Aeronautical Application

(Aero App)

Windows User Manual Version 1.2410

NSN76440152335389

Acknowledgements

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

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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.

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
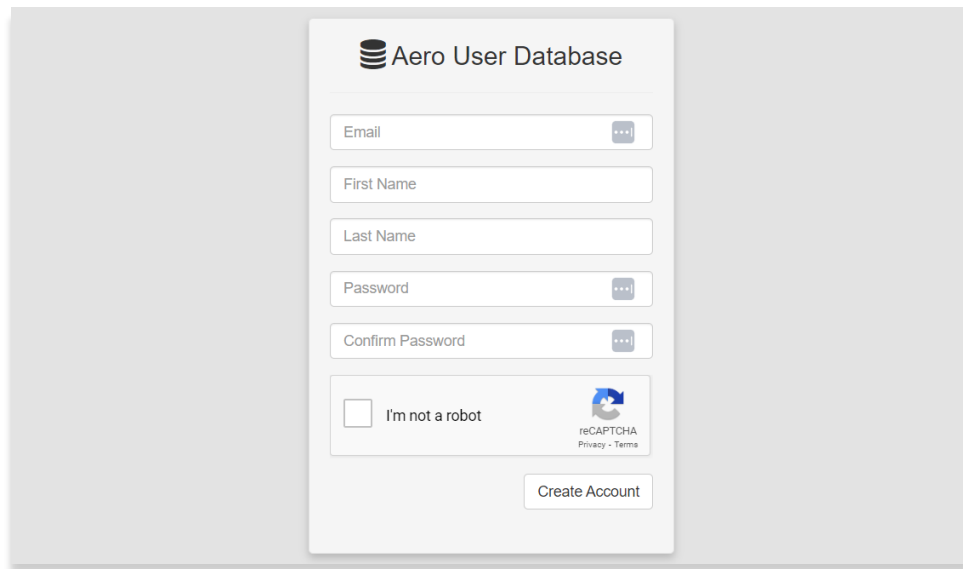
5 Accounts

To utilize Aero App's offerings, certain features require an active account respective to the action being made. 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: 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: Valid .mil email is required to create an account.

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

5.3 ASPS Account Registration

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

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

6 Aero App Installation

There are several methods 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.
  - **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 Install Aero App from Aero App DVD

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

1. Insert the DVD onto your computer.
2. Locate and double-click on the DVD drive in your File Folders.
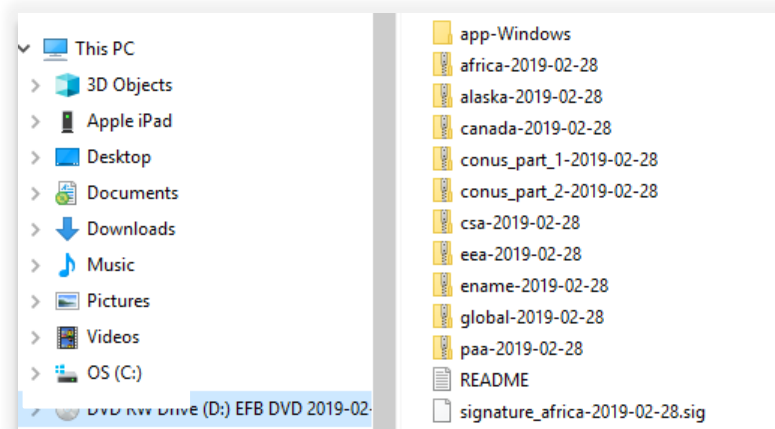
3. Once you have located the DVD on File Explorer, insert the microSD card into an adapter.
4. Insert the microSD card adapter into a Windows computer.
5. With both files simultaneously open, drag the Aero App executable files from the DVD onto the SD card.
6. Eject the microSD card adapter from the 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**.
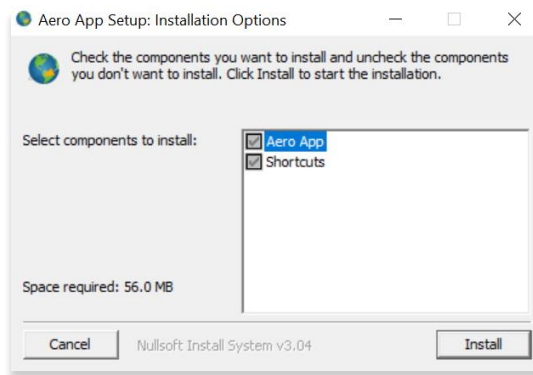
12. The dialog box should display Completed, tap **Close**.
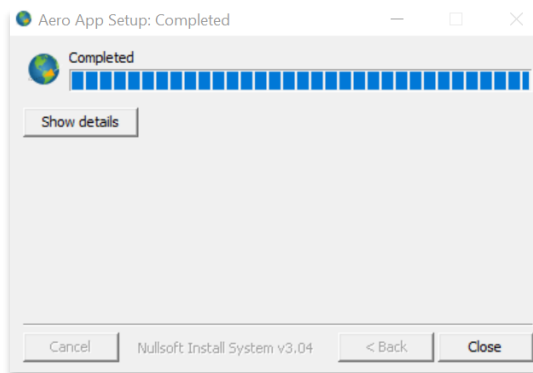
13. To verify if the file has been properly installed, go to your Aero App and tap **App Mgmt** on the Main Menu.

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

Aero App
Version
Number

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

| Q | KBLV | Moving Map | General | Notepad | ▲ |

| Preferences | Data | Host Nation | Help |

| What's New | Web Links | User Manual | About |

Aero App
Version 1.2410.73

Send Feedback

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

Third Party Libraries Used:

AutoMapper (https://github.com/AutoMapper/AutoMapper)
Code License: MIT

BouncyCastle.NetCore (https://github.com/chrishaly/bc-csharp)
Code License: MIT

BruTile.MbTiles (https://github.com/BruTile/BruTile)
Code License: Apache 2.0

Dapper (https://github.com/StackExchange/Dapper)
Code License: Apache 2.0

DotNetZip (https://github.com/haf/DotNetZip.Semverd)
Code License: Microsoft Public License of October 2006

Mapsui (https://github.com/pauldendulk/Mapsui)
Code License: LGPL

WebView2 (https://docs.microsoft.com/en-us/microsoft-edge/webview2/)
Code License: Microsoft

6.1.2 Install Aero App from Aero App Website

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

1. Open an internet browser of choice.
2. Enter 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 is displayed on the ribbon located at the top of the page.
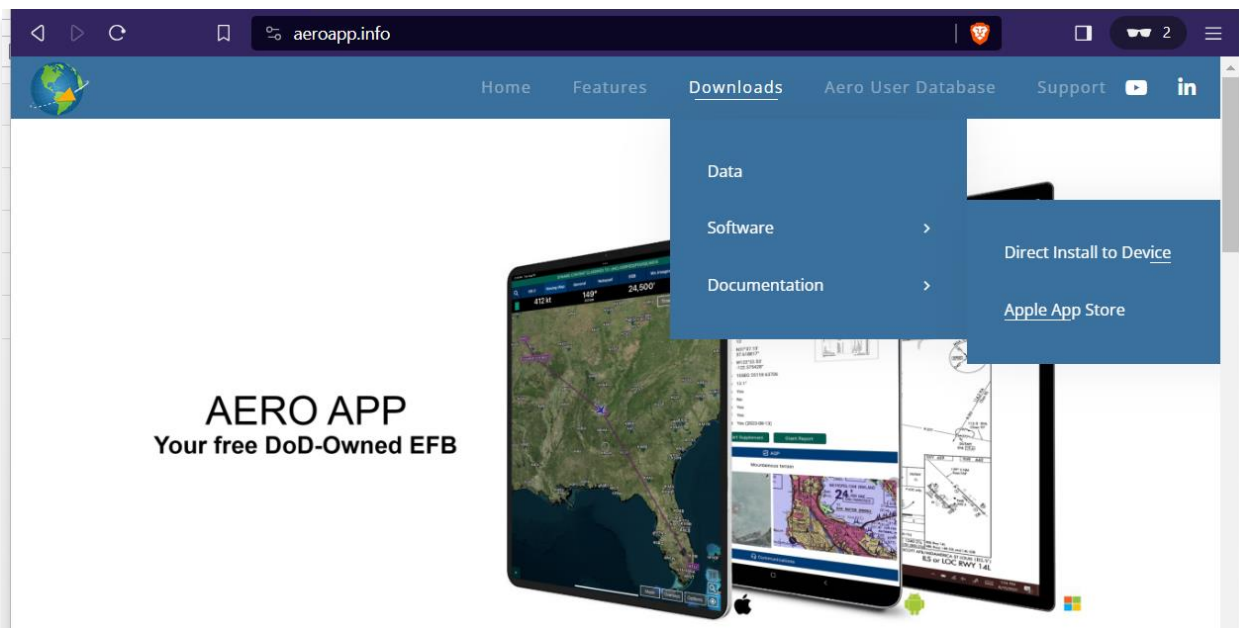
   - On smaller screens, click the hamburger button. Select **Downloads** then **Software.**
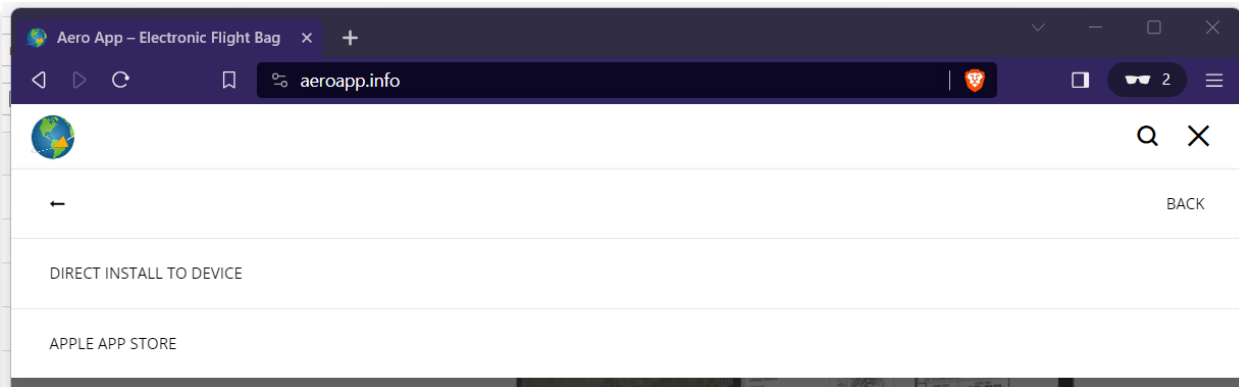
4. Users are provided with two different ways to download Aero App:
   - Direct Install to Device
   - Apple App Store
5. Select **Direct Install to Device**.
6. Log in using *GEOAxIS* or *Aero User Database* credentials.
7. Select the Windows version of Aero App and download will begin.
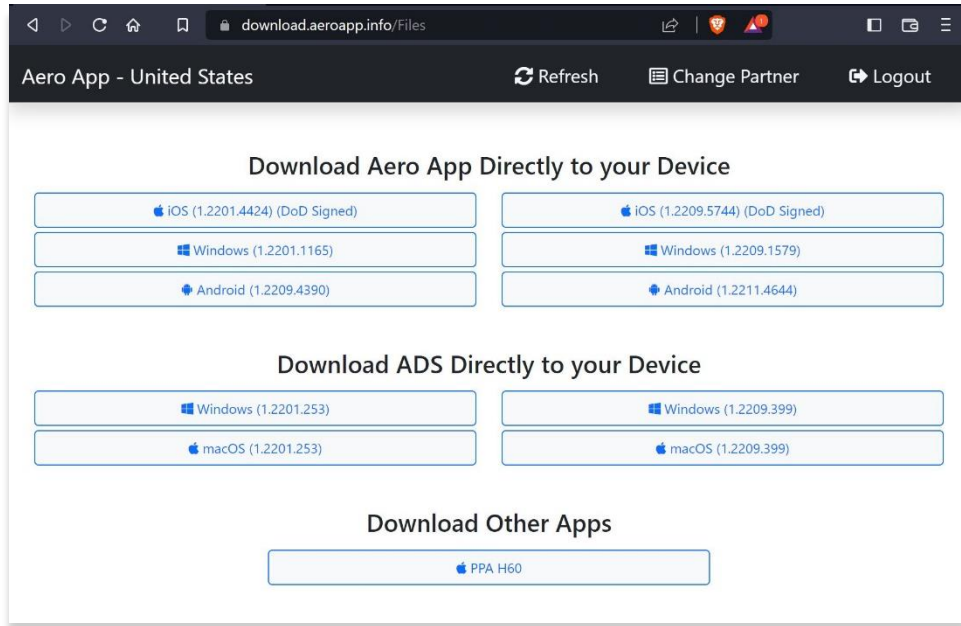
📝 **NOTE:** Users must have GEOAxIS or Aero User Database credentials prior to downloading the Aero App software.

7 Where to Obtain Aero App Data

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

- **Aero App DVD** – a physical DVD 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.

8 Aero App Data Overview

The following data is available for download:

- Aero App Maps
- Air Force Weather (AF Wx)
- Core Data
- Core Data Delta Files
- 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.

8.1 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 17 for more information on Maps.

8.2 Air Force Weather

Air Force Weather (AF Wx) is timely and accurate weather information from the Air Force. Aero App enables users to view real-time weather information for METARs and TAFs. Refer to Section 16.3 for more information on Air Force Weather (AF Wx).

8.3 Core Data

Core Data includes Global zip file and the Africa, Alaska, Canada, CONUS 1, CONUS 2, CSA, EEA, ENAME, and PAA region files. Usable data products in the Core Data include, but not limited to, FLIP charts, Supplements, Planning Documents, Legends, Moving Map Overlays including Air Refueling Route, Airways, and Pins. Users can choose to download zero or multiple regions. However, the Global zip file is always required. Refer to Section 9 for more information on how to download data from Aero App.

NOTE: Users have the option to sideload data, refer to Section 10 to view different methods of sideloading data.

8.4 Core Data Delta Files

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

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

8.9 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 17.3 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.

8.10 User Files

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

9 Download Data

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

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

9.1 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.

9.1.1 Download Data Using Aero User Database (AUD)

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

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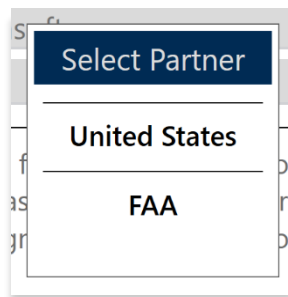
NOTE: The *Select Partner* popup will appear to those who have access to multiple government foreign partners.

8. Users will be redirected to the Data Cycle Download screen, select desired cycle.
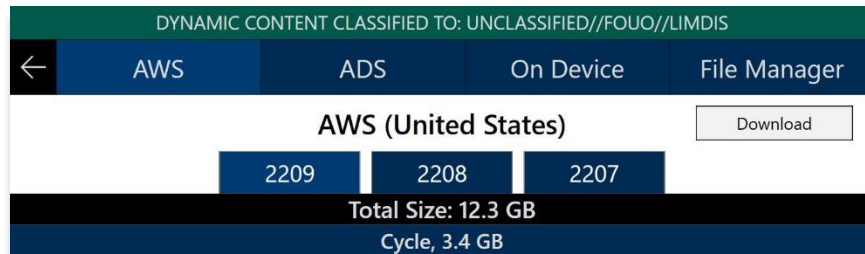
9. Available data pertaining to the respective cycle will be displayed on the screen. Select individual data files.
10. Tap **Download** once desired data files have been selected.
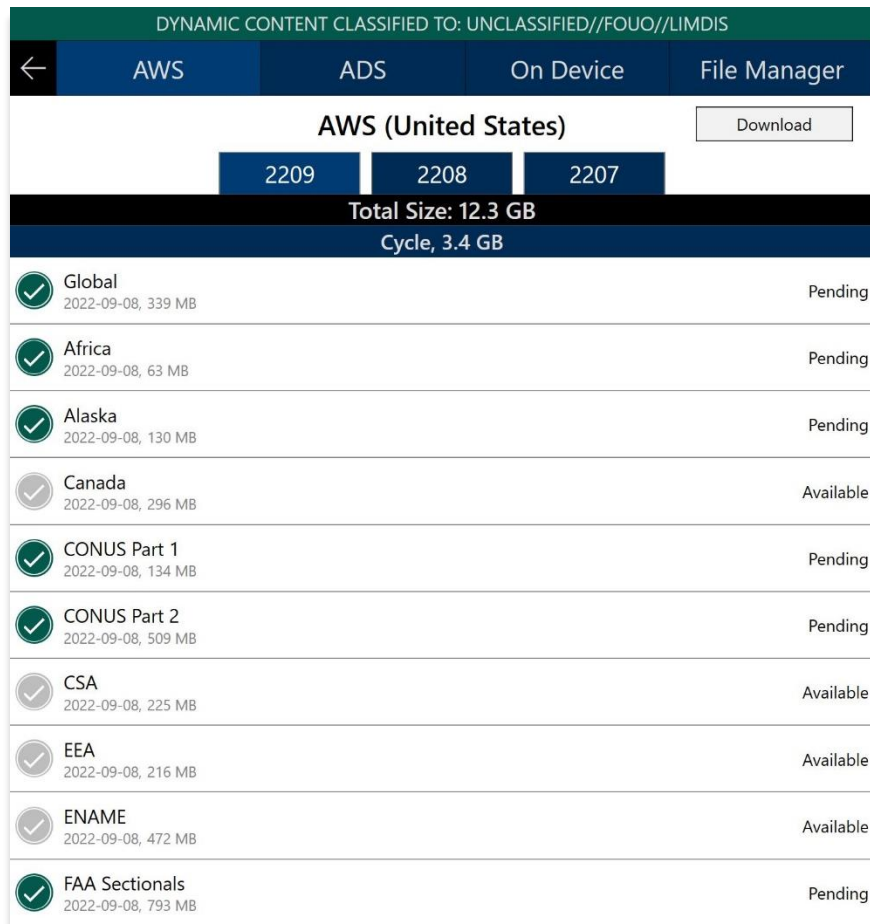
NOTE: Refer to Section 5.1 for additional information regarding registering for an AUD account.

9.1.2 Download Data Using GEOAxIS

GEOAxIS is a form of authentication for Disadvantage Users – users without a CAC card. Users must possess a GEOAxIS account to use GEOAxIS as their login method to download Aero App data. Refer to Section 5.2 for additional information.

1. Tap **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.
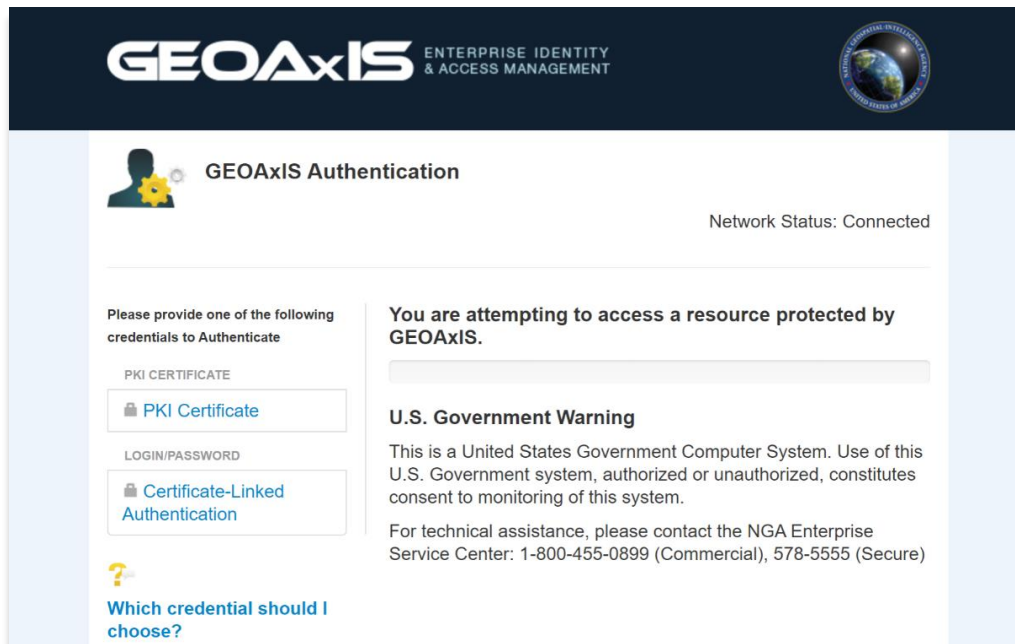
8. Once authenticated, users will be redirected to the AWS download screen. Select a cycle located at the top of the screen.
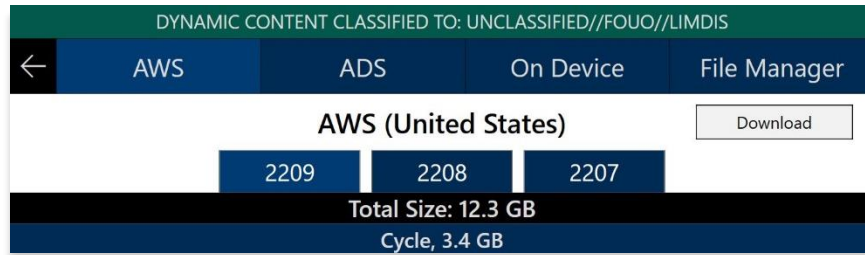
9. Available data pertaining to the respective cycle will be displayed on the screen. Select individual data files.
10. Tap **Download** once desired data files have been selected.
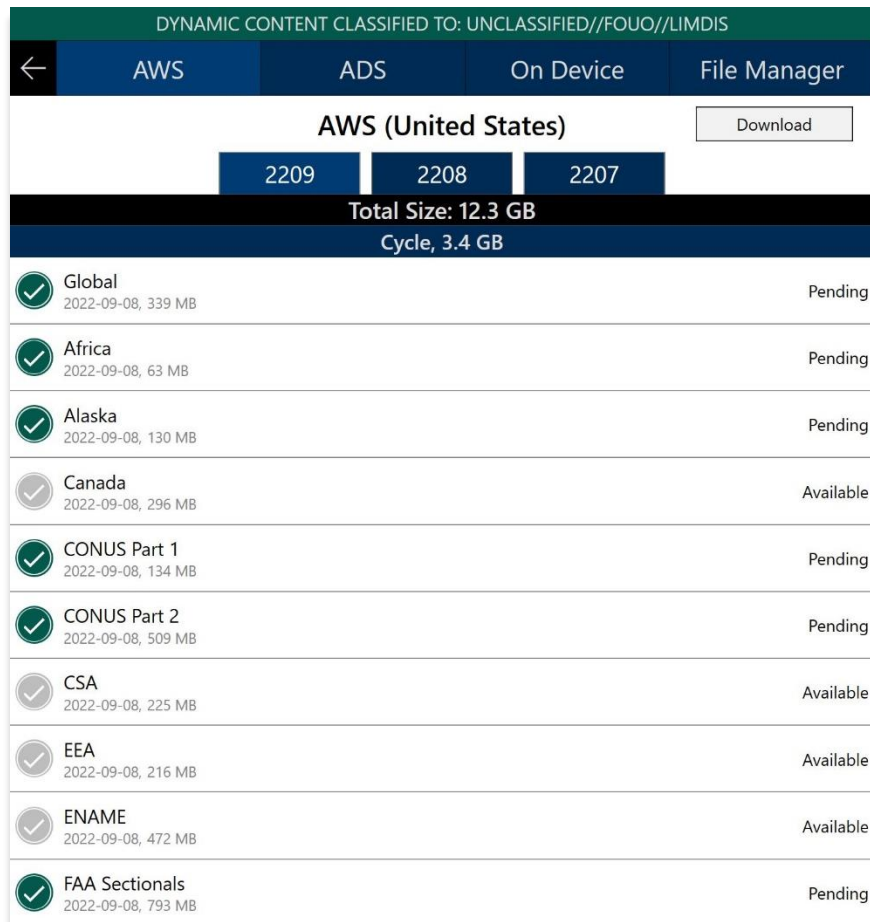
9.2 Download Data Through Aero Data Server (ADS)

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

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.

9.2.1 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.

AWS	ADS	On Device	File Manager

| Discover | Host | 192.168.98.119 | Port | 5556 | Connect |

Name MacBook-Pro		**Est. Bandwidth**
IP 192.168.99.47 **Port** 5531		1000 Mbps
Name ADS4-Mac-mini	🔒	**Est. Bandwidth**
IP 192.168.99.54 **Port** 443		1000 Mbps
Name ADS5	🔒	**Est. Bandwidth**
IP 192.168.99.60 **Port** 443		1000 Mbps
Name jess laptop ads		**Est. Bandwidth**
IP 192.168.99.89 **Port** 5555		1000 Mbps
Name ADS6	🔒	**Est. Bandwidth**
IP 192.168.99.35 **Port** 443		1000 Mbps

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 redirected to the Data Cycle Download screen, select desired cycle.
8. Available data pertaining to the respective 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.

9.3 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 download.aeroapp.info in the address bar.

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

3. Log in using your *GEOAxIS* or *Aero User Database* credentials. The Select Partner popup will be displayed for Aero User Database users who have access to multiple government foreign partners.
4. Navigate to the *Cycles* section of the page. Select **Cycles** from the list of folders.
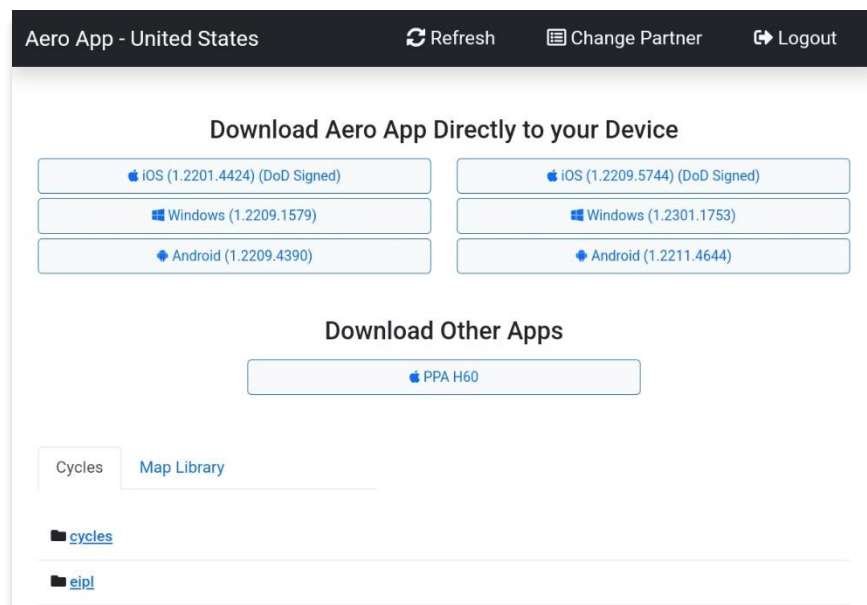
5. Click the **latest cycle** or a **cycle** of choice.
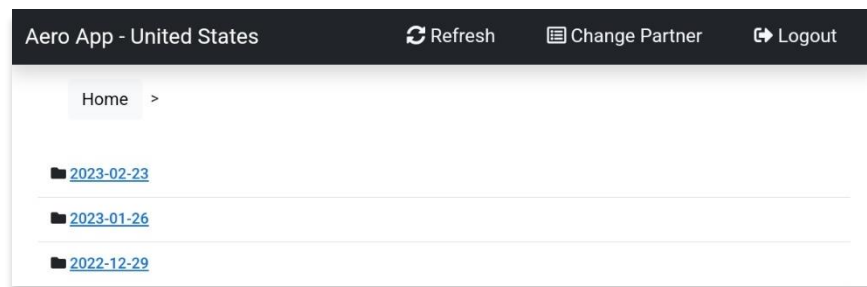
6. Users will be redirected to the download page. Located at the upper right of the screen are options to choose from, **Full Data Files** or **Delta Files,** to download data.

