

Pilot's Guide to **ForeFlight Mobile**



ForeFlight, LLC

26th Edition - Covers **ForeFlight Mobile v5.6 on iPad**

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Introduction

This pilot's guide provides an overview of ForeFlight Mobile and its capabilities on the iPad. After reading this guide, you will have the ability to:

- Plan flights quickly
- Gather preflight intelligence information efficiently, and
- Use ForeFlight Mobile to best support your type of flying.

This guide presumes a basic level of proficiency with general iPad use and navigation. If you are new to Apple iOS devices, including the iPad, you will want to *view the guided tours* available on Apple's website at www.apple.com/ipad/guided-tours/ as well as the iPad User Guide at support.apple.com/manuals/

IPAD TIPS

There are a few handy iPad features you'll want to know about when using ForeFlight Mobile:

- ❖ **Multiple Orientations:** The iPad supports portrait (tall) and landscape (wide) orientations. When you rotate an iPad from one orientation to another, an application typically alters its user interface to better take advantage of the space supplied.
- ❖ **Rotation Lock:** Having the screen content rotate when you rotate the iPad isn't *always* a good thing. Rotation lock is helpful for preventing Terminal Procedure rotation or accidental rotation in turbulence. Fortunately, you can choose when the screen rotates and when it doesn't. There are a few methods for locking the orientation of content on your iPad's screen:

Physical Switch: A physical switch is located immediately above the volume buttons on the right side of the iPad. When switched on, this prevents an application from changing its orientation as you change the orientation of the iPad. On some iPads, this switch instead functions as a "mute" switch. You can change the function of this back to a "lock" switch by using the iPad's **Settings** application. Tap *General*, and use the options in the *Use Side Switch to:* section. If this section is not displayed, you may need to update your iPad's version of the iOS operating system to enable this.

iPad Soft-Lock: Double tap the circular, physical, **home** button and slide to the left in the fast-app icon list that pops up to find the rotation lock soft-

button. This method is not available if you have the physical slider switch set to manage screen lock.

ForeFlight Procedures Lock: ForeFlight Mobile also provides a soft-lock switch on the **Procedures** viewer for more flexibility.

❖ **Settings App:** The iPad includes a special application called Settings. Within Settings, you can modify the way the iPad and its applications behave. ForeFlight-specific settings are addressed in the Settings section of this guide. All ForeFlight settings are available in the *More* view of ForeFlight Mobile as well.