7. Click the respective **ZIP** and **SIG** buttons for your region(s) of choice: **Africa**, **Alaska**, **Canada**, **CONUS**, **CSA**, **EEA**, **ENAME**, and/or **PAA**, and other files.

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

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

	Save as		
What do you want to do with africa-2019-12-05.zip (53.0 MB)? From: s3.amazonaws.com	Open	Save ∧	Cancel ✕
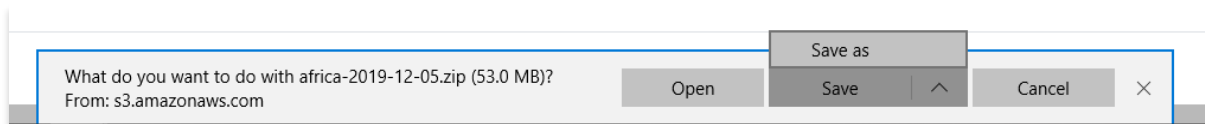
9. Once the data has completed the download, select from options to **Open**, **Open folder**, or **View downloads**.

10. Connect your SD card to a PC.

11. Open **File Explorer** and navigate to **Devices and drives** to locate your SD card.

∨ Devices and drives (4)
- Galaxy Tab S2
- DVD RW Drive (D:)   SDHC (F:)
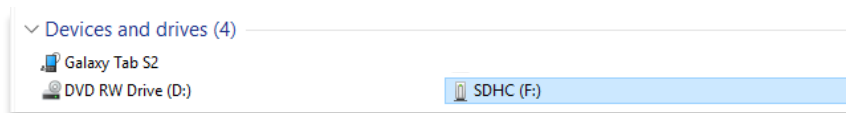
12. Double-click on the SD card to open **Internal storage**.

13. Drag the downloaded data files from your Downloads folder onto your SD card.

africa-2019-12-05   global-2019-12-05   signature_africa-2019-12-05.sig SIG File   signature_global-2019-12-05.sig SIG File

NOTE: Refer to <u>Section 12</u> on how to load and view data status.

10 Sideload Data

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

Users must first sideload the desired data (e.g., a complete data cycle or user-generated data) into a trusted storage device such as the following:

- **USB Drive** – transfer desired data into a USB drive
- **SD Card** – transfer desired data into an SD card

The steps in achieving this are as follows:

1. Connect your storage device (USB or SD card) to a computer.
2. Open a **File Explorer** window.
3. Locate and double-click your storage device to view contents.
4. Drag and drop desired data into the storage device. Your data is now stored in your storage device.

Once the data is successfully transferred to a secured storage device, users can transfer the data to a Windows device where Aero App is installed. The following sections ahead will provide the necessary steps for each data type.

10.1 Sideload Data from Aero App DVD

NGA distributes the Aero App DVD to the appropriate persons. For additional information, contact Jorge Diaz (Jorge.Diaz@dla.mil) from the Defense Logistics Agency. Users must transfer the desired data from the Aero App DVD into a storage device (USB or SD card) beforehand. Refer to Section 10 for instructions in achieving this.

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

1. Connect your storage device (USB or SD card) to a Windows device (where Aero App is installed).
2. Open **Aero App**.
3. Tap **App Mgmt** on the *Main Menu*.
4. Tap **Data** on the *Secondary Menu*.
5. Select **Download**.
6. Select **On Device** on the navigation bar.
7. Tap the storage device that contains the data files you want to download.

8. The selection will be highlighted, tap **Select**.

Your storage device
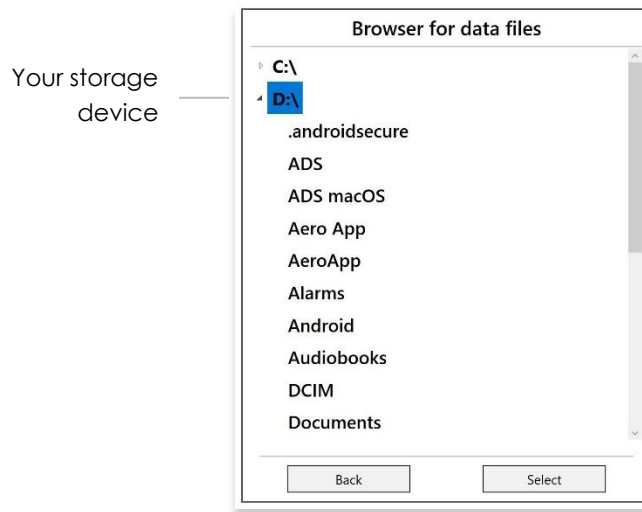
9. Select desired data files then tap **Download** to begin the downloading process.

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

10.2 Sideload User Maps

Users can sideload user-generated Maps into Aero App. User Maps are MBTiles files that can be viewed on the Map. Users must sideload the desired User Maps from their computer into a storage device (USB or SD card) beforehand. Refer to Section 10 for instructions on achieving this.

1. Connect your storage device (USB or SD card) to a Windows device (where Aero App is installed).
2. Open a **File Explorer** window.
3. Locate and double-click your storage device to view contents.
4. Open a new **File Explorer** window.
5. Navigate to the **My Documents** folder in the File Explorer window.

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

7. Select **UserFiles** to view contents.

8. Drag and drop desired user map files from the storage device into the UserFiles folder.

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

9. Open **Aero App**.
10. Tap **Moving Map** on the *Main Menu*.
11. Tap **Maps** located at the bottom right of the Moving Map screen.
12. The Maps popup will display. Tap **User Maps** from the side menu. A successful sideload will display the User Map(s) in the list.

10.3 Sideload User Waypoints

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

Aero App supports text files for user waypoints. To create a user waypoint, the following steps should be followed:

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

initial-waypoints.txt	10/31/2019 5:36 PM	Text Document	1 KB
New Text Document	11/29/2019 1:24 PM	Text Document	0 KB

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

initial-waypoints.txt	10/31/2019 5:36 PM	Text Document	1 KB
route0-waypoints.txt	10/31/2019 5:38 PM	Text Document	1 KB
work-routine-waypoints.txt	10/31/2019 5:38 PM	Text Document	1 KB

work-routine-waypoints.txt - Notepad

File Edit Format View Help

PANCHO,Happy Bottom Riding Club,34.863833,-117.956317

7. Save file once completed.

Users must sideload the desired User Waypoints from their computer into a storage device (USB or SD card) beforehand. Refer to Section 10 for instructions on achieving this.

8. Connect your storage device (USB or SD card) to a Windows device (where Aero App is installed).
9. Open a **File Explorer** window.
10. Locate and double-click your storage device to view contents.
11. Open a new **File Explorer** window.
12. Navigate to the **My Documents** folder in the File Explorer window.

∨ Folders (7)

3D Objects	Desktop	Documents	Downloads	Music
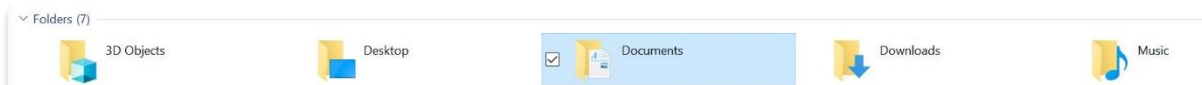
13. Select **Aero App**. Its respective subfolders are displayed.

14. Select **UserFiles** to view contents.

15. Drag and drop desired user waypoint files from the storage device into the UserFiles folder.

initial-waypoints	10/31/2019 5:36 PM	Text Document	1 KB
route0-waypoints	10/31/2019 5:38 PM	Text Document	1 KB
work-routine-waypoints	10/31/2019 5:38 PM	Text Document	1 KB

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

16. Open **Aero App**.
17. Tap **Search** on the Main Menu.
18. Enter the exact name of the User Waypoint in the search text box. A successful sideload will display the user waypoint(s) under the User Waypoints section.
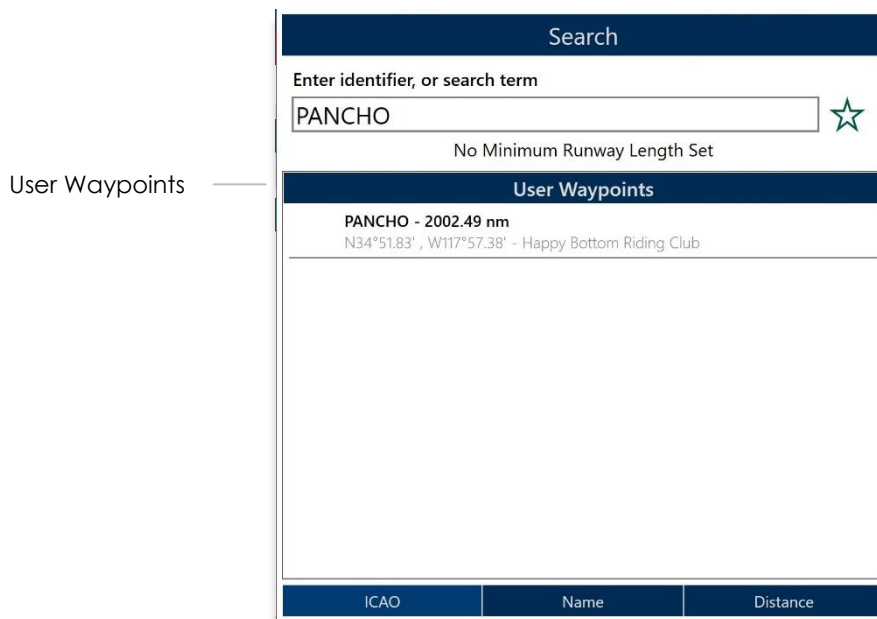
10.4 Sideload Common Route Definition (CRD)

Aero App enables users to sideload Common Route Definition (CRD) files to view on the map or be added to a flight route. Users must sideload the desired CRD files from their computer into a storage device (USB or SD card) beforehand. Refer to Section 10 for instructions on achieving this.

1. Connect your storage device (USB or SD card) to a Windows device (where Aero App is installed).
2. Open a **File Explorer** window.
3. Locate and double-click your storage device to view contents.
4. Open a new **File Explorer** window.
5. Navigate to the **My Documents** folder in the File Explorer window.

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

7. Select **UserFiles** to view contents.

8. Drag and drop desired CRD files from the storage device into the UserFiles folder.
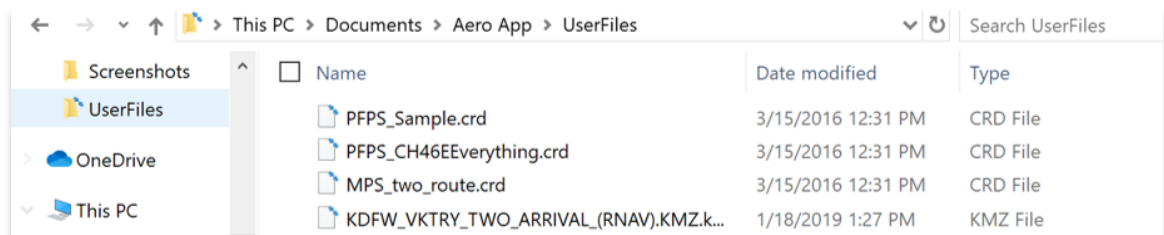
Verify that the sideload was successful. The steps in achieving this are as follows:

9. Open **Aero App**.
10. Tap **Moving Map** on the *Main Menu*.
11. Tap the **Route Tab** to expand the *Route Panel*.
12. Select **Route**.
13. Select **Actions** on the side menu, if necessary.
14. Tap **Load**. A successful sideload will display the CRD file(s) in the Load Route collection.
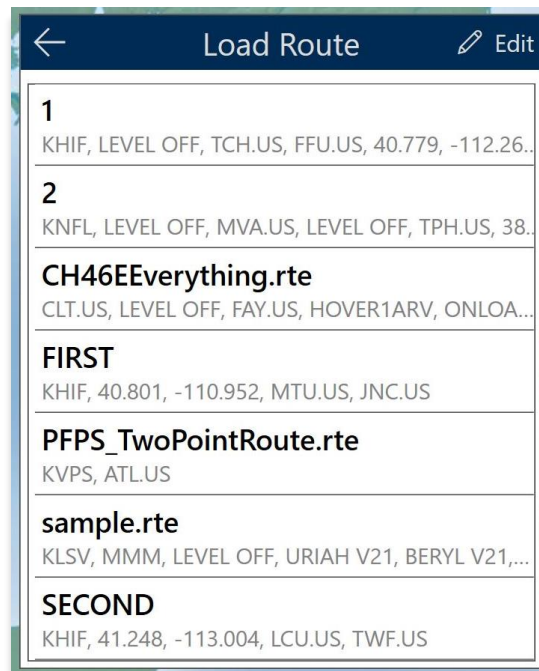
10.5 Sideload Pins

Aero App enables users to sideload 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 25.1.3 for guidance on how to Drop Pins.

1. Connect your storage device (USB or SD card) to a Windows device (where Aero App is installed).
2. Open a **File Explorer** window.
3. Locate and double-click your storage device to view contents.
4. Open a new **File Explorer** window.
5. Navigate to the **My Documents** folder in the File Explorer window.
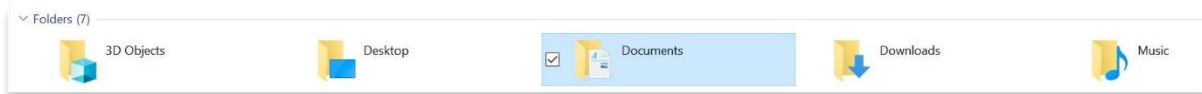
6. Select **Aero App**. Its respective subfolders are displayed.
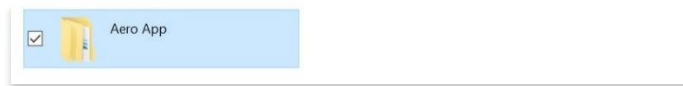
7. Select **UserFiles** to view contents.

8. Drag and drop desired Pins from the storage device into the UserFiles folder.
9. 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.

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

10. Open **Aero App**.
11. Tap **Moving Map** on the *Main Menu*.
12. Tap **Overlays** located at the bottom right of the Moving Map screen.
13. Select **User Overlays** on the side menu. A successful sideload will display the pin(s) under the User Overlays section.

> **NOTE:** Refer to Section 18.1.4 for additional information on Pins overlay.
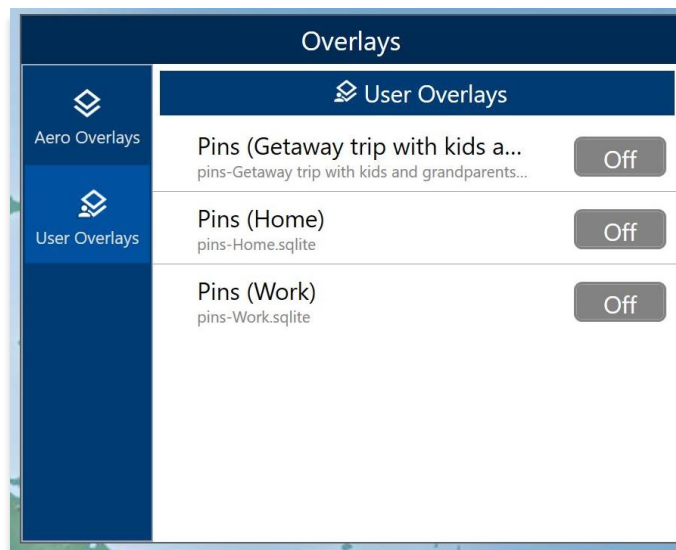
> **NOTE:** To delete individual pins, go to File Manager, select Documents, then tap the delete button of the pin(s) that you want to permanently delete.

10.6 Sideload Documents

Users can sideload documents into Aero App. Users must transfer the desired user documents from their computer into a storage device (USB or SD card) beforehand. Refer to Section 10 for instructions on achieving this.

1. Connect your storage device (USB or SD card) to a Windows device (where Aero App is installed).
2. Open a **File Explorer** window.
3. Locate and double-click your storage device to view contents.
4. Open a new **File Explorer** window.
5. Navigate to the **My Documents** folder in the File Explorer window.

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

7. Select **UserFiles** to view contents.

8. Drag and drop desired document(s) from the storage device into the UserFiles folder.

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

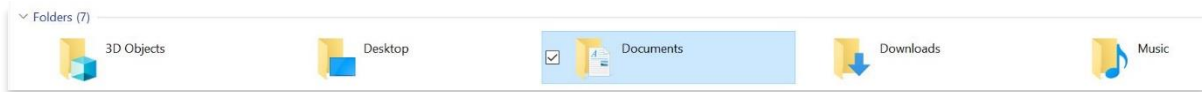9. Open **Aero App**.
10. Tap **General** on the *Main Menu*.
11. Tap **Docs** on the *Secondary Menu*.
12. Tap on the **ribbon** to view the available documents. A successful sideload will display the user document(s) in the User Documents' collection.
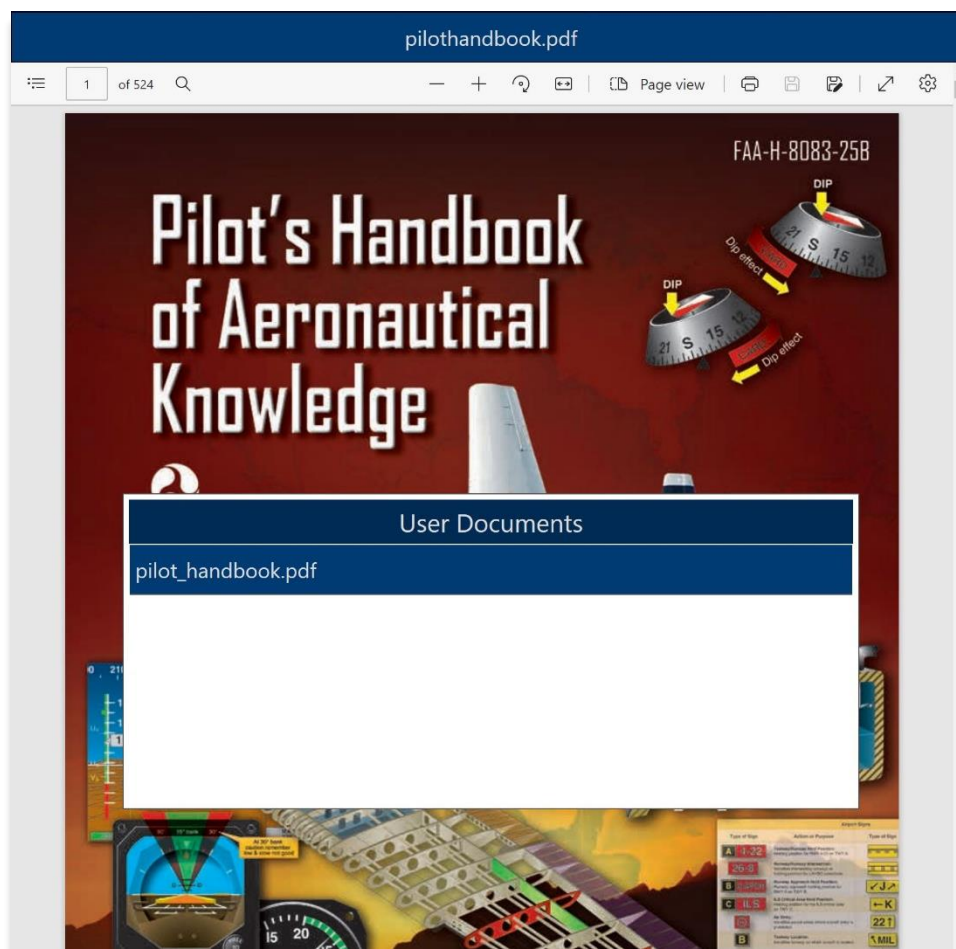
11 Update Aero App Data

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

11.1 Data Notifications

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

No active cycle
Aero App displays airport information, FLIP charts and other data for the Active Cycle. If no Active Cycle is selected, Aero App will display the following notification. If there is data in the Standby Cycle, then tap **Swap Cycles** on the Data Status screen to move the data to the Active Cycle. If there is no data in either cycle, then data must be downloaded or sideloaded.
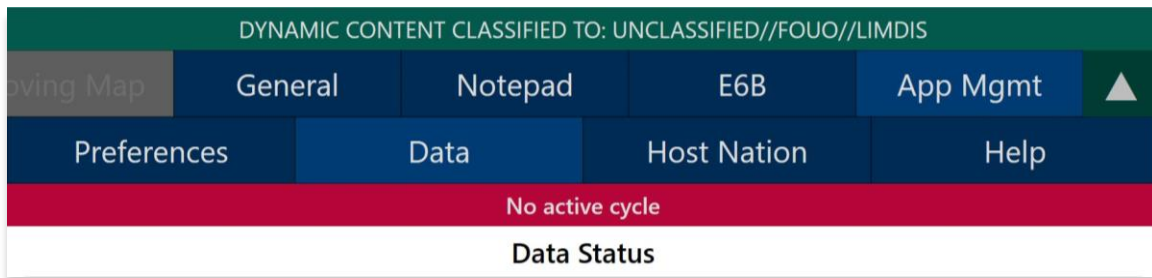
Active cycle is not current
Aero App will display a data notification if the Active Cycle is not current. In this configuration, Aero App will not display current information, and it is recommended to ensure that the Active Cycle is always current.
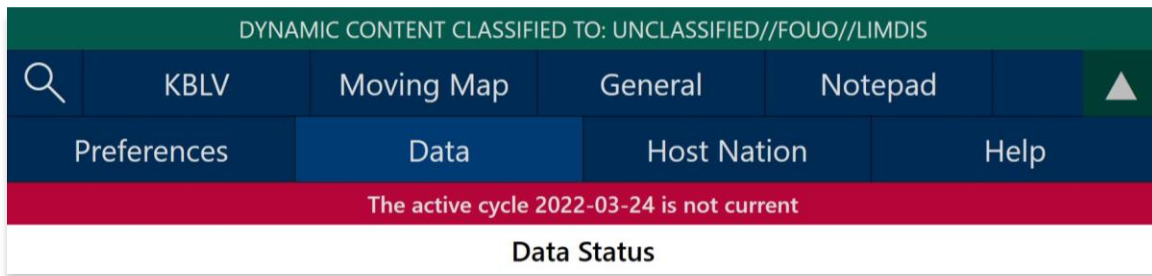
12 Manage Data

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

12.1 Data Status

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

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 cycle dates of the Active Cycle are displayed on the left, and the Standby Cycle are displayed on the right. From this screen, you can also download new data when they become available.

Active Cycle Effective Dates

Standby Cycle Effective Dates
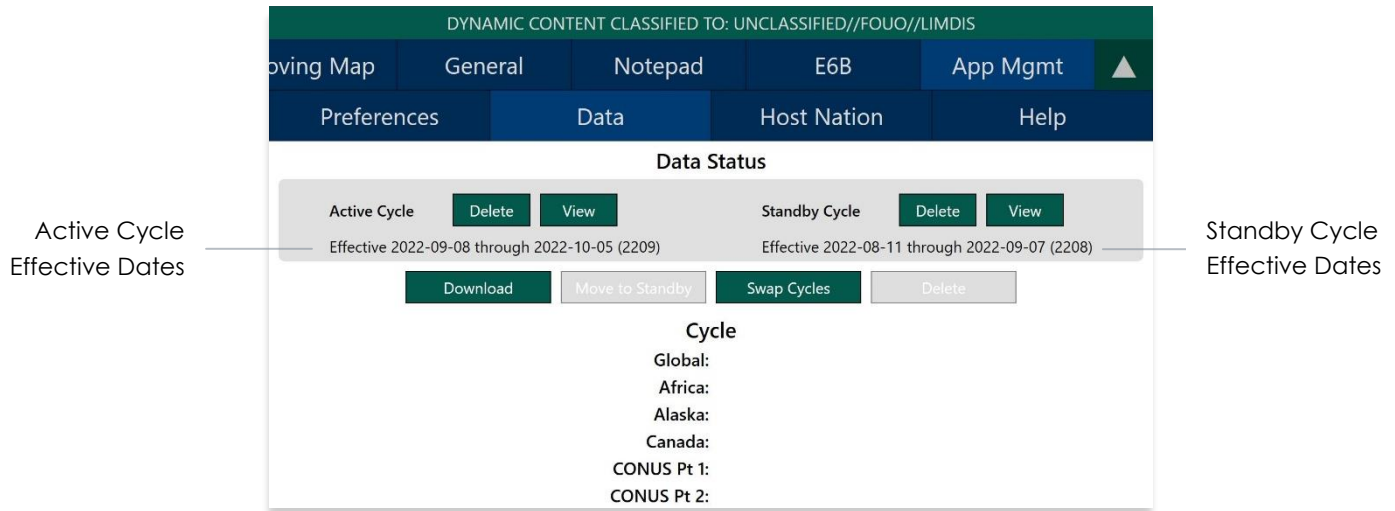
NOTE: Core data files are current for 28 days after the effective date.

12.2 Manage Data Downloads

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

1. Tap **App Mgmt** on the *Main Menu.*
2. Tap **Data** on the *Secondary Menu* to view data information.
3. Tap **Download** to select data that you wish to have in the device. Refer to <u>Section 9</u> for additional information. A successful download will display **Found** besides its respective data type.

Cycle 2022-09-08 (2209)
Global: Found ———————————————— Available Data Files
Africa: Found
Alaska: Found
Canada: Found
CONUS Pt 1: Found
CONUS Pt 2: Found

4. Tap **Move to Standby** to transfer the data to Standby Cycle.
5. Tap **Swap Cycles** to transfer the data from Standby Cycle to Active Cycle.

NOTE: Your data is activated once files are transferred to Active Cycle.

6. If maps are downloaded separately, tap **Load Maps** to move data to Active Cycle.
7. Tap **View** to display the list of available files stored in Active Cycle or Standby Cycle.
8. Tap **Delete** to permanently delete the files stored in Active Cycle or Standby Cycle.

12.3 On Device

On Device allows users to browse data files stored in their device's local disk or the connected storage device (USB or SD card).

1. Tap **App Mgmt** on the *Main Menu*.
2. Tap **Data** on the *Secondary Menu*.
3. Tap **Download**.
4. Tap **On Device**.
5. A browser to search for data files will appear. Depending on what is connected to your device, Aero App will assign the connected device(s) to a single alphabetic name (i.e. Your device's local disk is assigned to C, and so forth).

> **NOTE**: The primary source of data storage on your device is the local disk, which is labeled as source C:\. Any other external storage devices, such as USB or SD card, that you connect to your device will be listed below the local disk. When you insert a new drive, it will appear as a new source under the list of available sources.

> **NOTE**: It is recommended to store your data in the same folder for ease of access.

6. Tap **C:** to reveal the subfolders stored in the source.

C:\ internal hard drive —————

Browser for data files

- **C:**
  - Intel
  - PerfLogs
  - Program Files
  - Program Files (x86)
  - Users
  - Windows
- **D:**

Back   Select
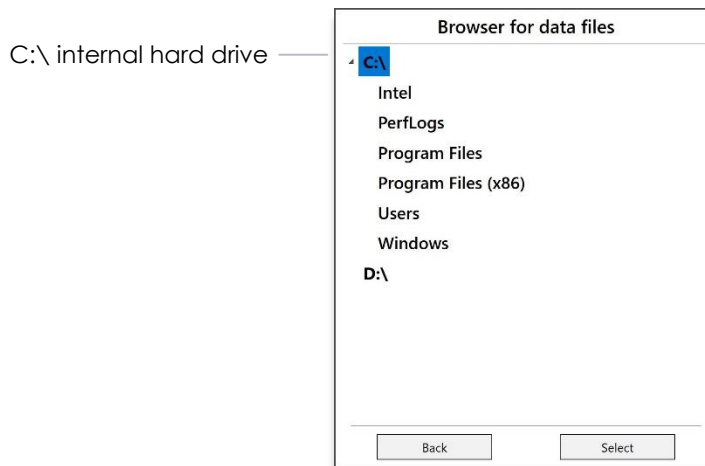
7. If applicable, tap on the other sources (i.e. D:\) to reveal its respective subfolders.
8. Tap to highlight desired folder, then tap **Select**.
9. Select desired files to download.
10. Tap **Download** to begin the downloading process.

12.4 File Manager

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

1. Tap **App Mgmt** on the *Main Menu.*
2. Tap **Data** on the *Secondary Menu.*
3. Tap **Download**.
4. Tap **File Manager**.
5. Data within File Manager is categorized by data types, each accessible by its own tab. To explore File Manager, simply tap on the desired data type. The following data types are available:

   - **Downloads** – stores files that are in queue to be loaded onto Active or Standby Cycle.
   - **Active** – contains files that are in Active Cycle.
   - **Standby** – contains files that are in Standby Cycle.
   - **Aero App Maps** – contains a collection of downloaded regional charts such as Canada, FAA and NGA IFR high and low, as well as FAA VFR charts of the respective region.
   - **Other** – stores Earth Base Map and Giant Report data.
   - **Documents** – stores a collection of user-generated files such pins, waypoints, KML/KMZ, GeoJSON, shapefile, and PDF documents.

DYNAMIC CONTENT CLASSIFIED TO: UNCLASSIFIED//FOUO//LIMDIS			
AWS	ADS	On Device	File Manager

File Manager

Downloads	Active	Standby	Aero App Maps	Other

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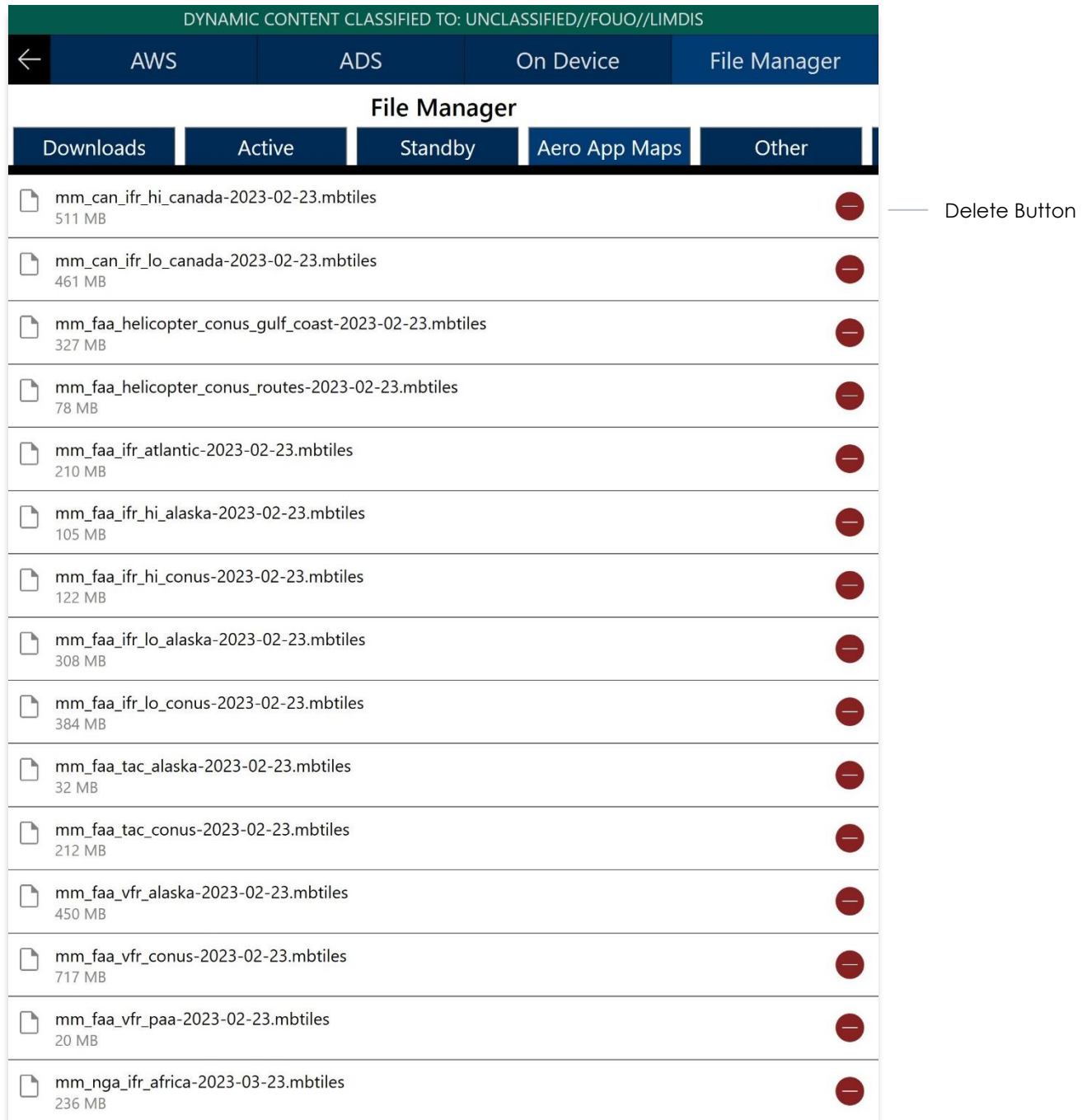
13 Aero App Menus

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 sections to follow will elaborate on the different menus and their functionalities.

13.1 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.

Q	Search – Users can perform a search of different identifiers such as Airports, NavAids, Waypoints, and User Waypoints. A search can be refined by setting a minimum runway length, which can be done through the Settings page. Additionally, users can add identifiers to the Favorites list.
KJAX	Active Point – Once the search is completed, the identifier will become an active point. The active point will show its General Information such as Giant Reports and Chart Supplements, AQP images (if applicable), Communications, Runways, and Remarks. Additional information such as APD, procedure charts, Host Nation charts, weather, and others, can be viewed. To load a new active point, simply tap on the search icon and enter a desired point, then tap Search on your device's on-screen keyboard. The new identifier will load as the new active point.
Moving Map	Moving Map – Aero App's high-performance Moving Map 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 – Contains a library of FAA data, FLIP Charts, Supplements, Area Planning, User Documents, and Terminal Procedure Legend.
Notepad	Notepad – Users can create up to three pages of notes using their fingertips or a stylus.

E6B	E6B – 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 Mgmt – 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 – Hides or reveals the Main and Secondary Menus.

13.2 Route Menu Options

Aero App provides route menu features on the Route Panel. The features include Add, Edit, and Route menu options.

◀	Collapsible Route Panel – The Route Panel can expand or collapse, based on the user's view preference. Users have options to add to route, edit route, and access additional route enhancement features in the Route menu. The Route Panel contains essential route information, such as the ETA and ETE, distance and bearing, tower frequencies, and the total distance of your route.
+	Add – Used 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 – Reorder and delete entries from the route.
Route	Route – Provides various features that enhance your route activities. The features are divided into Actions, Add, and Show menus.

13.3 Identifier Options

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

Info	Info – Contains identifier information including General Information, AQP (if applicable), 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 – Contains options to view METARs/TAFs and a button that redirects to the NOTAMs web browser.

13.4 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 Procedure Legend.

Charts	Charts – Select from High and Low Enroute Charts, Area Charts, Graphic Charts, CONUS Chart Graphics, Military Training Routes (MTRs), and others.
Supplements	Supplements – Select from a list of supplements in the FLIP chart library. Supplement books are in PDF format.
Planning	Area Planning Documents – Select from a list of Area Planning documents in PDF format.
Docs	User Documents – Users can access to user-defined content loaded into the Documents library.
Legend	Terminal Procedure Legend – Displays the Terminal Procedure Legend.

13.5 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 – Users can 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 switch device to Secret mode. Data includes Store data in an external location. GPS includes GPS COM port search and GPS Connection Settings. Lastly, Reset includes Clear All Chart Markups.
Data	Data – Includes the Data Status page for users to manage and download cycle data.
Host Nation	Host Nation – Download Host Nation charts for the selected ICAO. This requires an ASPS account.
Help	Help – A hub for Aero App information containing options to view the What's New, Web Links, link to User Manual, and the About page.

14 Search

Search (search icon) is located on the Main Menu. Users can search by a point's ID (identifier) or by entering a search term. Users can filter airports by setting a minimum runway length in their Preferences. Once an identifier or search term has been selected, it will become the Active Point. Options such as the identifier overview, diagrams, charts, weather, and other supporting sources are available to view.

1. Tap **Search** on the **Main Menu**.
2. The Search popup will appear. Tap the **text box** to open your device's keyboard.
3. Enter an identifier or search term of a desired point.
4. The search results are divided into different identifier types (Airports, NavAids, Waypoints, and User Waypoints). If needed, scroll through the results list to choose the searched identifier. Alternatively, users can tap **Enter** on the device's keyboard and the searched identifier will become an active point.

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** for the second time and the identifier will be removed from *Favorites*.
5. To view all identifiers marked as favorite, remove all characters from the search box then tap the **Star**. The Favorites list will display respective to the identifier type that was selected (e.g., Airports, NavAids, and Waypoints).
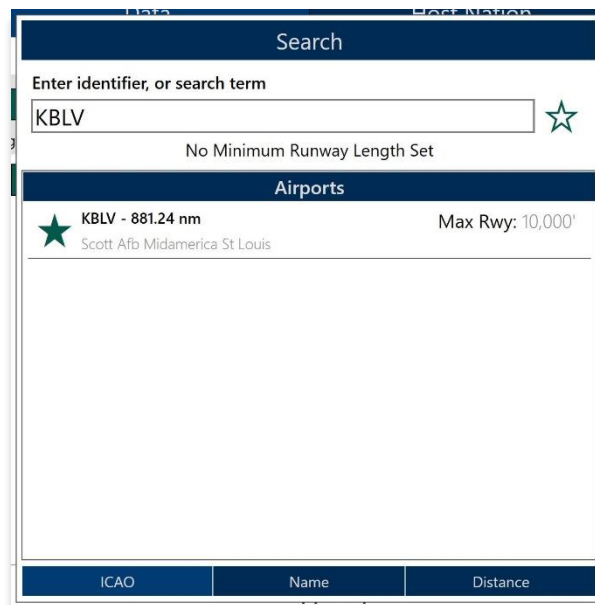
NOTE: Users can add their desired identifiers to *Favorites* directly from the Add to Route, Active Point search, or Move Map to Location features.

15 Active Point

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

15.1 Identifier Information

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

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

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

General Information contains the identifier summary 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 and Giant Report data, users must download the respective region files, Global, and Giant Report data.
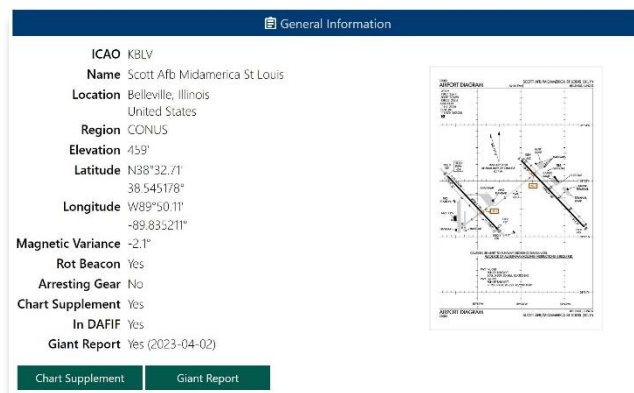
Advanced Qualification Program (AQP) is available for select airports.

☑ AQP

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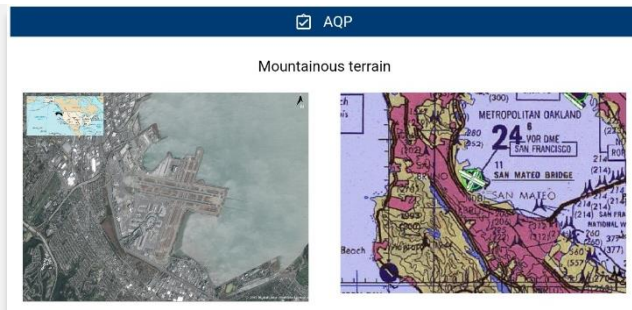
Communications includes tower frequencies, remarks, and call signs for the selected airport.

🎧 Communications

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

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

/I\ Runways

Runway 14L/32R

Dimensions	10,000' x 150'
Surface	Concrete
Condition	Good
PCN	82
LCN	108

Runway 14L

Heading	138.0° magnetic 136.6° true

Runway 32R

Heading	318.0° magnetic 316.6° true

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

ⓘ Remarks

CAUTION
Dense civ air tfc all quad, all alt. Unexpected bumps occur on Twy G btn rwys when crossing bridges and tunnels. Use min speed when opr in area. Use caution when utilizing Twy G, 0.25 NM E of Rwy 14R-32L int, grad chg of 3° and a 70° turnpresent. On coming tfc may not be vis due to terrain. Bird and wildlife haz.

CSTM/AG/IMG NAV
CSTMS avbl. Ctc base OPS 72 hrs prior to exp arr to coord. Civ acft must be cleared by US CSTMS if given a min 72 hr ntc prior to acft arr.

FLUID
SP(Mil) PRESAIR(Mil) LHOX(Mil) LOX(Mil)

15.2 Airport Chart Options

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.

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

Airport Diagram (APDs)	Instrument Approach Procedures (IAPs)

NOTE: Users can add markings to APDs and IAPs. Refer to Section 15.2.1 for additional information.

Departure Procedures	Arrival Procedures

Alternate/ RADAR/Takeoff Minimums	Other

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.

📝 **NOTE**: Host Nation charts must be downloaded to preview them; otherwise, the Host Nation option will remain disabled. Refer to Section 30.3 for additional information.

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

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

1. Tap 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.

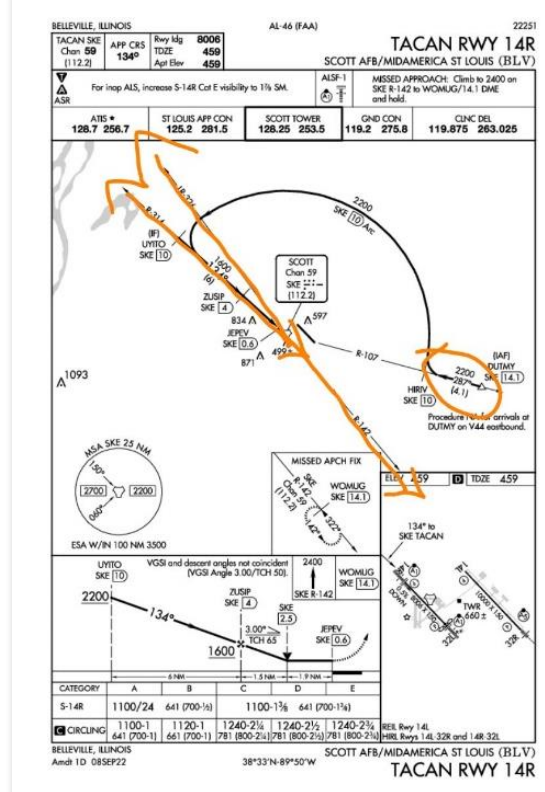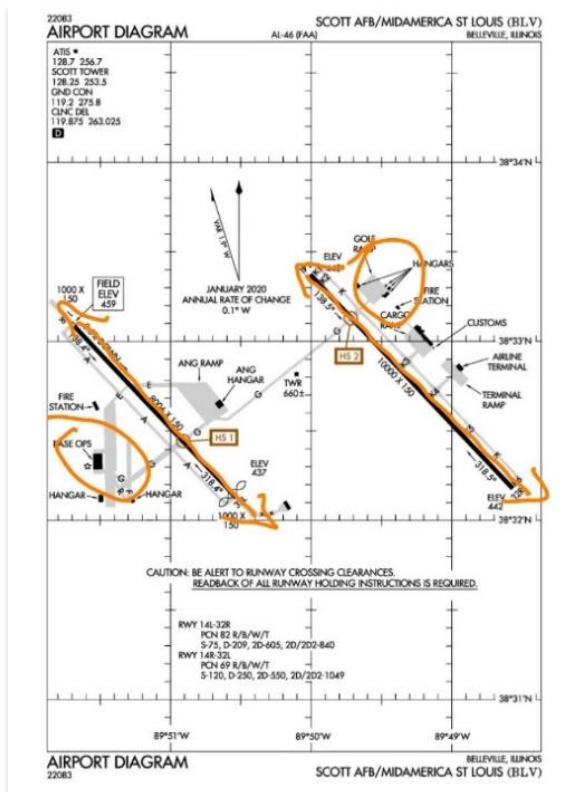| CLEAR	UNDO	EXIT	AIRPORT DIAGRAM	⟳

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.

15.3 Weather and Potential Hazard Information

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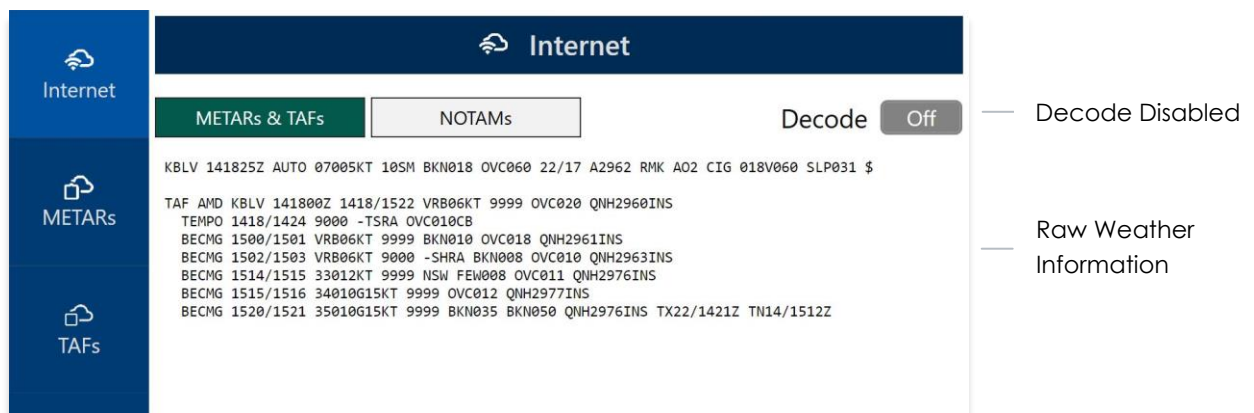
- Internet
- METARs
- TAFs

15.3.1 Internet

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

METARs and Terminal Aerodrome Forecasts (TAFs)

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

1. 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. Users can view raw or decoded weather information for the selected airport.

Notice to Airmen (NOTAMs) Website

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

1. 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.
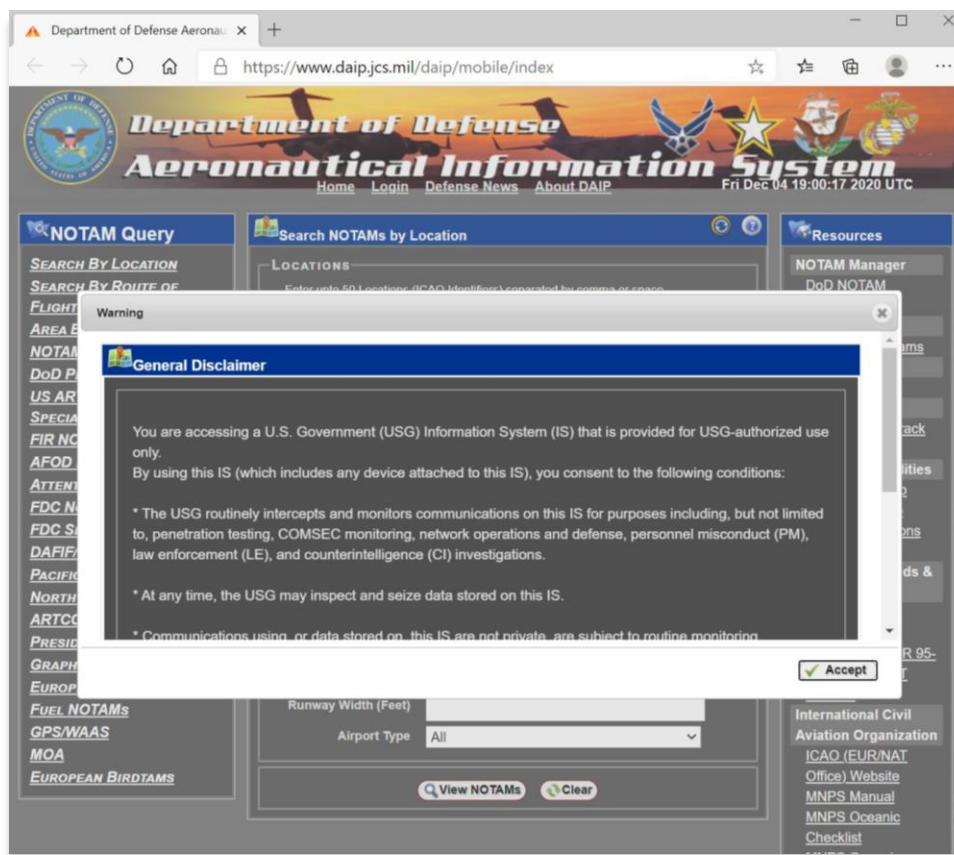
📝 **NOTE:** In the case the "Your connection isn't private" error appears, tap **Advance** then tap **Continue** to access the website.

15.3.2 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.

15.3.3 Terminal Aerodrome Forecast (TAFs)

Terminal Aerodrome Forecasts (TAFs) highlight 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)

⌂ METARs			⌂ TAFs	
KBLV VFR	KBLV - Scott Afb Midamerica KBLV 221455Z 36009KT 10SM SCT190 BKN220 18/10 A3019 RMK AO2A SLP225 T01770101 52029 TSNO CHINO RWY14R $=	AfWx	**KBLV - Scott Afb Midamerica St Louis** KBLV 220800Z 2208/2314 01012KT 9999 SCT050 BKN080 QNH3004INS BECMG 2213/2214 01012G18KT 9999 SCT080 BKN200 QNH3013INS BECMG 2222/2223 03006KT 9999 SCT150 BKN200 QNH3013INS TX22/2219Z TN12/2308Z=	AfWx
KCPS VFR	KCPS - St Louis Downtown 15nm W KCPS 221453Z 02012KT 10SM CLR 17/10 A3019 RMK AO2 SLP222 T01720100 51024 $=	AfWx	**KCPS - St Louis Downtown** 15nm W KCPS 221120Z 2212/2312 36009G17KT P6SM BKN250 FM230000 03004KT P6SM SCT250=	AfWx
KALN VFR	KALN - St Louis Rgnl 23nm NNW KALN 221450Z 36007G18KT 10SM CLR 16/10 A3021=	AfWx	**KSTL - St Louis Lambert Intl** 28nm WNW AMD KSTL 221456Z 2215/2318 01012KT P6SM BKN250 FM230100 04005KT P6SM SCT250=0000443401 XNXX84 KAWN 221500 RRX	AfWx
KSAR VFR	KSAR - Sparta Community Hu 25nm SSE KSAR 221455Z AUTO 36006KT 10SM CLR 16/11 A3020 RMK AO2 T01630108=	AfWx	**KSUS - Spirit Of St Louis** 39nm WNW	AfWx

> **NOTE:** Refer to <u>Section 16.3</u> for information on Air Force Weather (AF Wx).

16 Moving Map

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

The following are map-related overlays, features, 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

16.1 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, Track, Altitude, Center Target Coordinates, Distance and Bearing, and Breadcrumbs.
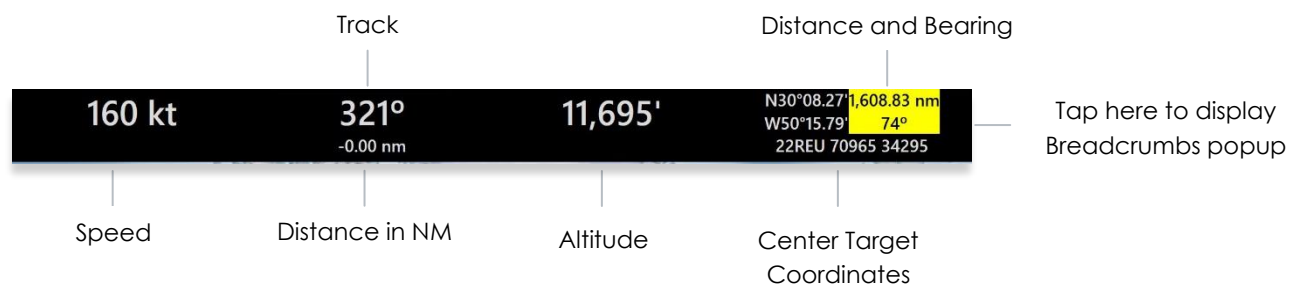
16.1.1 Speed

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.

16.1.2 Track

Aero App measures the Track, which is the *actual* direction of the ownship's course above the ground. The Track value is based on the GPS. The value below the track is the deviation from your ownship to the course, which is measured in nm. The orientation of the arrow is direction to get back to course.

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

16.1.3 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 flight information panel.
2. Tap the **+/-** buttons to adjust your calibrated altitude by increments or decrements of 100' or 500', respectively.
3. Tap **Set** to complete the calibration.
4. The ownship altitude is displayed below the *GPS* section. Tap **Use GPS** to use your current GPS altitude.

16.1.4 Center Target Coordinates

The Flight Information Panel displays the latitude, longitude, and MGRS of the Center Target. The Center Target is activated once the Moving Map view is moved. As the globe of the Moving Map view is moved, the Latitude, Longitude, and MGRS values update respective to the placement of the center target. Refer to Section 23 for additional information.

16.1.5 Distance and Bearing

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

When the center target is activated, a yellow tag is shown on the Flight Information Panel and displays the *distance* (in nautical miles) and *bearing* (in degrees) relative to current location. Refer to Section 23.1 for additional information.

16.1.6 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 19.2.1.

Add Coordinates — **Breadcrumbs** ✎ Edit

+ Add   × Clear   ⬆ Export — Export Breadcrumbs

2022-09-22 18:22:14Z
N26°31.61'   W80°03.54'
0 kt, 0°, 0'

Coordinates —
2022-09-22 18:22:16Z
N26°31.61'   W80°03.54'
0 kt, 0°, 0'

2022-09-26 18:21:57Z
N25°56.93'   W80°27.84'
Speed, Track, Altitude — 160 kt, 321°, 11695'

2022-09-26 18:21:58Z
N25°56.93'   W80°27.84'
160 kt, 321°, 11695'

Date and Zulu Time —
2022-09-26 18:21:59Z
N25°56.96'   W80°27.87'
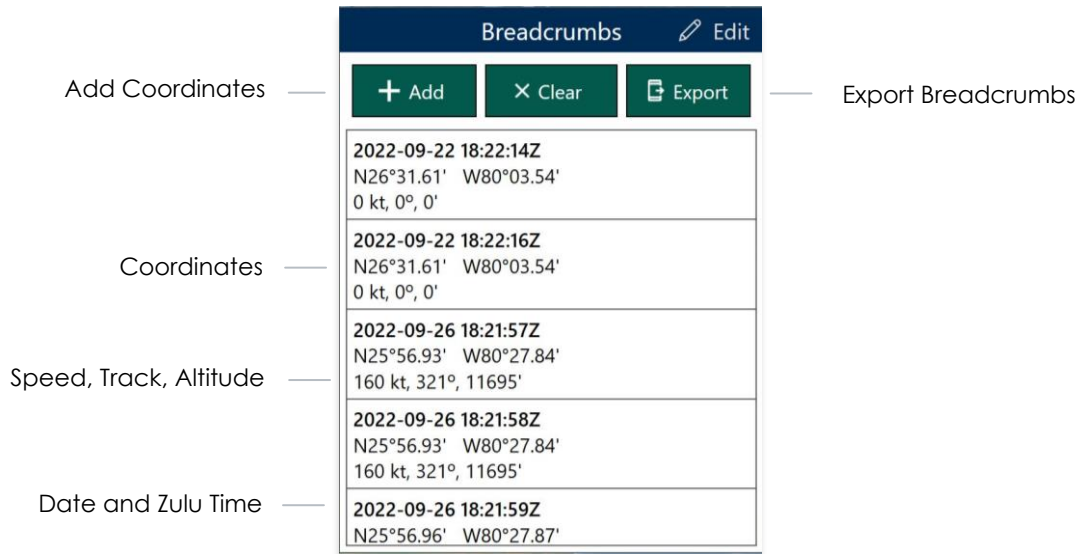
1. Tap the **coordinates** located at the upper right of the Flight Information Panel.
2. A dialog window will appear displaying the recorded breadcrumbs.
3. Tap **Add** to manually store coordinates.
4. To delete individual breadcrumbs, tap **Edit** then tap the **Delete** button and the breadcrumbs will be deleted.
5. Tap **Clear** to delete all breadcrumbs.
6. To export and save breadcrumbs, tap **Export**. Users can export KML or SQLite.

Export Breadcrumbs

Export breadcrumbs from 9/22/2022 18:22:14Z to 9/26/2022 18:21:59Z

KML

SQLite

× Cancel
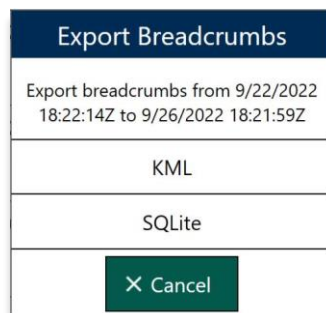
NOTE: Breadcrumbs are logged by individual days.

View Breadcrumbs in KML

1. Export Breadcrumbs in KML.
2. Open **File Explorer** then navigate to **This PC**.

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

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

5. Double-click on **Breadcrumbs**.

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

AeroBreadcrumbs-20180924165930-20180924172340.kml	9/24/2018 1:28 PM	KML File
AeroBreadcrumbs-20180924174500-20180924174650.kml	9/24/2018 1:47 PM	KML File
AeroBreadcrumbs-20180924175204-20180924175450.kml	9/24/2018 2:01 PM	KML File

7. Open **Google Earth** to import the KML files. You screen will display the points of the breadcrumbs.
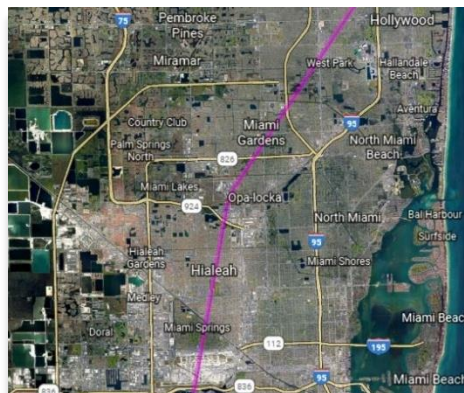
View Breadcrumbs in SQLite File

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. Open **File Explorer** and navigate to **This PC**.
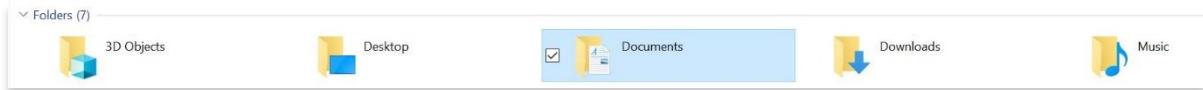
3. Double-click on **Documents**.

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

5. Double-click on **Breadcrumbs**.

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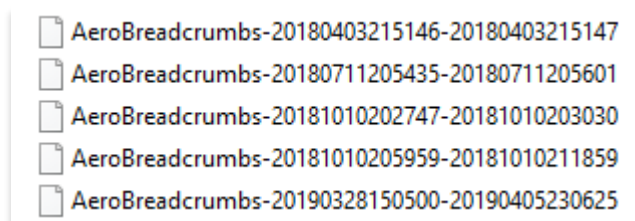
16.2 Timer

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

1. Tap **Moving Map** on the *Main Menu*.
2. Tap **Timer** located on the upper right 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.
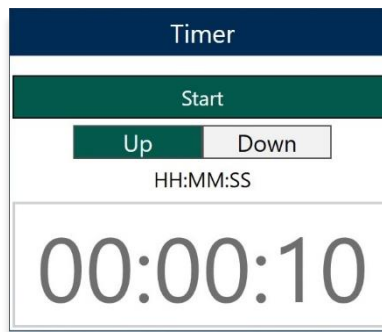
5. To count down, tap to select the Count **Down** mode.
6. Enter desired timer duration following the format HH:MM:SS.
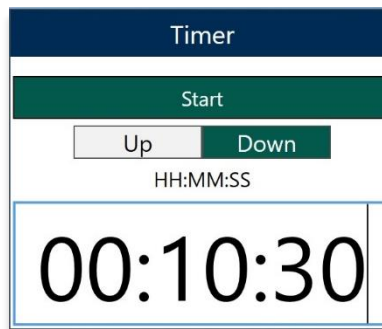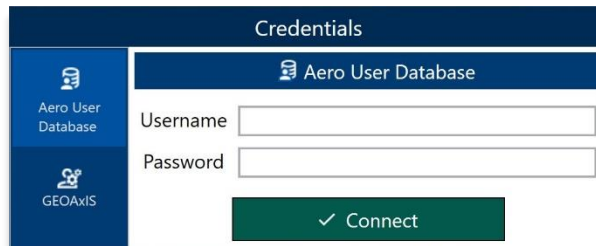
7. Tap **Start** to begin timer.
8. Tap **Stop** to end timer.
9. Tap **Reset** to restart timer.

16.3 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 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:
   - Aero User Database (AUD)
   - 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: The password field is cleared when Aero App is closed and then reopened.

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

Air Force Weather (AF Wx) on the Route Panel

Air Force weather can be viewed on the Route Panel. Different colored dots will populate on the Route Panel for each point on the route. The different color dots within route panel depict the airport's flight rule. 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 is displayed for each ICAO on your route.
3. Flight rules are color-coded to depict the latest reported weather conditions:
   - o **Green**: VFR
   - o **Blue**: MVFR
   - o **Red**: IFR
   - o **Magenta**: LIFR

VFR	MVFR
KLOT ● Lewis University Destination TWR:	**KGGP** ● Logansport Cass Co 17.9nm, 275° TWR:
IFR	LIFR
KMCX ● White Co 45.9nm, 351° TWR:	**KVPZ** ● Porter Co Rgnl 49.8nm, 285° TWR:

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

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)
☁ METARs	☁ TAFs
KBLV IFR — KBLV - Scott Afb Midamerica — AF Wx KBLV 251755Z 29014KT 10SM OVC008 02/00 A2975 RMK AO2A SLP081 60004 T00160001 10016 20002 52020 $=	**KBLV - Scott Afb Midamerica St Louis** — AF Wx AMD KBLV 251610Z 2516/2622 33009KT 9000 -DZ OVC008 620089 QNH2968INS BECMG 2517/2518 29009KT 9999 NSW SCT004 OVC011 620119 QNH2976INS BECMG 2612/2613 29015KT 9999 BKN020 OVC027 620209 QNH3000INS BECMG 2616/2617 29015G20KT 9999 FEW020 OVC035 620359 QNH3011INS TX03/2523Z TNM02/2612Z=
KCPS MVFR — KCPS - St Louis Downtown 15nm W — AF Wx KCPS 251753Z 30011KT 10SM OVC010 02/01 A2977 RMK AO2 SLP085 60004 T00220006 10022 20006 51009=	**KCPS - St Louis Downtown 15nm W** — AF Wx KCPS 251725Z 2518/2618 31012G20KT P6SM OVC009 FM260000 29012G18KT P6SM OVC011=
KALN IFR — KALN - St Louis Rgnl 23nm NNW — AF Wx KALN 251750Z 30013KT 10SM OVC007 02/01 A2976=	**KSTL - St Louis Lambert Intl 28nm WNW** — AF Wx KSTL 251725Z 2518/2624 31012G20KT P6SM -SN OVC006 FM252000 30013G20KT P6SM OVC007 FM260100 29014G22KT P6SM OVC013 FM262000 28012G18KT P6SM OVC022=
KSAR IFR — KSAR - Sparta Community Hu 25nm SSE — AF Wx KSAR 251815Z AUTO 30007G15KT 10SM OVC008 01/01 A2976 RMK AO2 P0002 T00120006=	**KSUS - Spirit Of St Louis** — AF Wx

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

17 Maps

Maps include map configuration options and is located at the bottom right of the Moving Map view. This menu contains a library of mutable charts stored within Aero Maps, Base Map, Helicopter and TAC Maps, and User Maps menus.
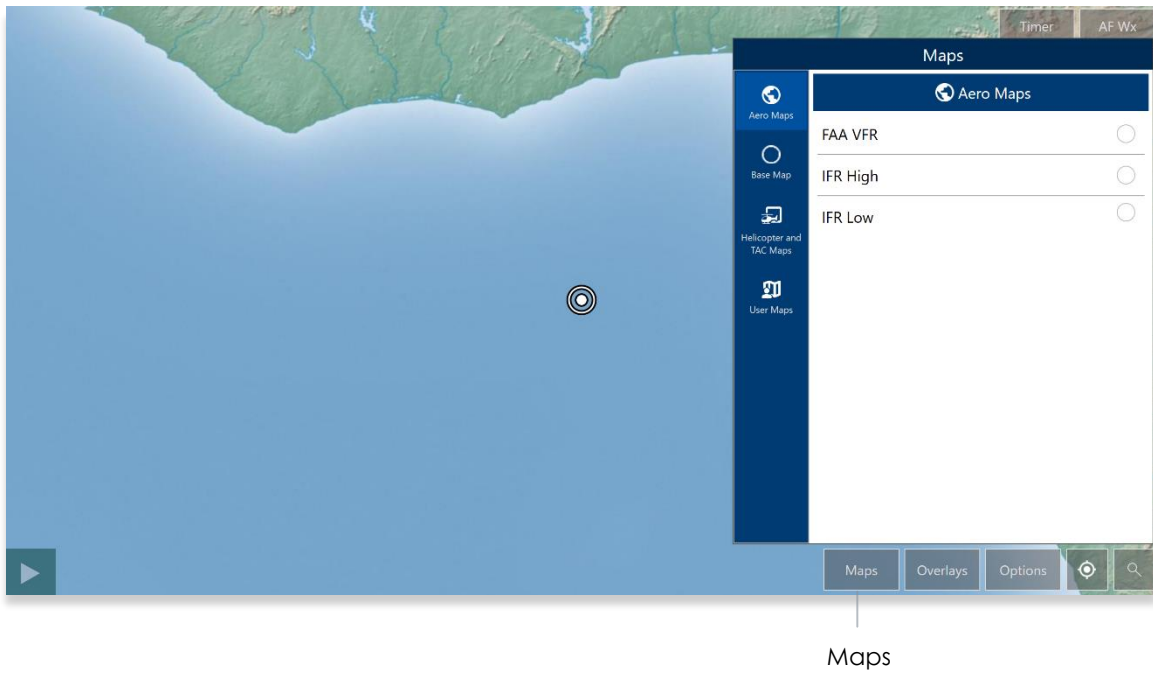
Maps

17.1 Aero Maps

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

17.1.1 FAA Visual Flight Rule (VFR)

The FAA VFR for the desired region must be downloaded. Until the data has been successfully downloaded, the FAA VFR option will remain disabled.

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

17.1.2 Instrument Flight Rule (IFR) High

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

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

FAA VFR	IFR High
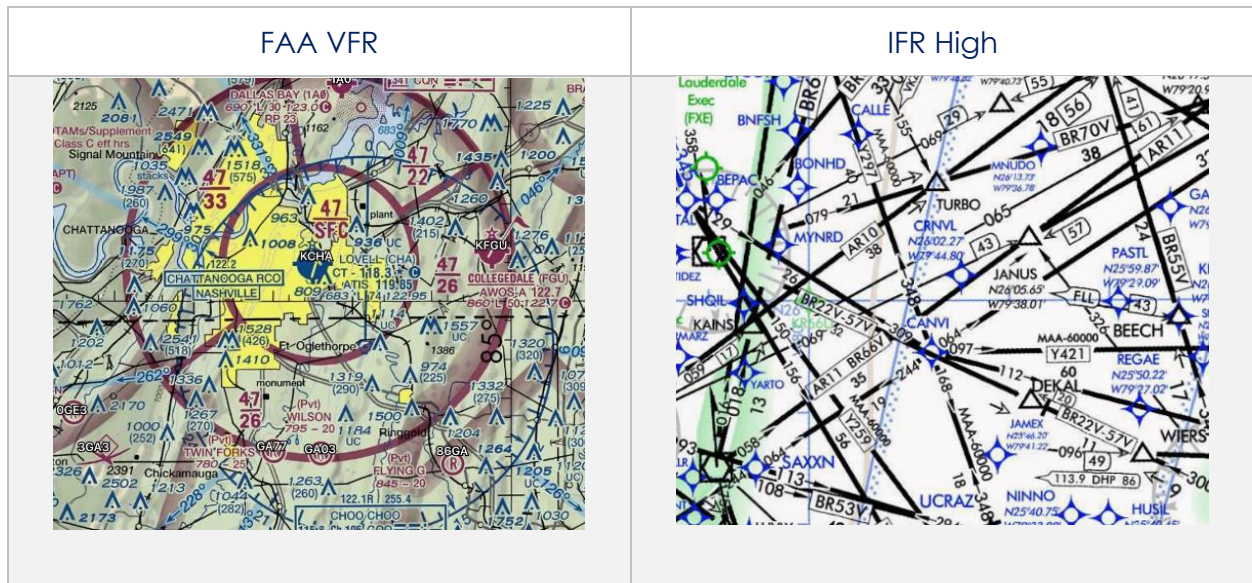
17.1.3 Instrument Flight Rule (IFR) Low

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

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

IFR Low

17.2 Base Map

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

17.2.1 Earth Base Map

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

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

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

17.2.2 Gray Base Map

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

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

Earth	Gray

17.3 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.

17.3.1 Helicopter (Gulf Coast)

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

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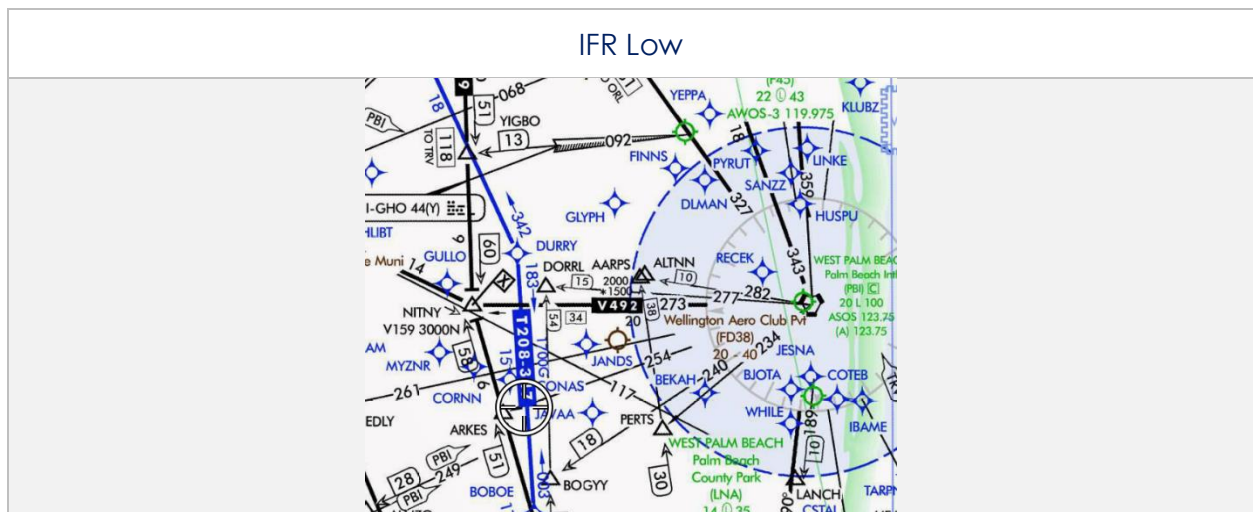
17.3.2 Helicopter (Routes)

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

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

Helicopter (Gulf Coast)	Helicopter (Routes)

17.3.3 Terminal Area Charts (TACs)

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

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

17.4 User Maps

Aero App supports User Maps to be viewed and accessed on the Moving Map. User Maps must be sideloaded onto Aero App. Refer to Section 10.2 for additional information.

1. Tap the **Moving Map** on the *Main Menu.*
2. Tap **Maps** located at the bottom of the Moving Map view.
3. Select **User Maps** from the side menu.
4. The loaded files will display under User Maps.
5. Select desired file(s). The selected user map is displayed on the map.

TACs	User Maps
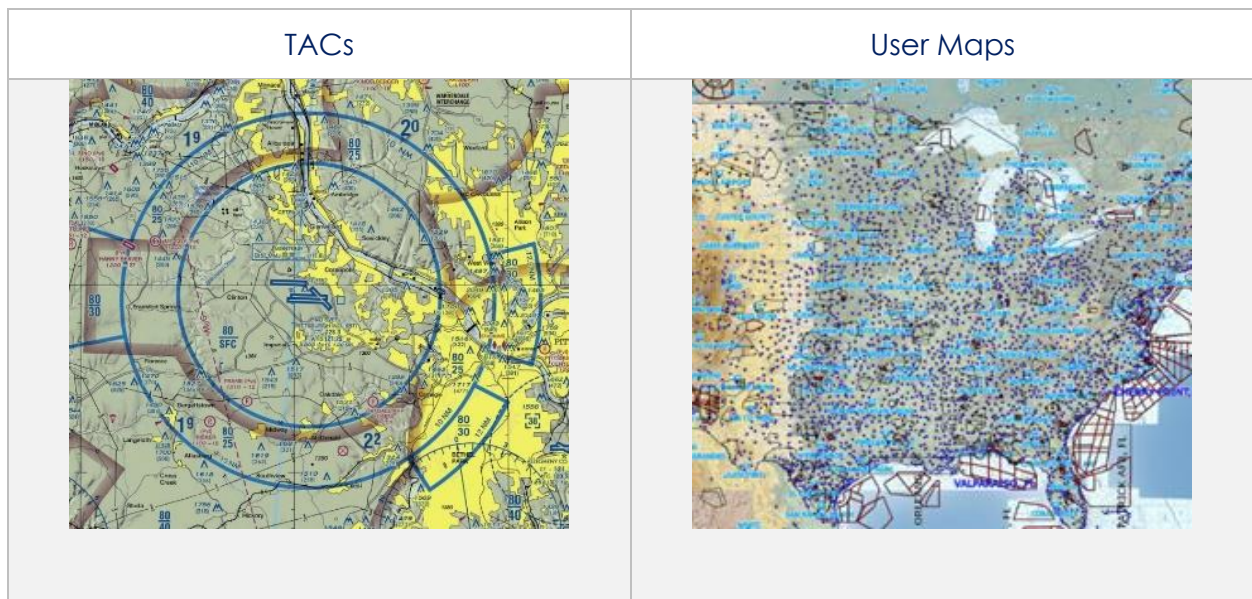
18 Overlays

The Overlays section contains map overlay options and is located at the bottom right of the Moving Map view, to the right of Maps. The sections ahead will expand on the different Moving Map overlay options to choose from.
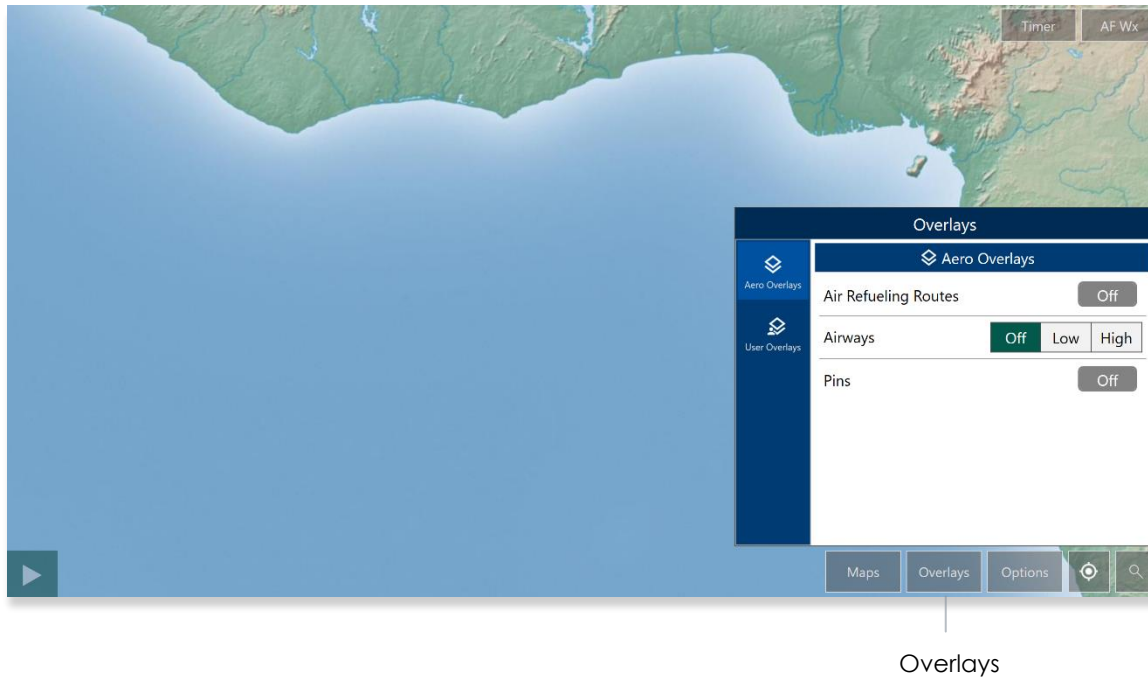
Overlays

18.1 Aero Overlays

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

18.1.1 Air Refueling Routes

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

18.1.2 Airways – Low

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

18.1.3 Airways – High

1. Tap **Moving Map** on the *Main Menu*.
2. Tap **Overlays** located at the bottom of the Moving Map view.
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 the map.

> **NOTE:** User can add Airways to their route. Refer to <u>Add Airways to Route</u> for additional information.

18.1.4 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 <u>Section 25.1.3</u> for additional information.

1. Tap **Moving Map** on the *Main Menu.*
2. Tap **Overlays** located at the bottom of the Moving Map view.
3. Select **Aero Overlays** from the side menu, if necessary.
4. Tap **Pins** to enable the option. Dropped pins will populate the map.
5. Tap a pin of choice on the Moving Map view. The pin information will be displayed.

Airways – High	Pins

18.2 User Overlays

Aero App enables users to sideload User Overlays such as Shapefiles and GeoJSON files to their Aero App directory. Refer to Section 10 for additional information.

1. Tap **Moving Map** on the *Main Menu*.
2. Tap **Overlays** located at the bottom of the Moving Map view.
3. Select **User Overlays** from the side menu.
4. Tap one or multiple **User Overlays**. The user overlay is displayed on the map.

NOTE: Users can sideload User Overlays by storing shapefiles, GeoJSON, KML, and other files in the PC/Documents/Aero App/UserFiles directory.
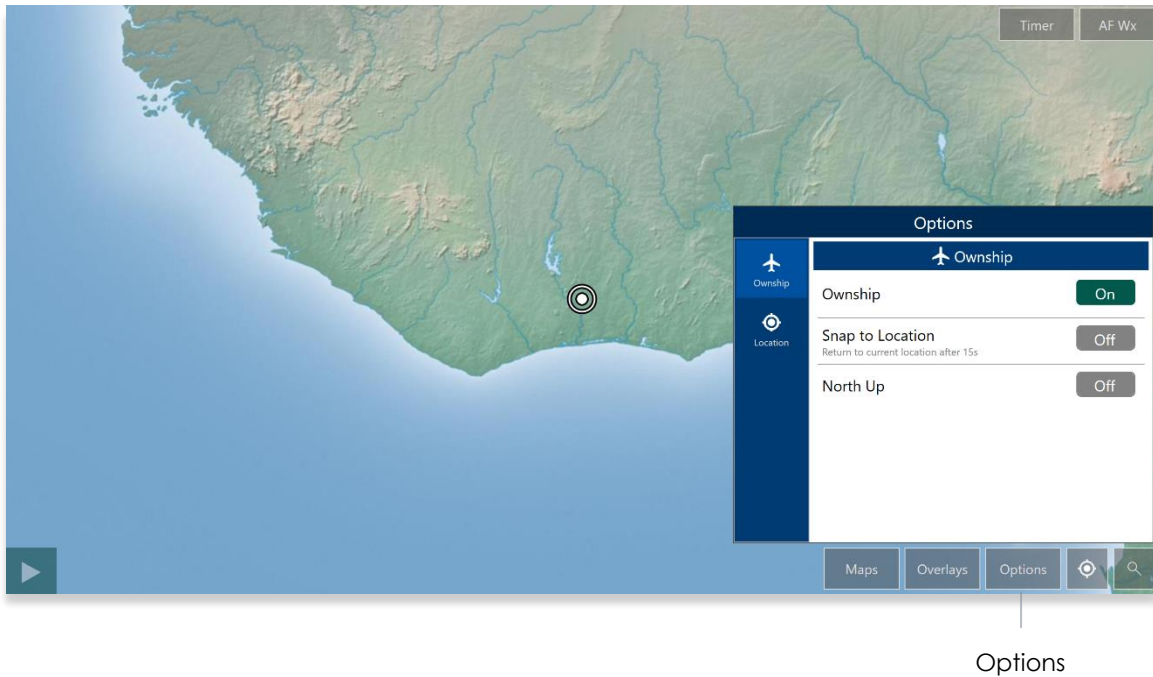
NOTE: GeoJSON files must not exceed 15 MB; otherwise, an error message will be returned.
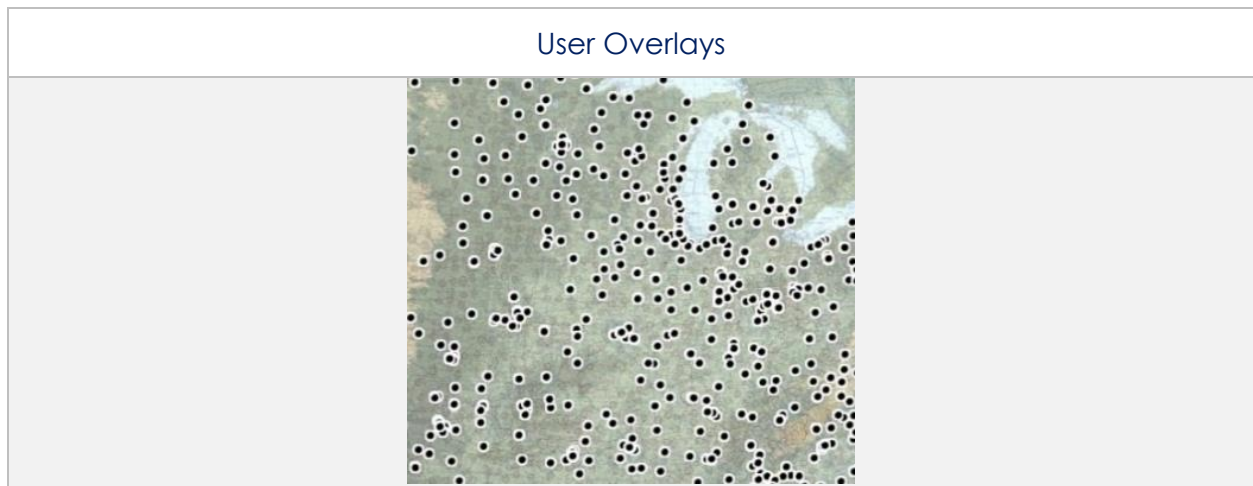
User Overlays

19 Options

The Options menu provides Ownship and Location features to assist users in preflight or inflight operations. The Options button is located at the bottom right of the Moving Map, to the right of Overlays.

Options

19.1 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.

19.1.1 Ownship

The location of your device is relative to the position of the ownship being displayed on the Moving Map view.

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

19.1.2 Snap to Location

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

NOTE: Alternatively, users can access their Snap to Location feature by tapping the *crosshair icon* on the Moving Map as explained in Section 20.

Ownship	Snap to Location

19.1.3 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
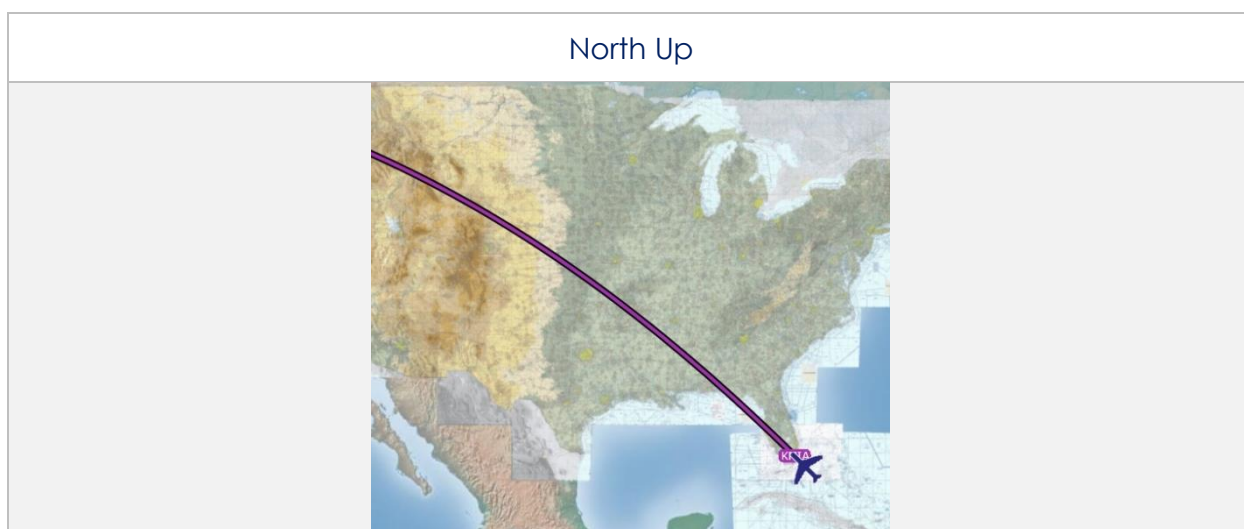
19.2 Location

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

19.2.1 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 displayed in orange are populated on the map.

📝 **NOTE:** Refer to Section 16.1.6 for additional information regarding Breadcrumbs.

19.2.2 Distance Rings

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

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
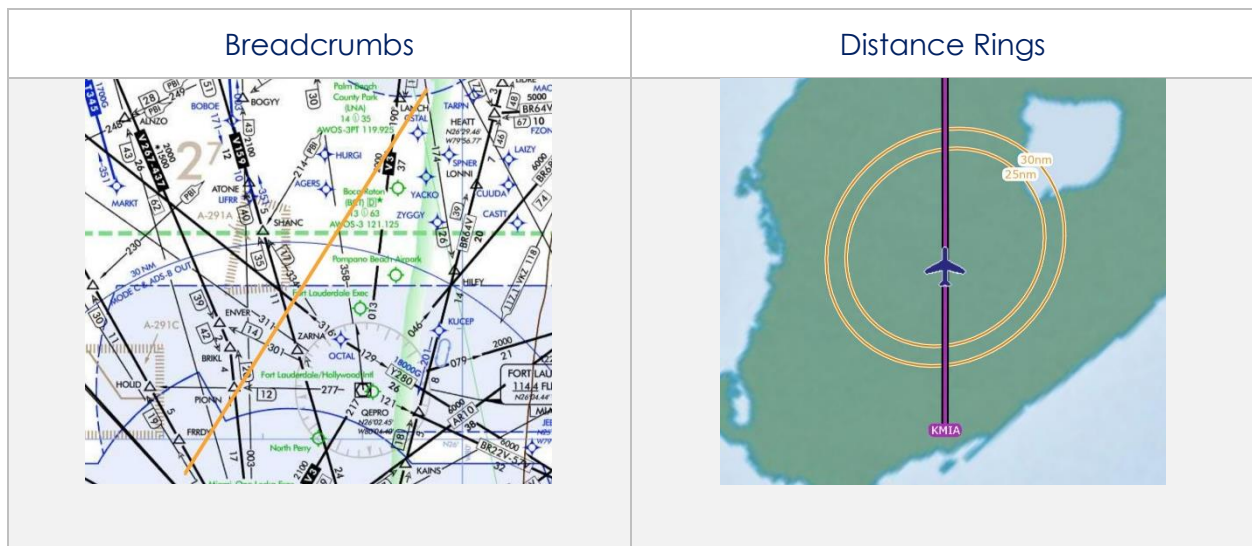
20 Snap to Location

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

> **NOTE:** Users can enable the Snap to Location feature, which returns to the user's current location after 15 seconds as explained in Section 19.1.2.

21 Move Map to Location

The Move Map to Location (search icon) feature can be found at the bottom right of the Moving Map view, next to the *Snap to Location* feature. Users can search by a point's ID (identifier) or by entering a search term, and the screen will move to the location of the identifier. Users can filter airports by setting a minimum runway length in their Preferences.

1. Tap the **Move Map to Location** (magnifying glass) button located at bottom right of the screen.
2. The Move Map to Location popup will appear. Tap the **text box** to open your device's keyboard.
3. Enter an identifier, search term, or the latitude and longitude of a desired point.
4. The search results are divided into different identifier types (Airports, NavAids, Waypoints, and User Waypoints). If needed, scroll through the results list to choose the searched identifier. Alternatively, users can tap **Enter** on the device's keyboard and the screen will pan to its location.
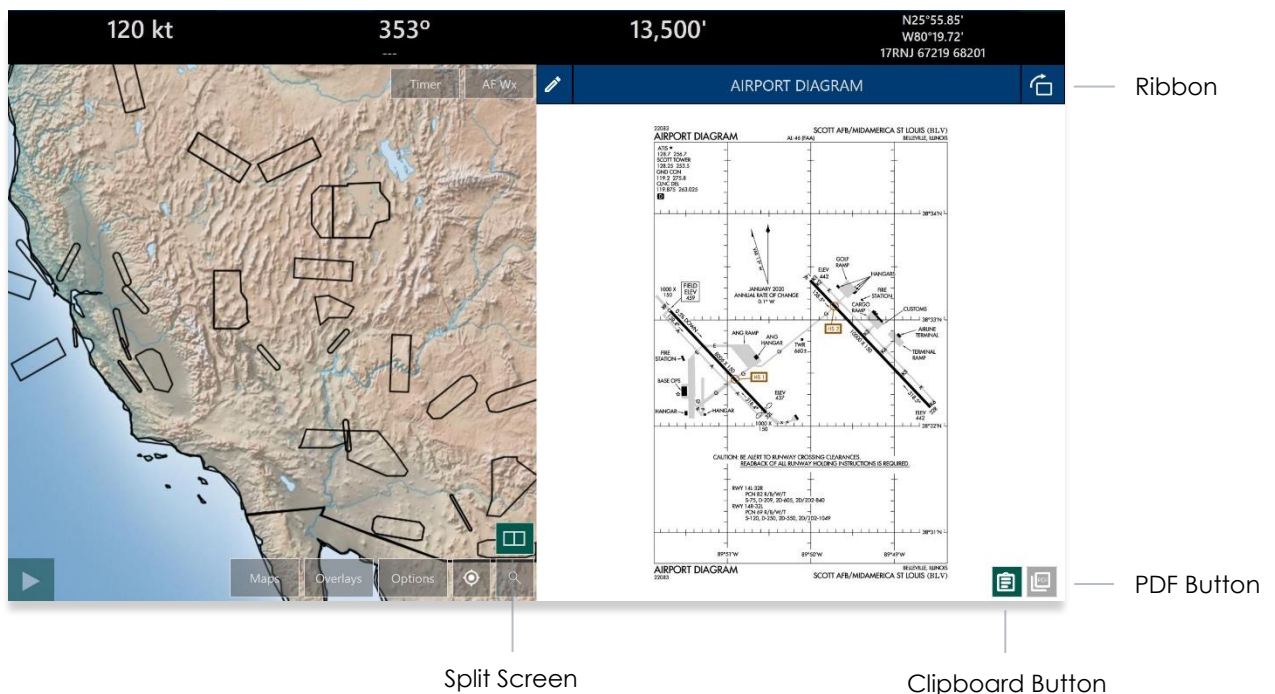
22 Split Screen

Split Screen enables users to simultaneously view IAP, APD charts, or user PDF documents with the Moving Map on the same screen. The Split Screen feature is located at the bottom right of the Moving Map view, directly above the Move Map to Location feature.

22.1 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 of the screen.
3. The destination APD will display.
4. Tap on the **ribbon.**
5. Select a chart from the popup menu.

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

> **NOTE:** Refer to Section 15.2.1 on how to draw on APD charts.

22.2 PDF Support

The Moving Map's split screen view supports the display of PDF documents. To view your preferred user documents, ensure they are saved to your device through sideloading. Refer to Section 10.6 for additional information.

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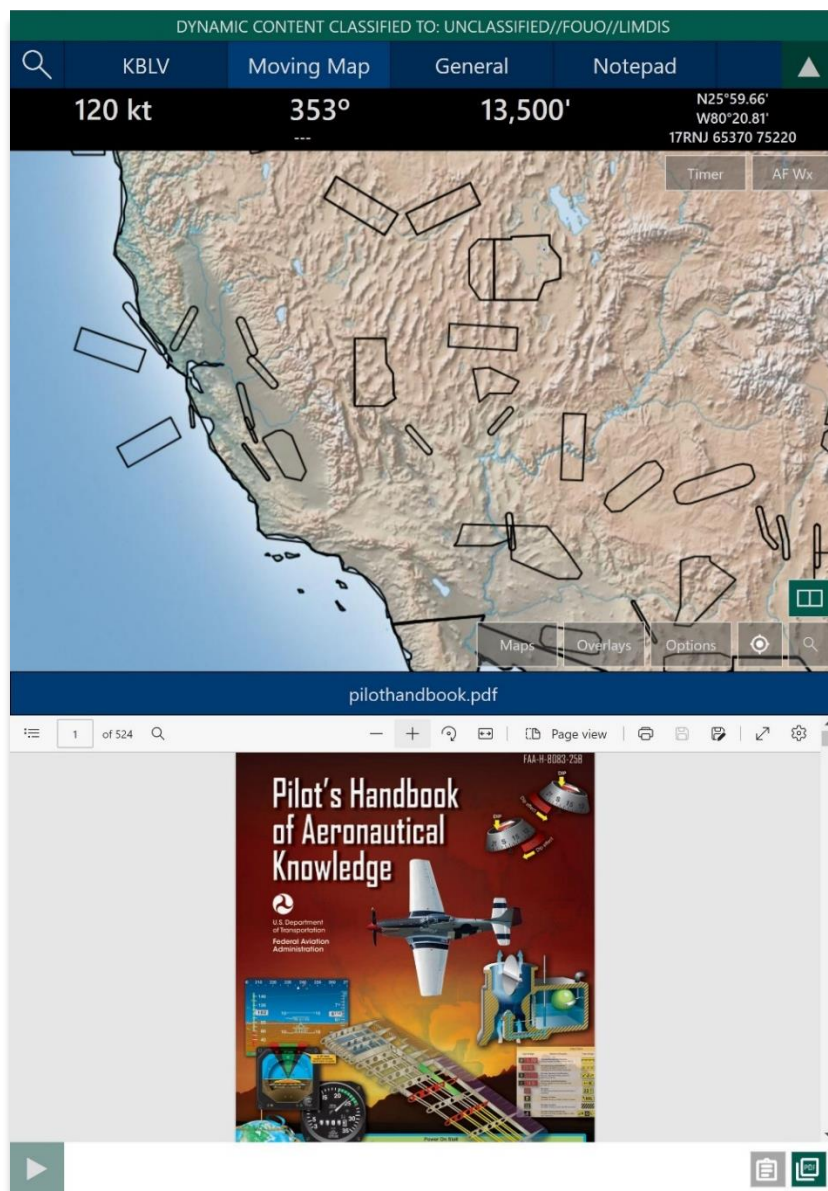
23 Center Target

The Center Target retrieves the latitude, longitude, and MGRS values of the area in which the target is placed. As the Map moves, a yellow tag located at the top right of the Flight Information Panel, will briefly display information on Distance and Bearing, respective to the placement of the target. The distance and bearing information on the yellow tag is relative to the ownship's location.
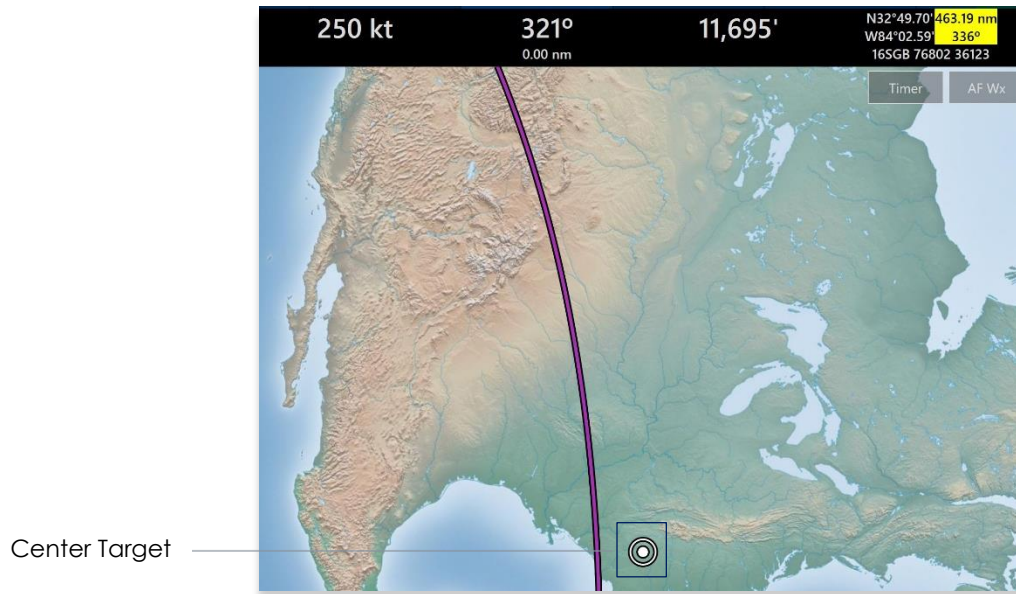
Center Target

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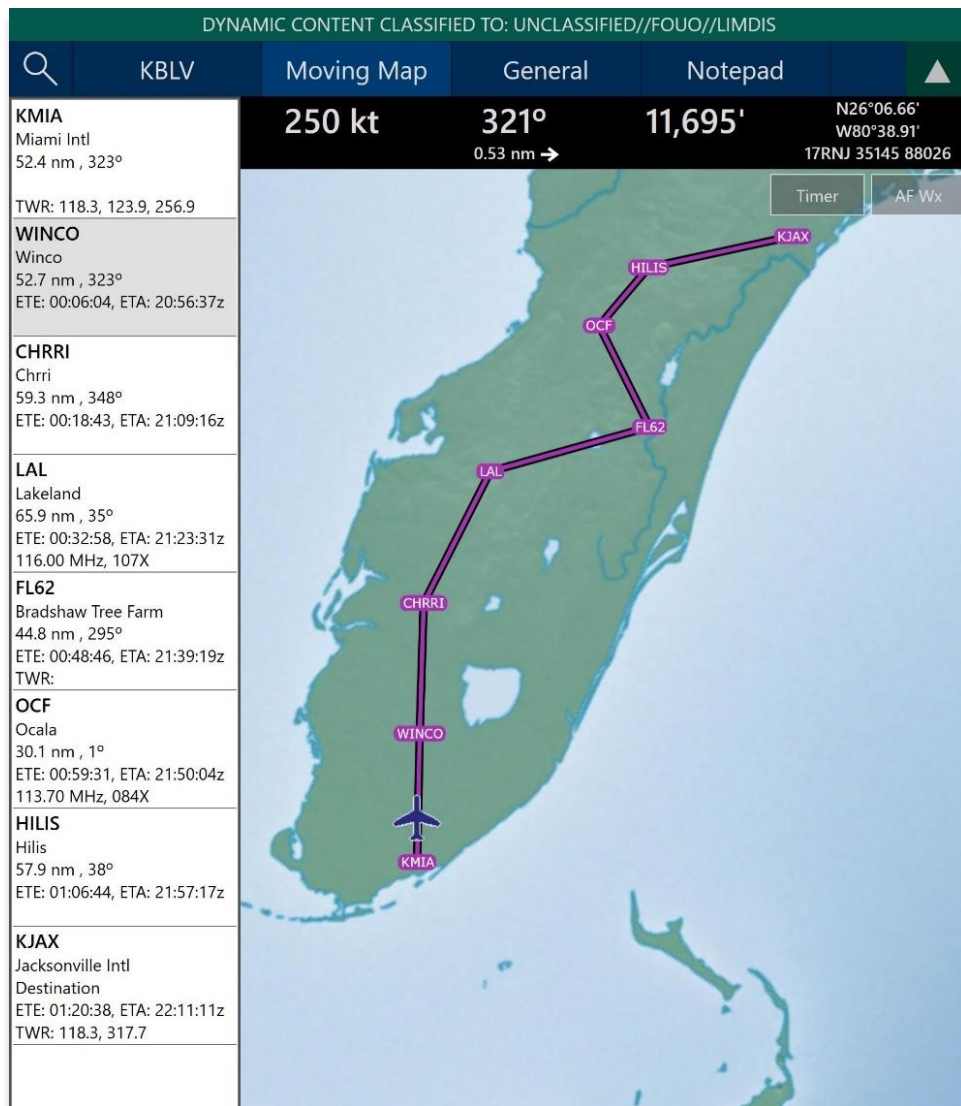
24 Drag and Drop

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

1. Load desired route in your Route Panel.
2. On the Moving Map, hold a point or segment in your route and drag it to a point that you wish to add to the route.
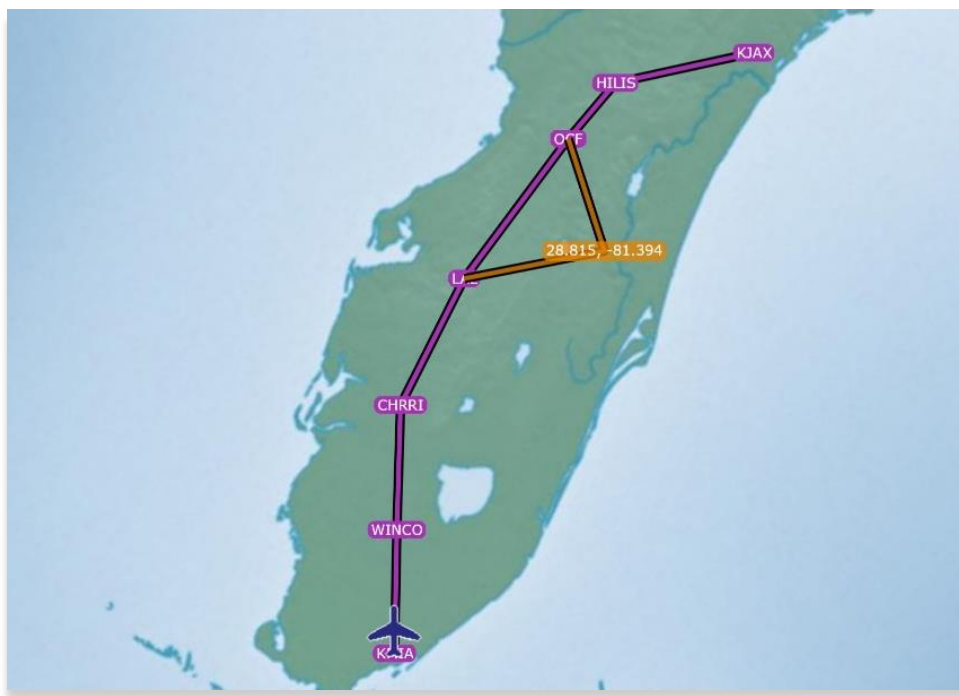
3. The Nearest popup will appear displaying the latitude and longitude of the selected point with ten nearest Airports, NavAids, Waypoints, and User Waypoints.
4. Select desired point.

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

NOTE: Warning popups will appear when users try to drag and drop points that belong to a 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.

---

25 Identifier Menu

The Identifier Menu includes identifier information such as the identifier name, and its latitude and longitude. Users can display the Identifier Menu 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 an identifier on the Route Panel.
3. The Nearest popup will display. Select desired identifier. The Identifier Menu will display with each option grouped by Actions, Add, and Show.
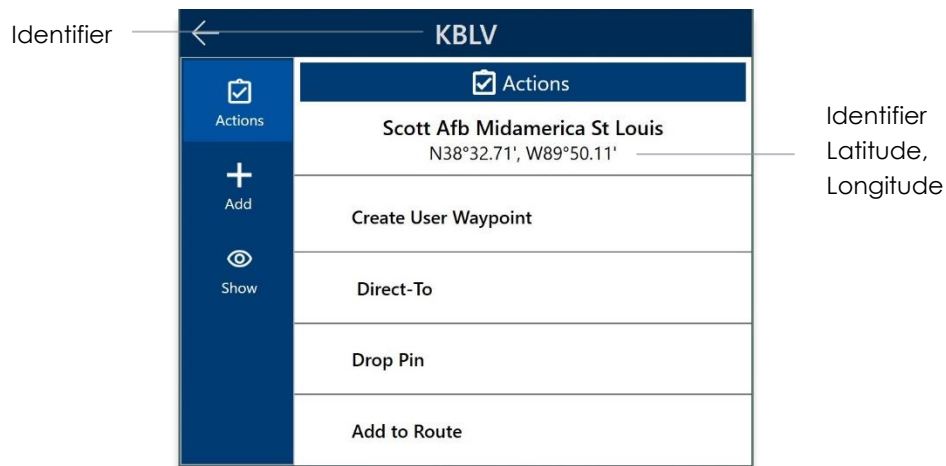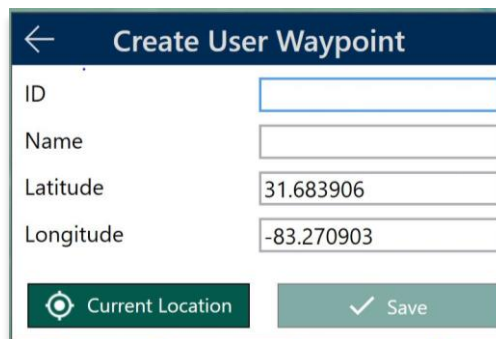
25.1 Actions

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

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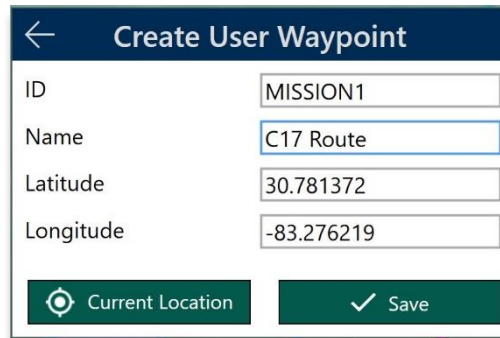
25.1.1 Create User Waypoint

Aero App enables users to create user waypoints using a unique ID, Name, Latitude, and Longitude. Users can view their list of User Waypoints. Refer to Section 26.3.3.4 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 an identifier on the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear, select your desired point.
4. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Create User Waypoint**.
6. The Create User Waypoint popup will appear with fields to enter an Identifier, Name, Latitude, and Longitude. The 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. When creating a name for User Waypoints, the name can only contain Alphanumeric characters (upper and lower cases), spaces, and hyphens.

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 10.3 for information on how to sideload User Waypoints.

**NOTE:** Refer to Section 26.3.3.4 to view all saved User Waypoints.

25.1.2 Direct-To

The Direct-To feature creates a new route from your ownship's current location direct to your desired destination. Users have the option to Add to Route and proceed Direct-To or Clear Route and proceed Direct-To.

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

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

3. Long press a point on the Moving Map. Alternatively, users can tap an identifier on the Route Panel to directly display the Identifier Menu.
4. The Nearest popup will appear, select desired point.
5. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
6. Select **Direct-To**. The Direct-To options popup will display the following options:
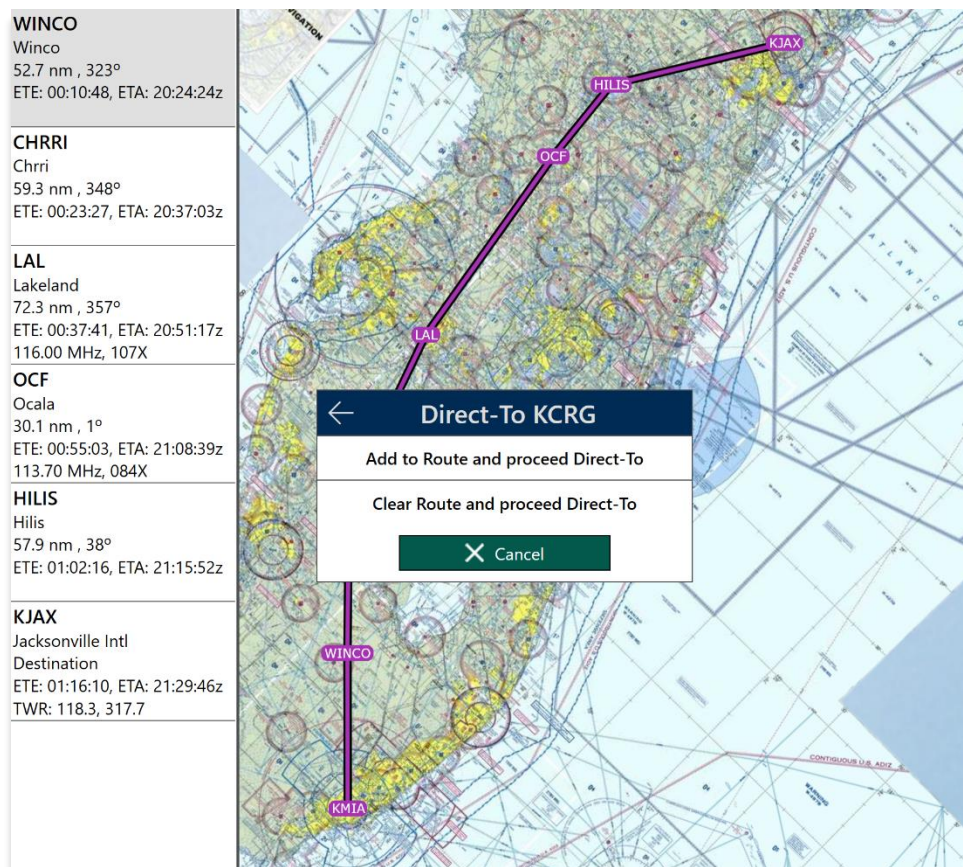
- **Add to Route and proceed Direct-To** – A new route is created starting from your present location to the Direct-To point. The values for ETA/ETE and distance and bearing are the calculated values for the Direct-To route. The total distance value is calculated for your existing route and not the Direct-To route.

Distance of existing route
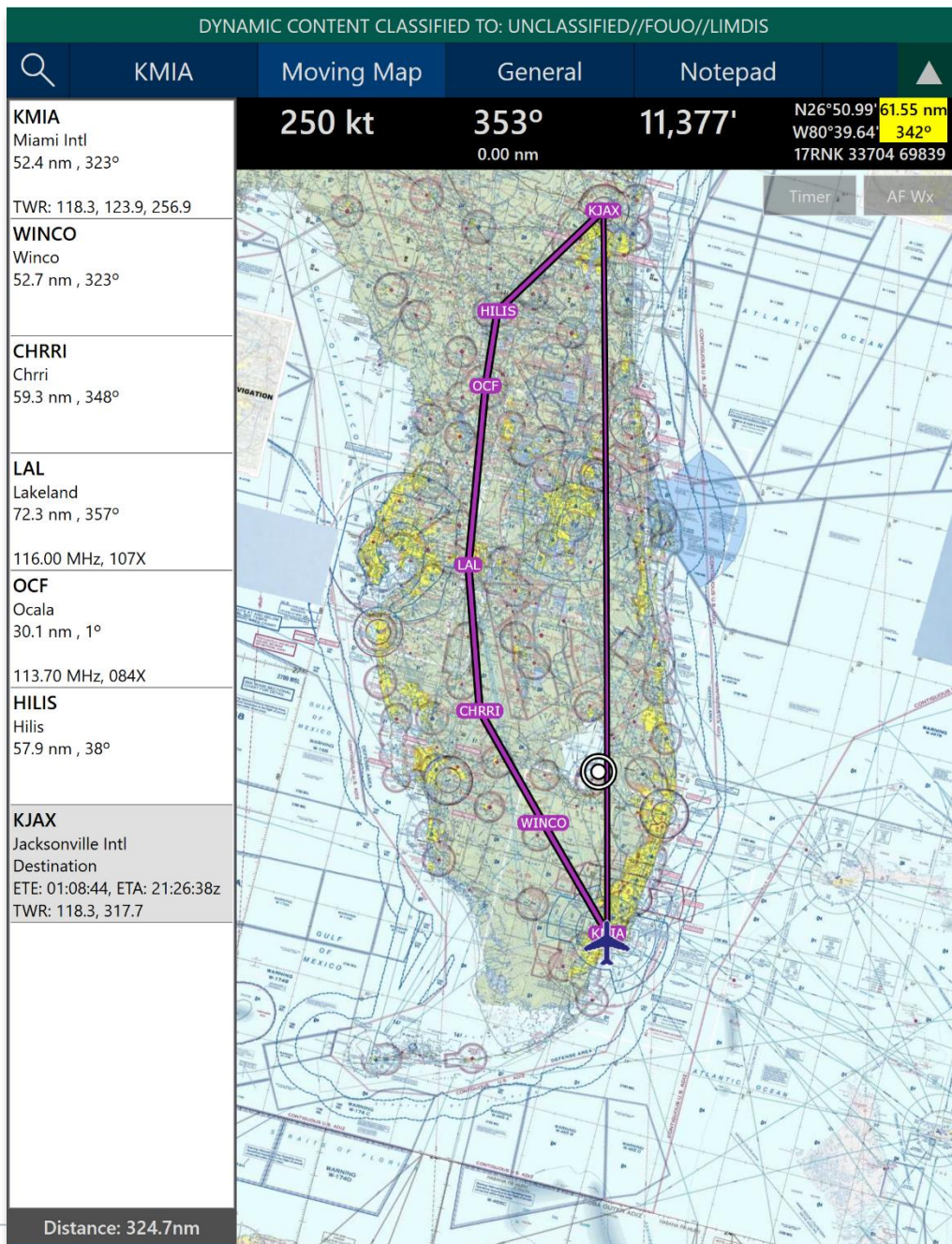
- **Clear Route and proceed Direct-To** – Aero App clears the existing route and creates a new route starting from your present location to the Direct-To point. The values for ETA/ETE and distance and bearing are the calculated values for the Direct-To route. The total distance for the Direct-To route is set to 0 nm.

Distance set to 0 nm
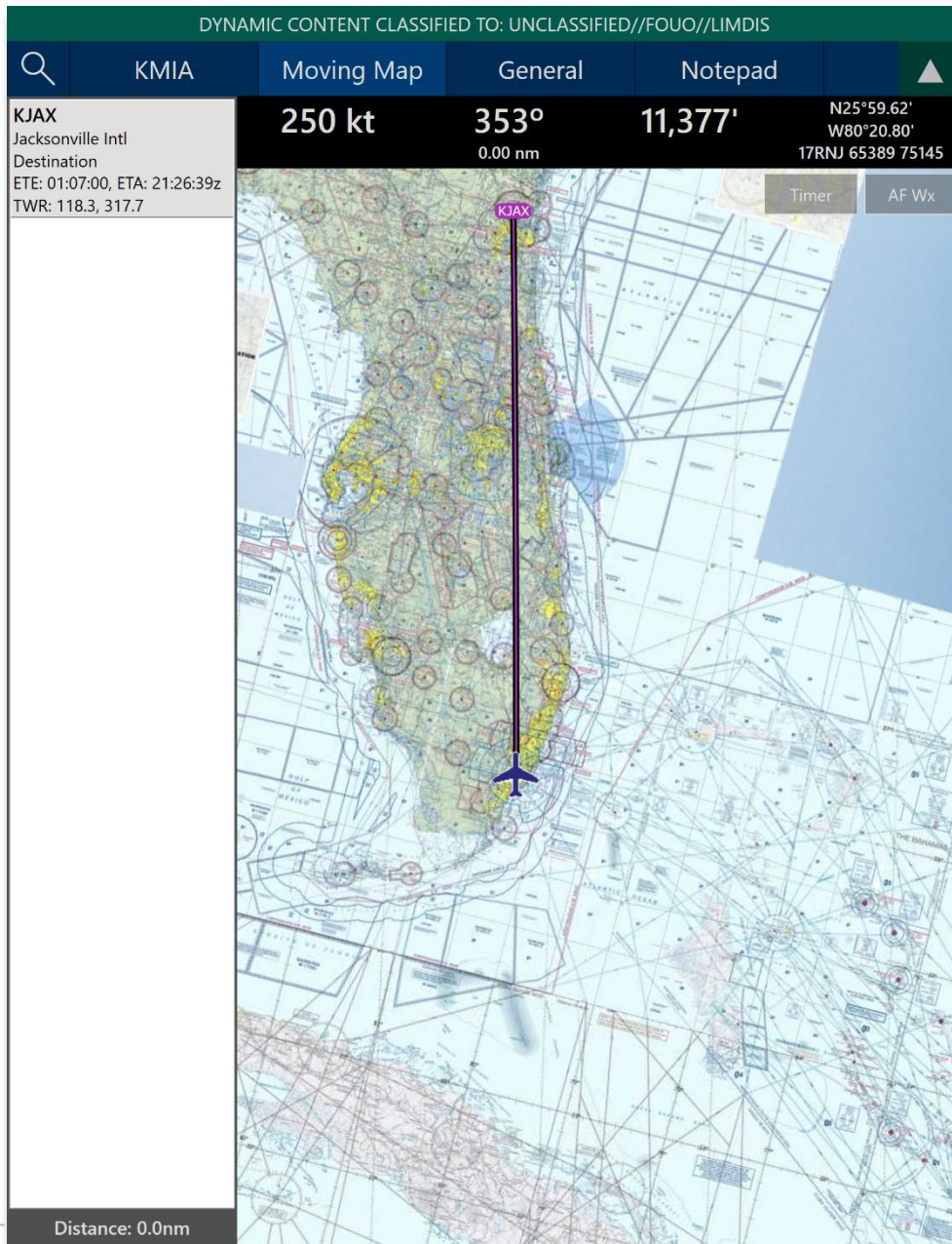
7. A thin magenta route line from the ownship's current location to the selected Direct-To point will appear.

8. To cancel the Direct-To, tap on the Direct-To point from the Route Panel. The Identifier Menu will appear, select **Cancel Direct-To.**

> ![note icon] **NOTE:** Once the existing route has been cleared, users cannot revert to the original route when canceling Direct-To.

25.1.3 Drop Pin

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

Aero App enables users to sideload pins onto Aero App. Refer to Section 10.5 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 an identifier on the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear, select your desired point.
4. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Drop Pin**.
6. 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.

25.1.4 Add to Route

1. Tap **Moving Map** on the **Main Menu**.
2. Long-press a point on the Moving Map. Alternatively, users can tap an identifier on the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear. Select a desired point.
4. The Identifier Menu will appear. Select **Actions** from the side menu, if necessary.
5. Tap **Add to Route**.
6. A new point will be added to the current route.
7. Once the point has been added, the Add to Route option changes to Remove from Route. Tap **Remove from Route** of the point that you wish to permanently delete.

25.2 Add

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

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

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

Aero App enables users to add 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 Identifier Menu will appear. Select **Add** from the side menu.
3. Select **DP** or **STAR.**

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

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

5. Transition will become selectable. Tap the Transition drop-down and select desired **Transition** point**.**

6. First Waypoint will become selectable. Tap the First Waypoint drop-down and select desired **First Waypoint.**

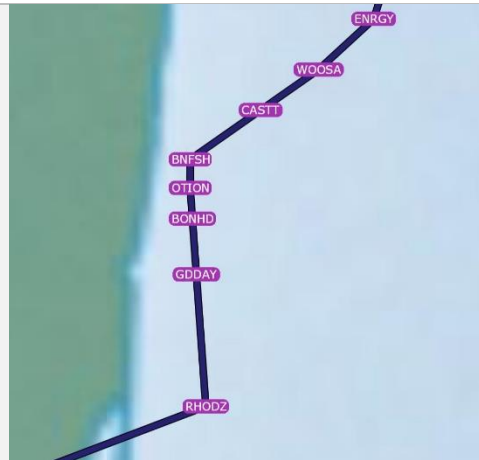7. The Procedure preview will appear and Add to Route will become selectable. Tap **Add to Route.**
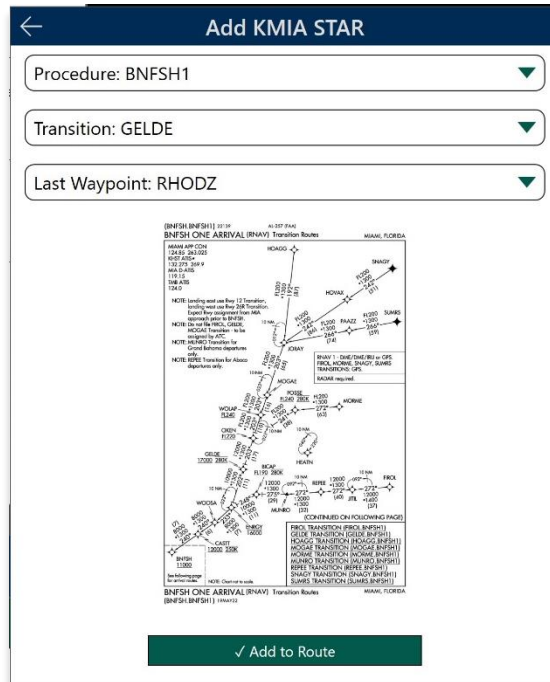
8. The procedure will be added to your flight route.
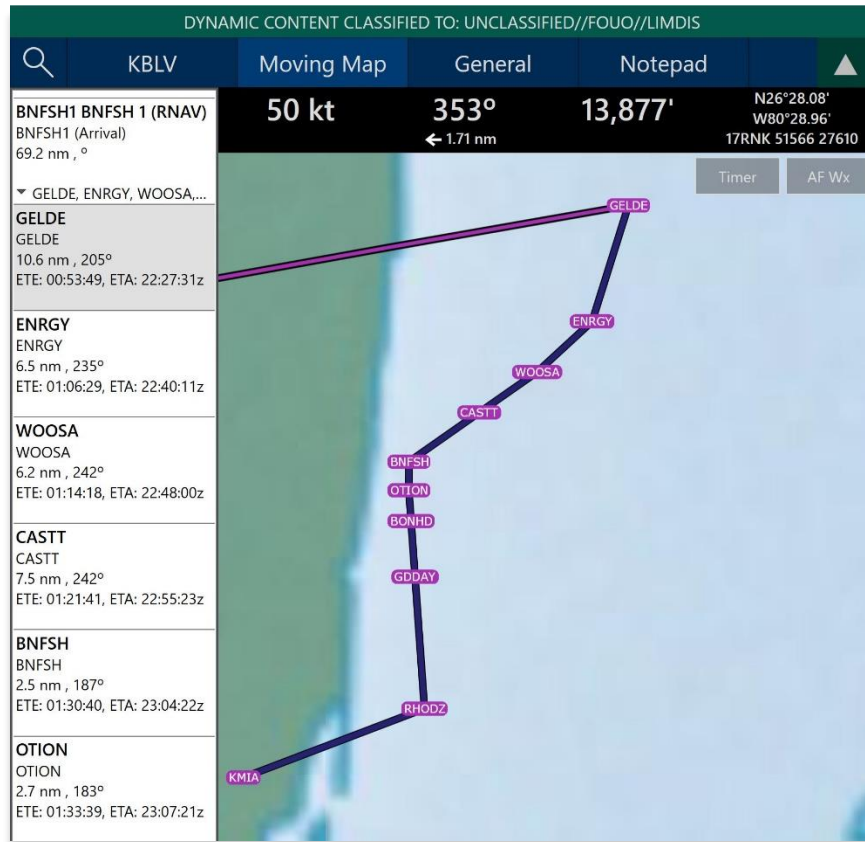

Add DP to Route	Add STAR to Route

25.3 Show

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

- Show on Map
- IAPs on Map
- Information and Weather (Info and Wx)
- Nearest

25.3.1 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 a point on the Moving Map. Alternatively, users can tap an identifier on the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear, select your desired point.
4. The Identifier Menu will appear. Select **Show** from the side menu.
5. Tap **Show on Map**.
6. The screen will pan to the selected location.
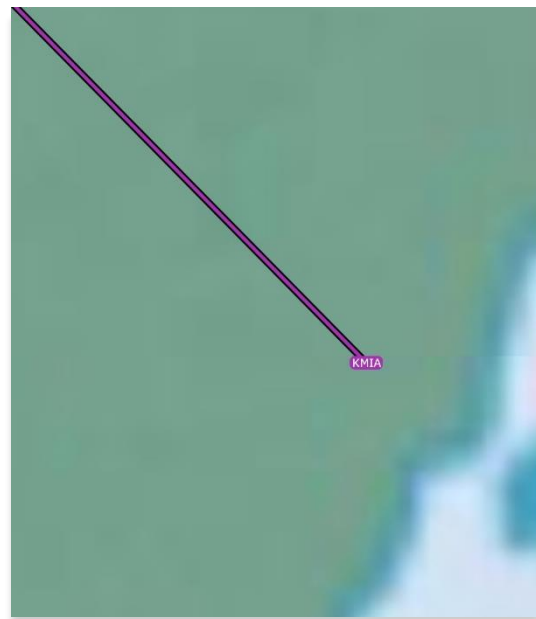
25.3.2 Instrument Approach Procedures (IAPs) on Map

Aero App enables users to display Instrument Approach Procedures (IAPs) on the Moving Map, perfectly georeferenced. To show an IAP on the Moving Map, users must download Georeference data beforehand; otherwise, an error message will be returned.

1. Tap **Moving Map** on the **Main Menu**.
2. Long-press a point on the Moving Map. Alternatively, users can tap an identifier on the Route Panel to directly display the Identifier Menu.
3. The Nearest popup will appear, select your desired point.
4. The Identifier Menu will appear. Select **Show** from the side menu.
5. Tap **IAP on Map**.
6. A list of IAPs for the identifier will appear. Select an **IAP Filter** from the options button group.
7. IAPs are grouped by runways. Select desired **IAP** then the IAP is overlayed 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%.
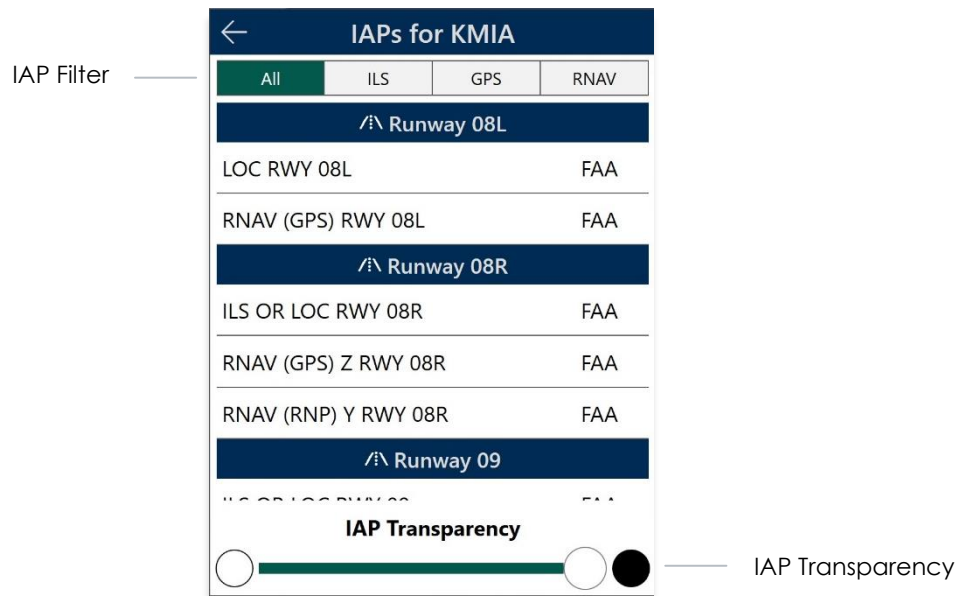
9. To remove the IAP from the Moving Map, tap the red popup **X**.
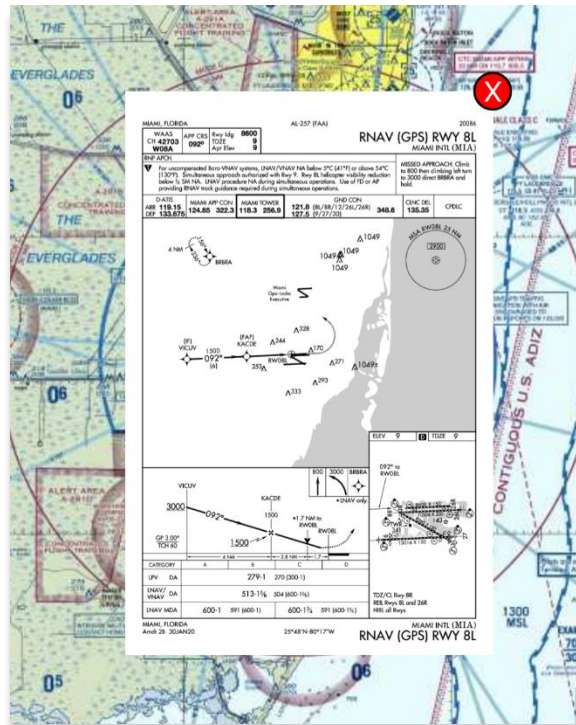
NOTE: A small number of Instrument Approach Procedures (IAPs) are not georeferenced and therefore cannot be shown on the Moving Map.

25.3.3 Info and Wx (Information and Weather)

The Info and Wx (Information and Weather) 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 Route Panel, additional airport information such as Info and Wx can be viewed. Refer to <u>Section 15</u> 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.

25.3.4 Nearest

The Nearest feature enables users to view nearby Airports, NavAids, Waypoints, and User Waypoints based on the selected identifier.

1. Tap **Moving Map** on the *Main Menu*.
2. Long-press a desired point on the Moving Map.
3. Your current location and a list of the nearby Airports, NavAids, Waypoints, and User Waypoints will display, select desired point.
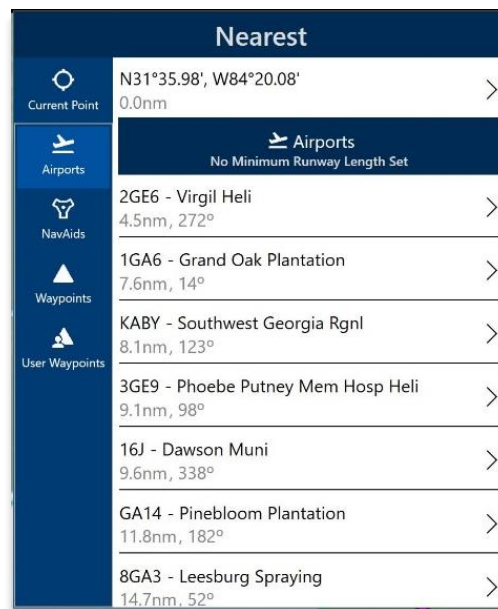
4. Select a desired point. The Identifier menu will display your new point.
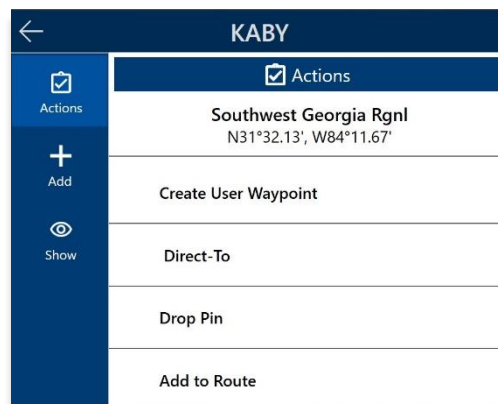
New Point

26 Route Panel

The collapsible Route Panel can be expanded to display the full view of the Route Panel or be hidden to display the full view of a specific Aero App page. The bottom of the Route Panel view displays the following options:

- **Add** – enables users to add identifiers such as Airports, NavAids, Waypoints, User Waypoints, Airways, MTRs, enter a full route, or add coordinates in latitude and longitude, MGRS, GARS, or Radial format.
- **Edit** – enables users to delete and/or reorder entries within the route.
- **Route** – enables users to perform actions pertaining to the route or display additional features on the map.

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

26.1 Add

The Add to Route feature allows users to create a route by adding an identifier (e.g., Airports, NavAids, Waypoints, User Waypoints, Airways, and MTRs), search term, a full route, or enter coordinates in latitude and longitude, MGRS, GARS, or Radial format. Users can filter airports by setting a minimum runway length in their Preferences.

1. Tap **Moving Map** on the *Main Menu*.
2. Navigate to the **Route Panel**.
3. Tap the **Add** button located at the bottom left of the Route Panel. The Add popup will display.
4. Search by entering an identifier, search term, or a full route. You can also enter coordinates in lat/lon, MGRS, GARS, or Radial format in the text box.
5. Tap **Enter** from the device's keyboard and the entries will be added to the route. All entries are displayed in the Route Panel in the order that they were entered.

📝 **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.

Add Military Training Routes (MTRs) to Route

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

1. Navigate to the **Route Panel**.
2. Tap the **Add** button located at the bottom left of the Route Panel**.** The Add popup will display.
3. Use your keypad to enter MTRs to add to route following the format: **{starting point}. {MTR}.{endpoint}**.

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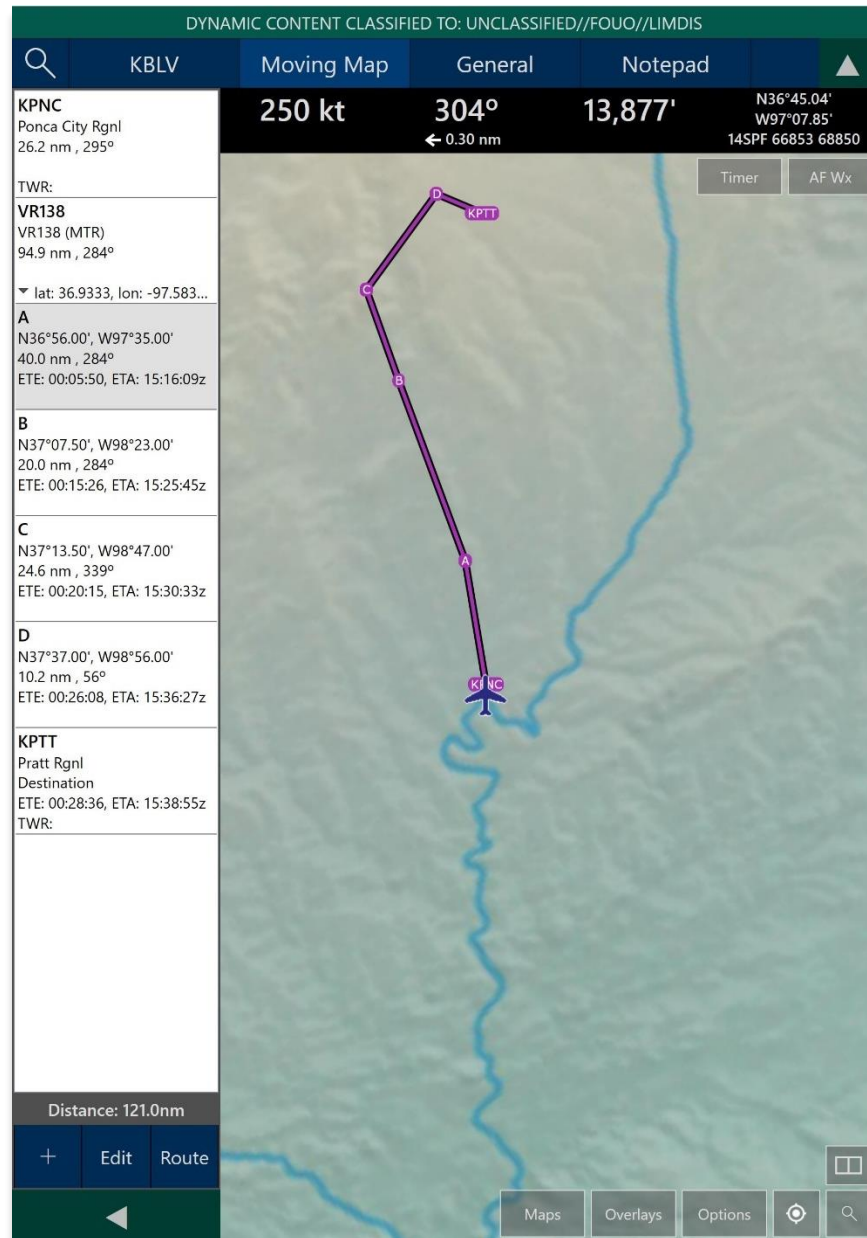
Add Airways to Route

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

1. Navigate to the **Route Panel**.
2. Tap the **Add** button located at the bottom left of the Route Panel**.** The Add popup will display.
3. Use your keypad to search and select desired Airways to add to route.

4. The Airway is added to the Route Panel and on Moving Map.
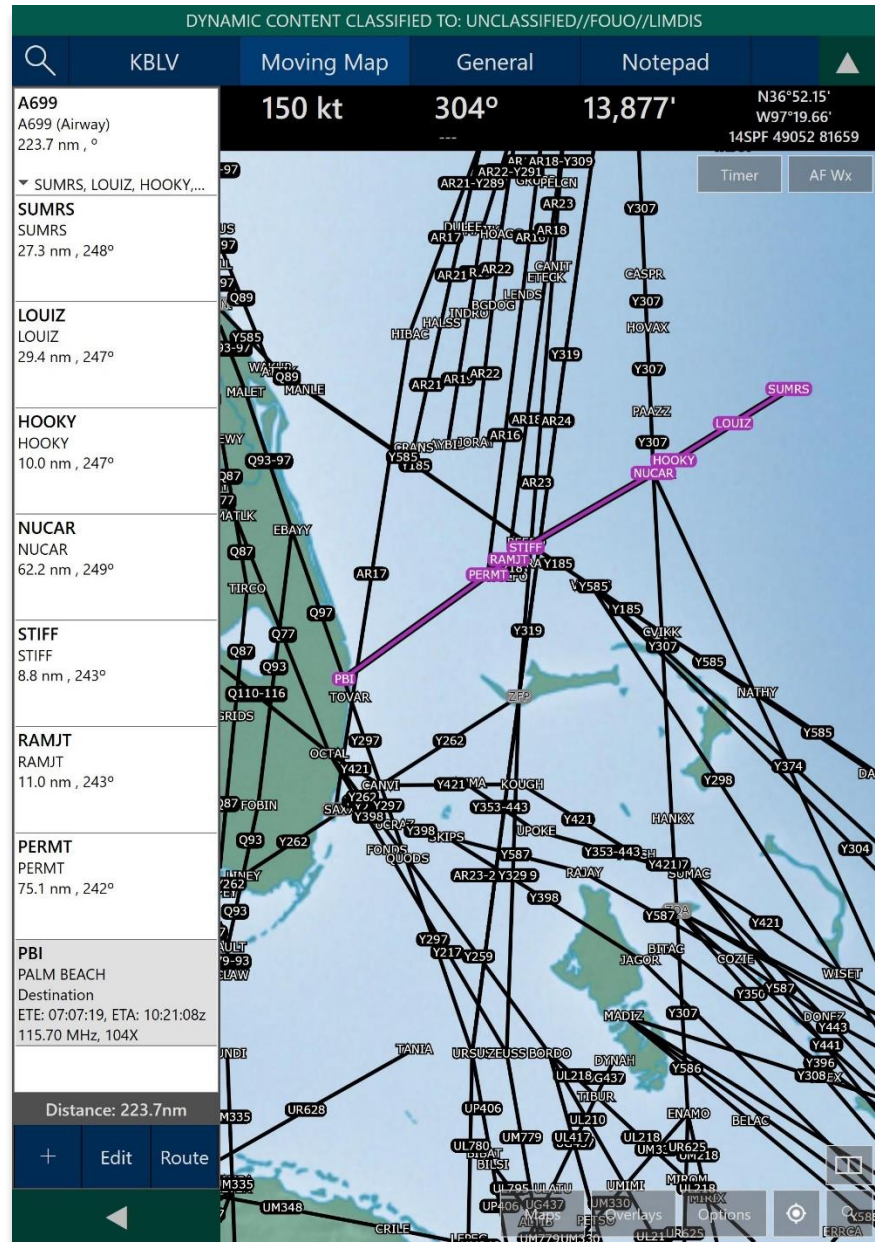
26.2 Edit

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

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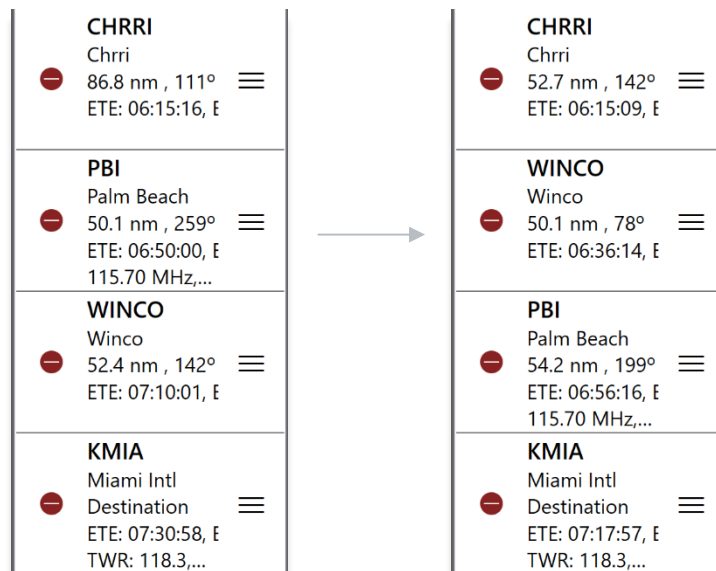
26.3 Route

The Route Menu options provide route enhancement capabilities and is located at the bottom right of the Route Panel view. The Route menu is divided into categories of Actions, Add, and Show.
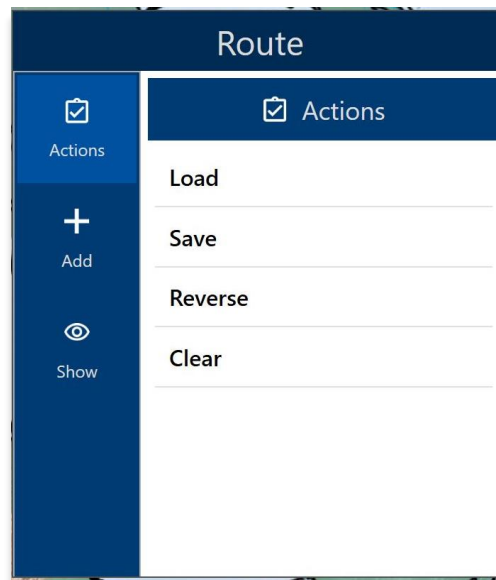
26.3.1 Actions

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

- Load
- Save
- Reverse
- Clear

26.3.1.1 Load Route

The Load feature displays a collection of imported routes including CRD files and routes saved directly on Aero App. Selecting a route from the list replaces the current route with the selected route.

1. Navigate to the **Route Panel**.
2. Tap **Route** located at the bottom right of the Route Panel.
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. The selected route will populate the Route Panel and display on the Moving Map.

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

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

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

Load a Common Route Definition (CRD) File

Aero App supports CRD files. CRD files must be sideloaded onto Aero App. Refer to Section 10.4 for additional information.

1. Navigate to the **Route Panel**.
2. Tap **Route** located at the bottom right of the Route Panel.
3. The Route Menu will appear. Select **Actions** from the side menu, if necessary.
4. Tap **Load**.
5. Locate and select your desired CRD file. The selected route will populate the Route Panel and display on the Moving Map.

6. Tap **Edit** to reveal the *Delete* button.
7. Tap the **Delete** button on the file(s) that you wish to permanently remove.

26.3.1.2 Save Route

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

1. Ensure that the route includes a complete route.
2. Tap **Route** located at the bottom right of the Route Panel.
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 will be saved and be added to the *Load Route* table.

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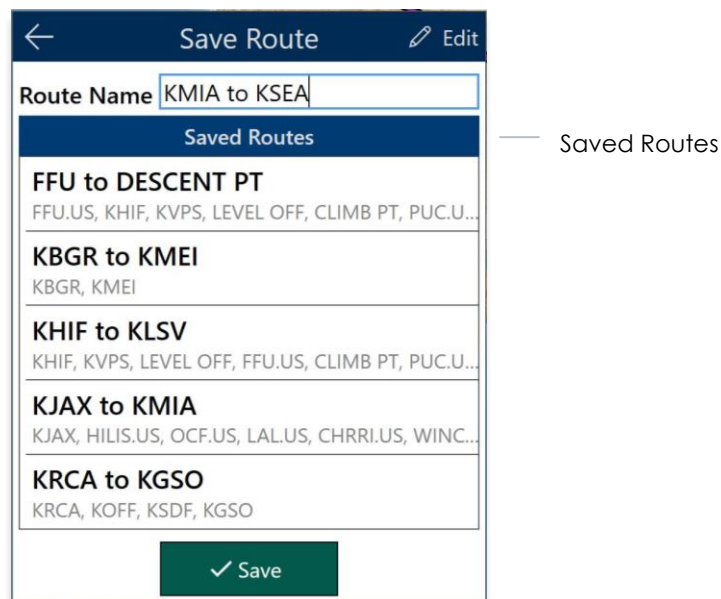
NOTE: When entering a new route name, the name should only contain alphanumeric (lower and upper case) characters, spaces and hyphens.

Save a CRD File

1. Navigate to the **Route Panel.**
2. Tap **Route** located at the bottom right of the Route Panel.
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 desired name.
6. Once the route has been renamed, tap **Save**. The changes will be added to the Saved Routes list.

Rename CRD File

26.3.1.3 Reverse Route

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

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

26.3.1.4 Clear Route

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

1. Navigate to the *Route Panel.*
2. Tap **Route** located at the bottom right of the Route Panel.
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.

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

26.3.1.5 Delete Imported and Saved Routes

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

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 **Edit** to reveal the *Delete* button.
6. Tap the **Delete** button on the file(s) that you wish to permanently remove.
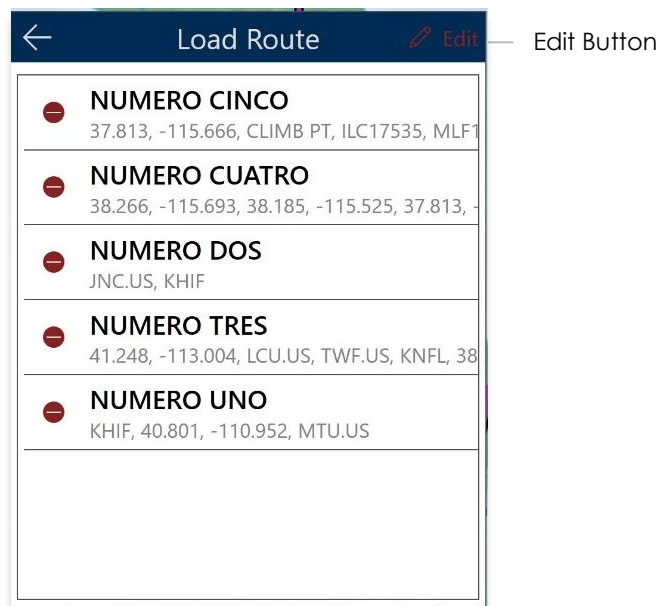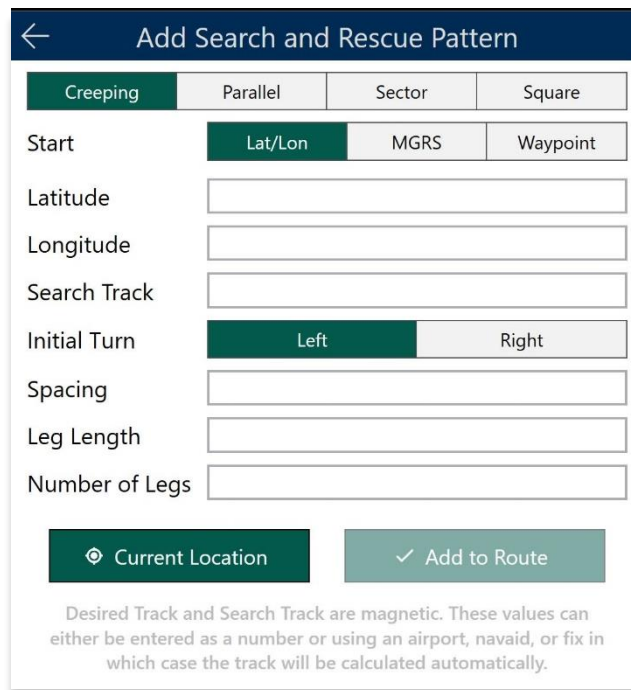

NOTE: Notice the pencil icon changes to red when editing.

26.3.2 Add

The Add option enables users to create Search and Rescue patterns and add SARs to their route.

26.3.2.1 Add Search and Rescue (SAR) Pattern

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

1. Navigate to the **Route Panel.**
2. Tap **Route** located at the bottom right of the Route Panel.
3. The Route Menu will appear. Select **Add** from the side menu.
4. Select **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** (GPS required) to set their current position as the coordinates or manually enter them in the Latitude and Longitude fields.

8. All fields are required; therefore, all fields must be filled.

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

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

Creeping	Parallel
Sector	Square

26.3.3 Show

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

- Doghouses
- Dropped Pins
- Routes
- User Waypoints

26.3.3.1 Doghouses

Doghouses display route information such as the next point, heading, distance, time (MM+SS), and time ahead/behind/on schedule in order from top to bottom. Doghouses will be displayed for every point loaded in the route.

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

1. Navigate to the **Route Panel**.
2. Tap **Route** located at the bottom right of the Route Panel.
3. The Route Menu will appear. Tap **Show** from the side menu.
4. Tap **Doghouses**.
5. Tap **Show Doghouses** to enable the feature.
6. Tap on the **Time on Target** text box and enter your desired time in the format of hh:mm:ss.
7. Tap the **Groundspeed** text box and enter your groundspeed in knots.

←	Doghouses		
Show Doghouses		On	— Enable Doghouses
Time on Target		16:55:33	
Groundspeed		80	
Estimated Time of Departure:		16:13:04z	— ETD in Zulu time
Waypoint	**ETE**	**ETA**	
KFLL	00:13:40	16:26:44z	
FL47	00:20:41	16:47:25z	
PBI	00:08:08	16:55:33z	

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

8. The Estimated Time of Departure (ETD) will adjust based on the entered values in Time on Target and Groundspeed fields. Your ETD will be calculated in Zulu time.
9. Tap outside of the Doghouses popup, and a doghouse will be assigned to each point on the active route on the Moving Map.
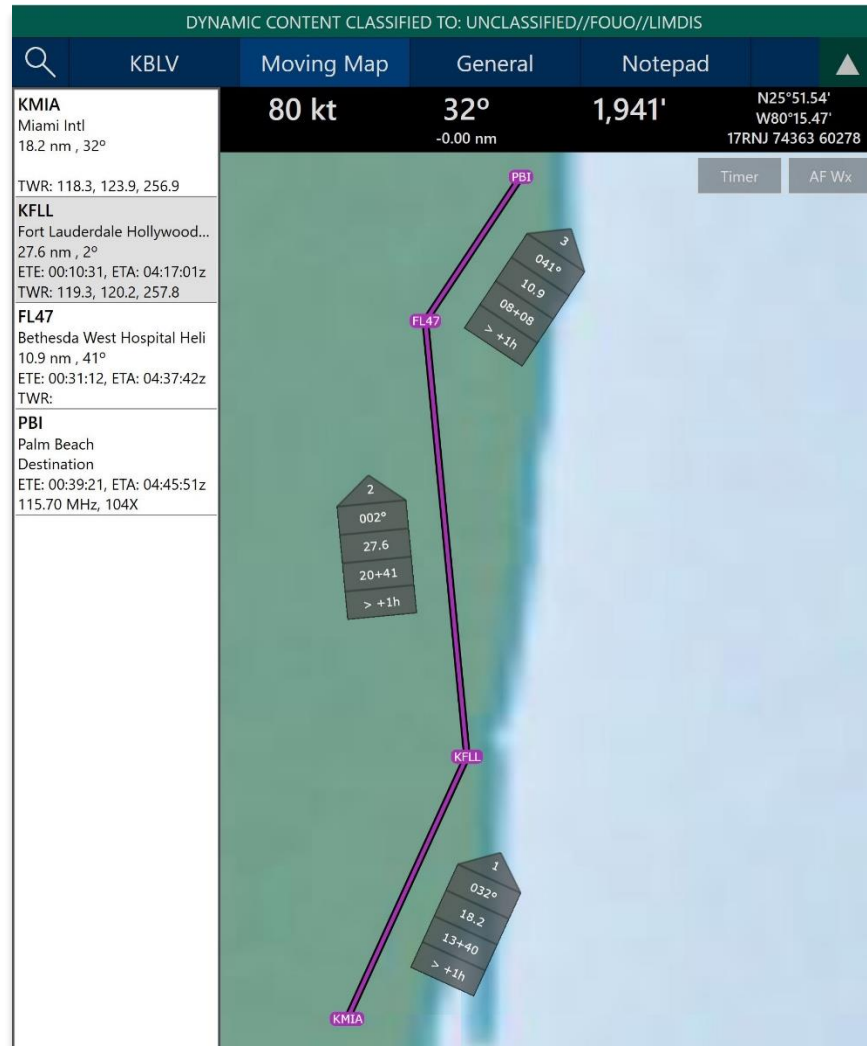
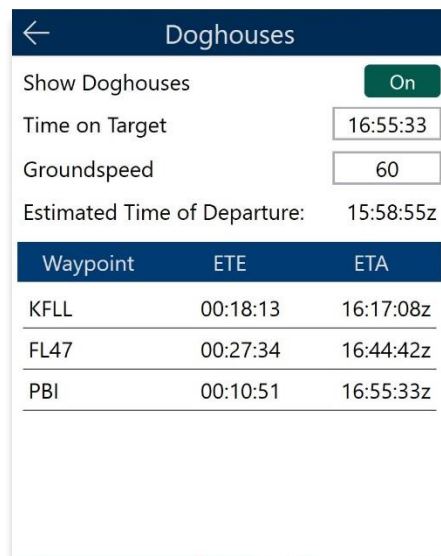**NOTE:** Users may need to zoom in at least 40 miles to view Doghouses.

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

Edit Doghouses

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

1. Navigate to the **Route Panel**.
2. Tap **Route** located at the bottom right of the Route Panel.
3. The Route Menu will appear. Tap **Show** from the side menu.
4. Tap **Doghouses**.
5. Tap on the **Time on Target** text box and enter your new time in the format of hh:mm:ss.
6. Tap on the **Groundspeed** text box and enter your new groundspeed in knots.

New Groundspeed in knots

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

---

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


✎ **NOTE:** Alternatively, users can tap on a doghouse directly from the Moving Map to view the Doghouses popup.

26.3.3.2 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, Magnetic Variance, Source, Notes, and any associated attachments.

1. Navigate to the **Route Panel**.
2. Tap **Route** located at the bottom right of the Route Panel.
3. The Route Menu will appear. Tap **Show** from the side menu.
4. Tap **Dropped Pins**.
5. A collection of dropped pins will appear. Select desired **pin**.
6. The Dropped Pins popup will display information pertaining to the selected pin.
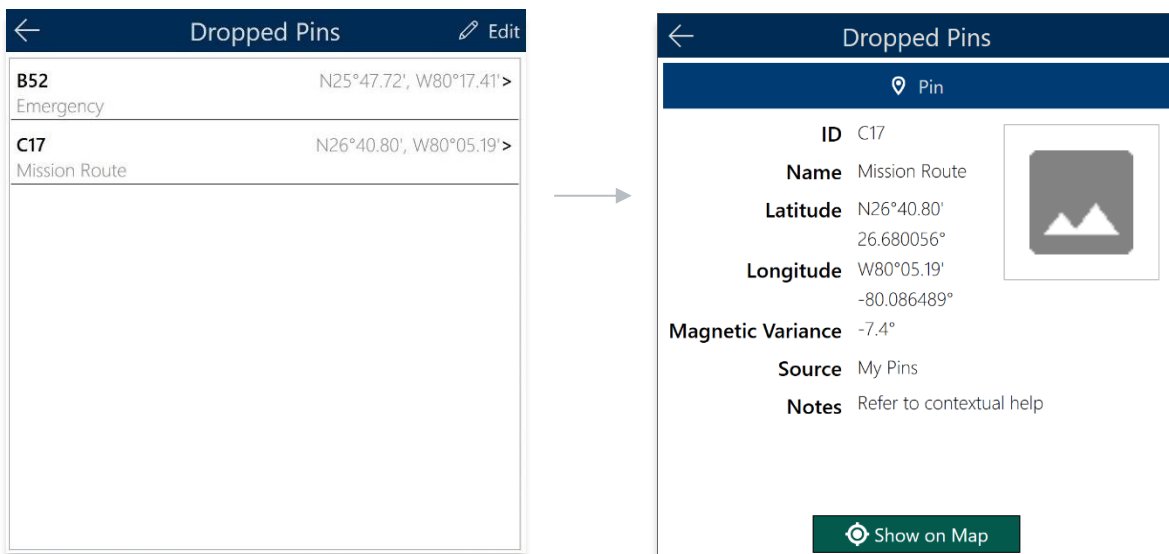
7. Tap **Show on Map** and the Moving Map view will pan to the location of the dropped pin.

NOTE: To view the dropped pins on the Moving Map, users must enable Pins from the Overlays menu. Refer to Section 18.1.4 for additional information.

NOTE: To drop new pins, refer to Section 25.1.3 for additional information.

26.3.3.3 Routes

Routes displays a collection of imported routes including CRD files and routes saved directly on Aero App. Multiple routes can simultaneously be displayed on the Moving Map.

1. Navigate to the **Route Panel**.
2. Tap **Route** located at the bottom right of the Route Panel.
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. Enable desired route to display on the Moving Map. The enabled route will move to the top of the Show Routes list.
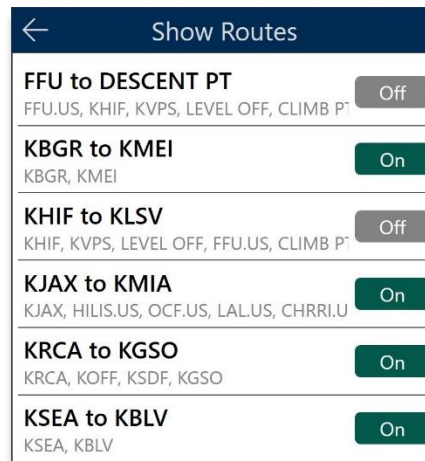
Enable button to show route

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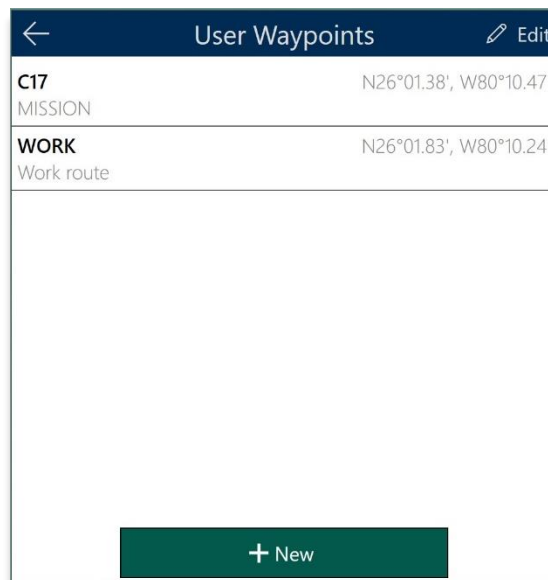
26.3.3.4 User Waypoints

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

Aero App enables users to create User Waypoints directly from the User Waypoints screen. Tap **+ New** and follow the prompts. Refer to Section 25.1.1 for additional information. Alternatively, users can sideload User Waypoints. Refer to Section 10.3 for additional information.

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**. A list of User Waypoints will be shown.

5. To remove a User Waypoint from the list, tap **Edit** then tap the **Delete** button.

26.4 Estimated Time Enroute (ETE) and Estimated Time of Arrival (ETA)

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

In addition, Departure and/or Arrival waypoints will include ETE and ETA values.

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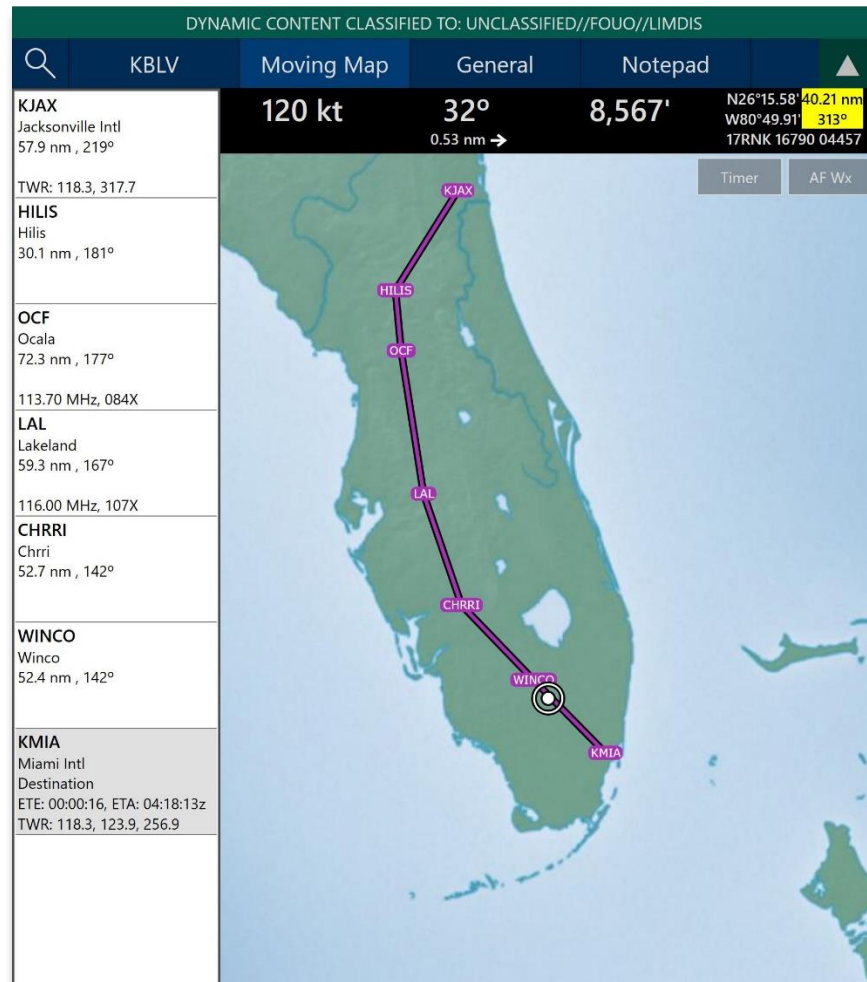

**NOTE:** Estimated Time of Arrival (ETA) is displayed in Zulu time.

27 General

The General section includes significant charts and documents such as regional Charts, Supplements, Planning, User Documents, and Legend that users can view directly on Aero App. User must download the respective region(s) to view charts.
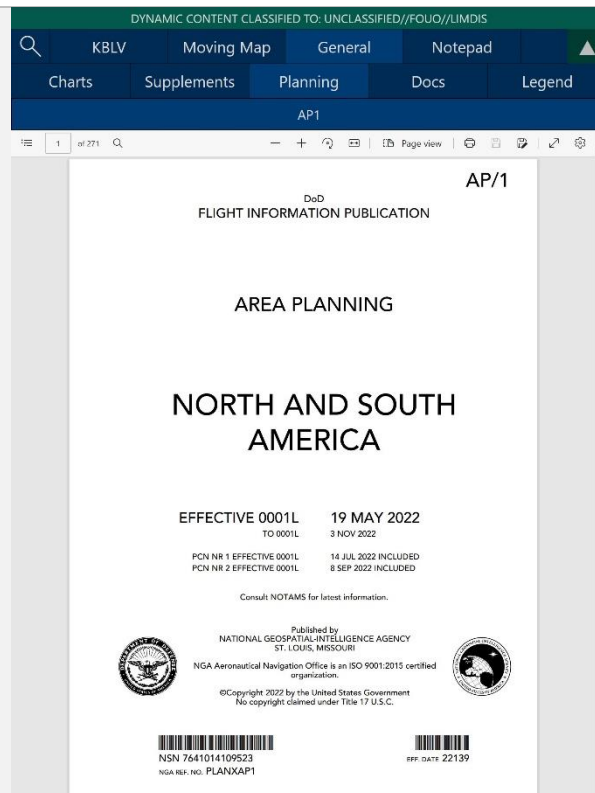
1. Tap **General** on the *Main Menu*.
2. Select from Charts, Supplements, Planning, Documents, and Legend on the *Secondary Menu.*
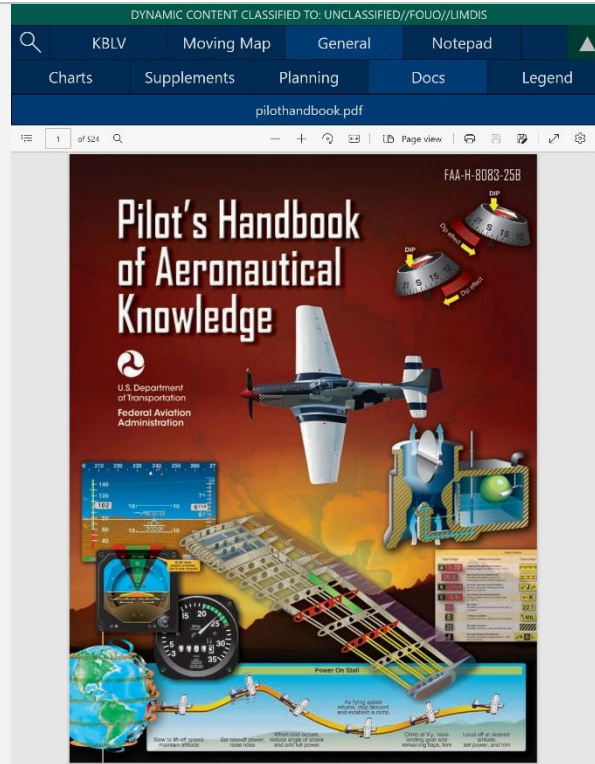3. Tap on the **ribbon** to display available charts or documents for the selected chart or document type.
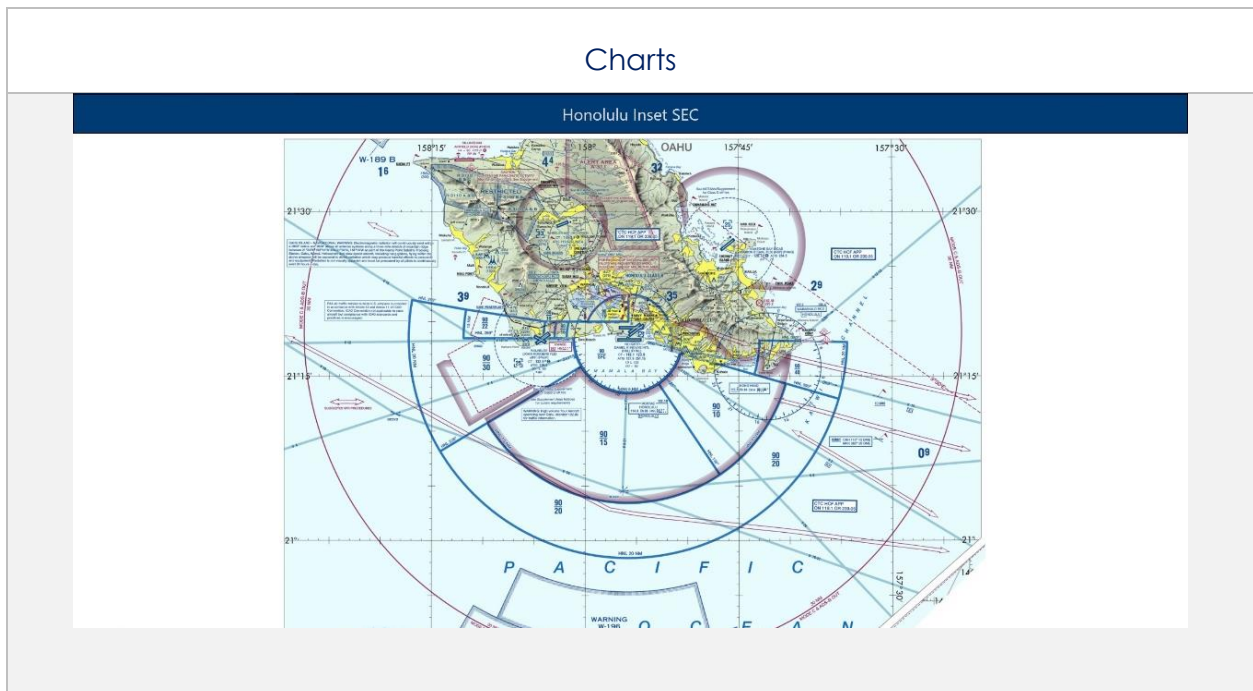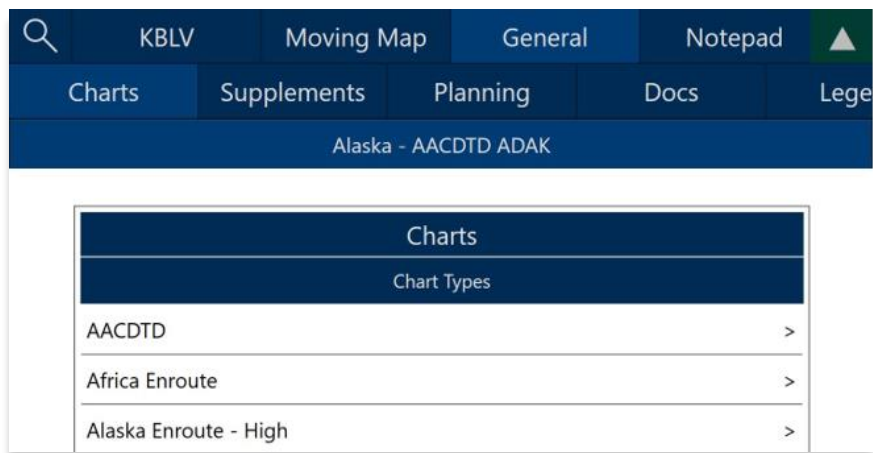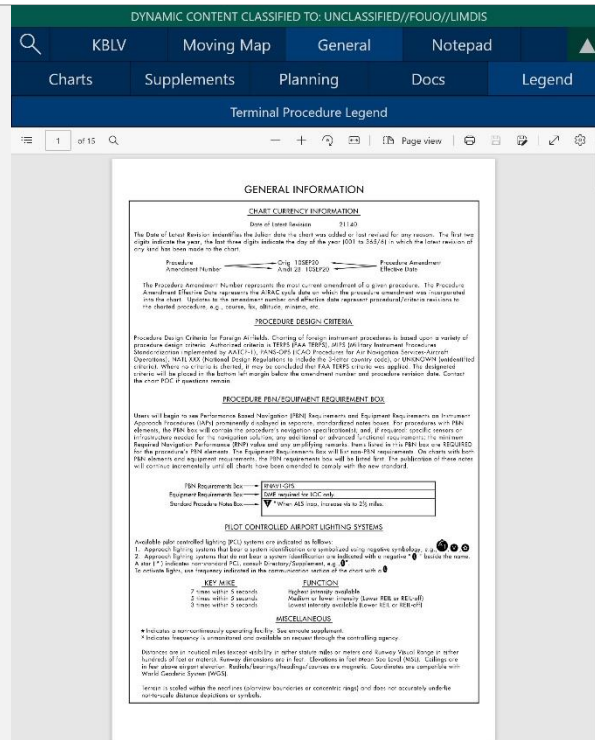
Supplements
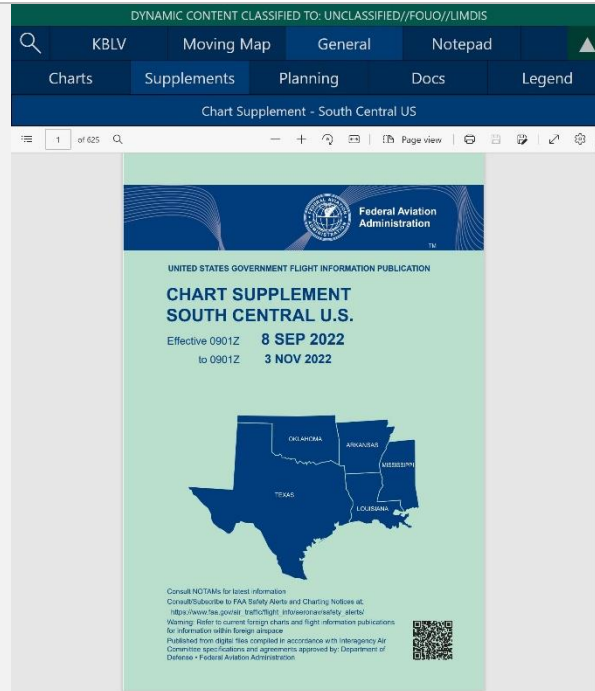
## Area Planning Documents

User Documents

Terminal Procedure Legend

28 Notepad

The Notepad feature enables users to freely enter notes using their fingertips or with a stylus. The notepad contains three reusable pages. The notepad view includes Undo and Clear options.

- **Undo** – undoes the most recent markings on the notepad
- **Clear** – erases all markings on the selected notepad page
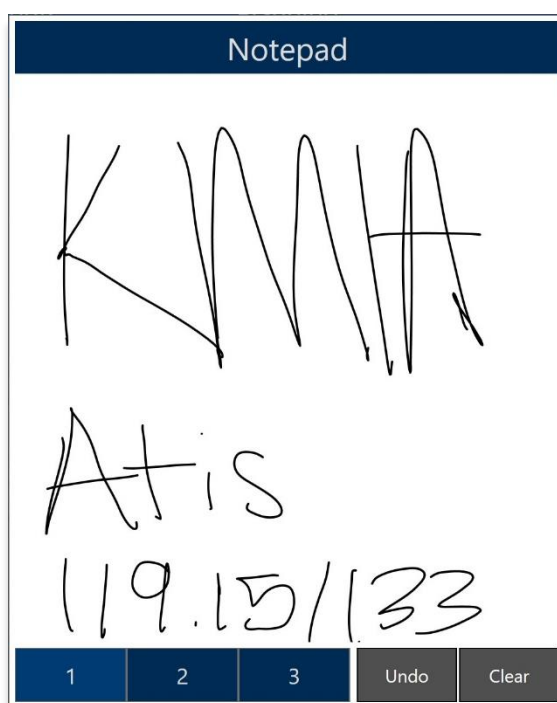
NOTE: Any notepad markings are automatically saved upon exiting the view.

29 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.

E6B		
Altitude	Cold Wx	Conversio

Pressure Altitude	Density Altitude
5,877'	8,541'
Feet	Feet

Elevation or Airport	5250
Altimeter	29.25
Temperature (°F)	80.6
Celsius	Off

Cold Weather (Wx)

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

E6B		
Altitude	Cold Wx	Conversio

Correction = 38'

Height Above Altimeter	500
Temperature	25
Celsius	Off

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).

E6B		
Cold Wx	Conversions	Coordinates

NM → SM

40	46.0

Distance	Temperature
NM → SM	°F → °C
NM → KM	°C → °F
SM → NM	**Weight**
SM → KM	AvGas → Lbs
KM → NM	Jet A → Lbs
KM → SM	Lbs → KG
M → FT	KG → 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 is populated 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 hh:mm:ss, 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 is displayed on the results bar above.

Speed is calculated by the Distance in nautical miles, the Time in the format hh:mm:ss, 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 is displayed 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 hh:mm:ss 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: Reference notes are located at the bottom of the E6B popup.

30 Application Management (App Mgmt)

Aero App's application management is a 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

30.1 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.

30.1.1 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** – allows users to view Aero App on a white-on-black or a black-on-white screen.

30.1.2 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** – displays ownship on FAA Airport Diagrams and Instrument Approach Procedures.
    - **Show Airport Ring on APD and IAP** – verifies the georeferencing by showing a small ring around the Airport center.
    - **Switch to APD on Landing** – switches the screen to display an APD upon landing. When this feature is enabled, the Speed (kt) field will display. Enter desired value in knots. Once your ownship has reached the specified speed, the screen will switch to APD.

- **Minimum Runway Length (ft)** – filters Airports based on the specified runway length. The value must be in feet.

📝 **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** – classifies your device as containing SECRET material.

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

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

30.1.3 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** – stores data on an SD card or a USB drive.

30.1.4 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** – connects to a GPS on all available COM ports.
   - **GPS Connection Settings** – connects to a GPS using specific settings.
4. Tap **Settings** to configure connection settings to desired preferences.
5. Tap **Reset** to reconfigure your connection settings.

30.1.5 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** – clears all markups on APDs and IAPs.

30.2 Data

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

30.3 Host Nation

Users are required to possess an ASPS account to utilize the Host Nation feature. Users must log in to their ASPS account to download charts. Refer to Section 5.3 for additional information.

1. Tap **App Mgmt** on the **Main Menu.**
2. Tap **Host Nation** on the **Secondary Menu**.
3. Log in using your ASPS credentials.
4. Enter the ICAO of the airport of choice in the ICAO text box.
5. Tap Enter on your device's keyboard. The host nation charts for the airport of choice will begin to download.

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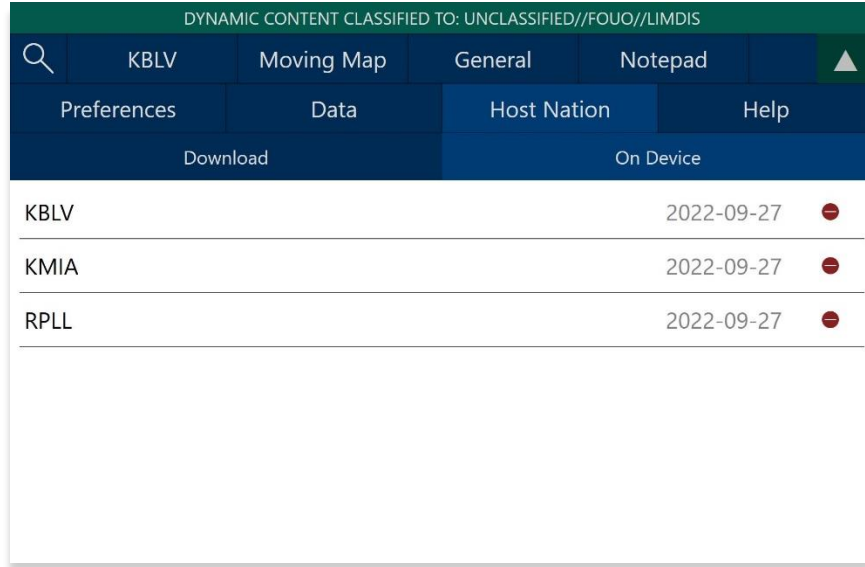
NOTE: In order to load Host Nation charts, an Active Cycle must be selected.

30.4 Help

The Help menu provides users with the following options to select from:

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

30.4.1 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.
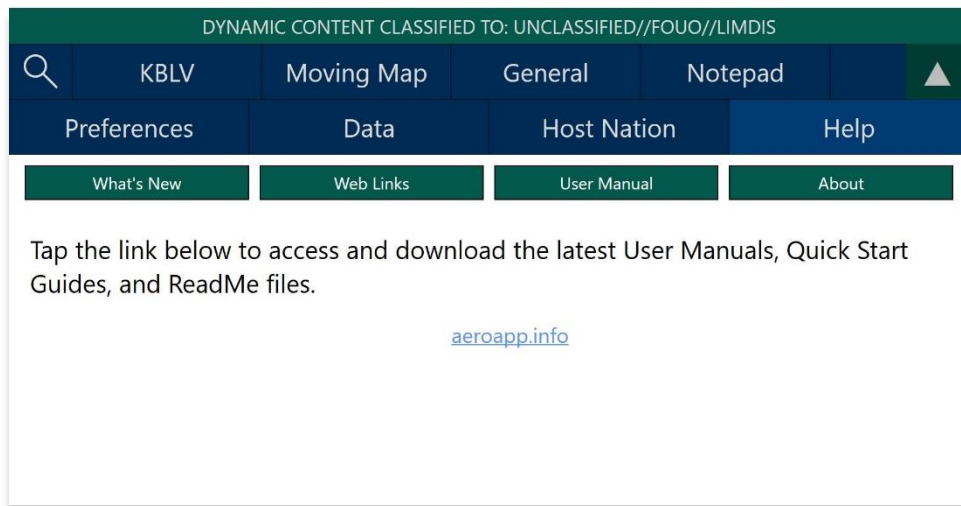
5. Navigate to the *Downloads* menu. Option placement will vary depending on display size.
   - On larger screens, hover over **Downloads** from the menu ribbon to reveal additional download options.
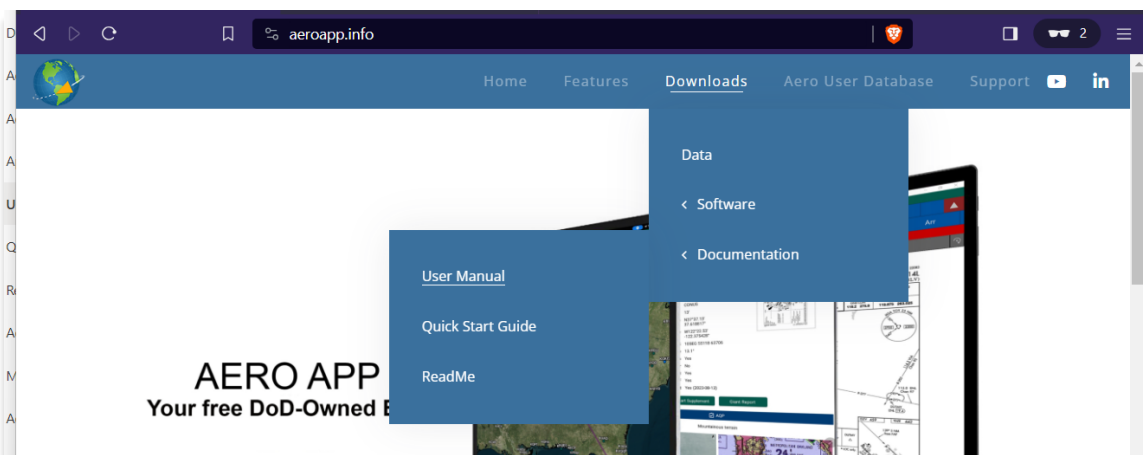
- On smaller screens, tap the hamburger button and select **DOWNLOADS** to display additional download options.
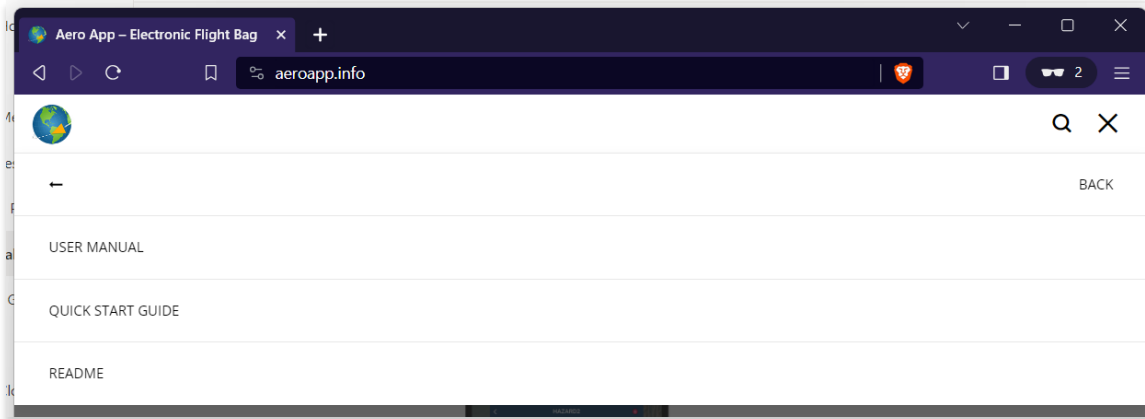
6. Select **Documentation** then **User Manual**.
7. Users are provided with several platforms to choose from. Tap **Aero App for Windows** to reveal related user manuals.
8. Select desired user manual version and you will be redirected to the PDF.
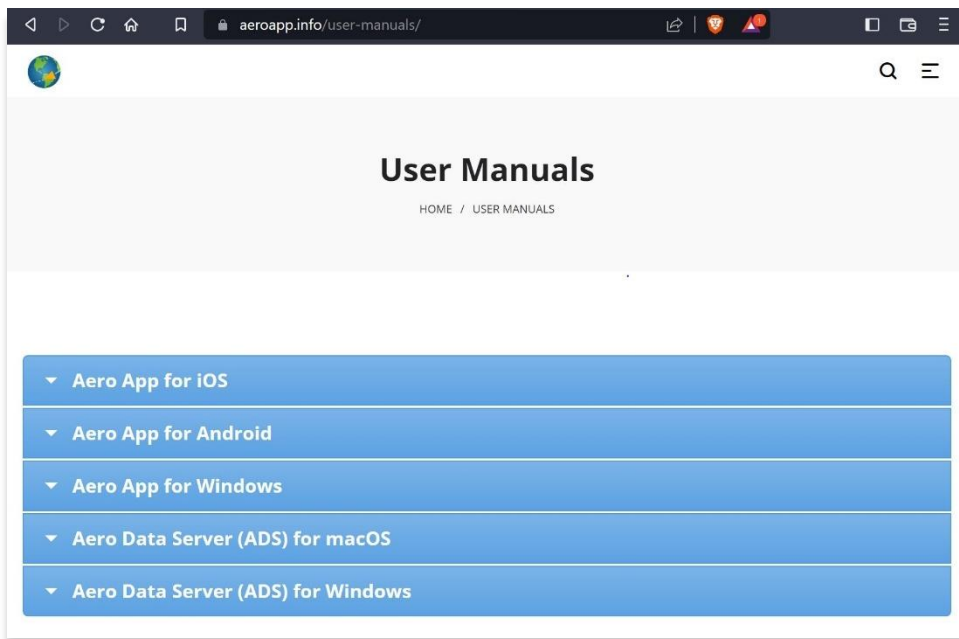
NOTE: The Aero App User Manual can be uploaded into Aero App. Refer to Section 10.6 for instructions on how to sideload PDFs into Aero App.

NOTE: PDFs such as the User Manual can be viewed preflight or inflight with no internet connection needed. Refer to Section 27 for additional information.

31 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**.
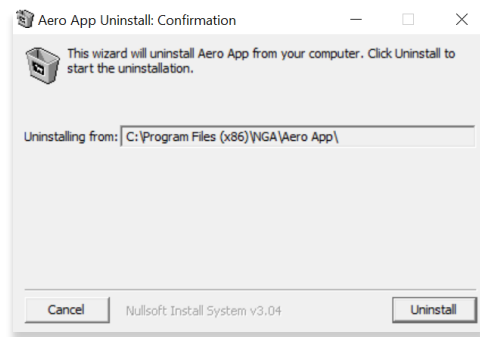
7. Once Aero App has been successfully uninstalled, a completed dialog box will appear, tap **Close**.
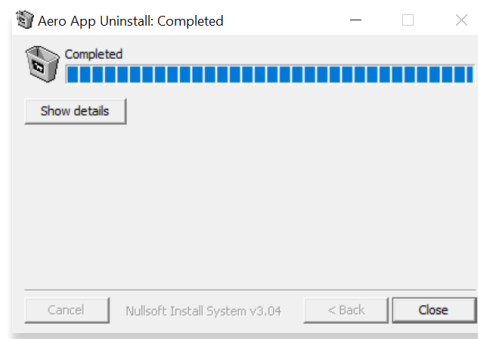
NOTE: Uninstalling Aero App will delete Aero App data.

32 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.

33 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
CAN	Canada
CNA	Canada North America
CONUS	Contiguous United States
CRD	Common Route Definition
CSA	Caribbean and South America
Delta	Upgrades from previous data cycles that only include changes
Dep	Airport Departure Procedures
DINS	Defense Internet NOTAM Service

DLA	Defense Logistics Agency
Docs	User-defined content loaded into document library
DOD	Department of Defense
DP	Departure Procedures
DSN	Defense Switched Network
DVD	Digital Versatile Disc
E6B	Aviator's calculator
EEA	Eastern Europe and Asia
EFB	Electronic Flight Bag
E-IPL	Electronic - Instrument Procedure Library
ENAME	Europe, North Africa, 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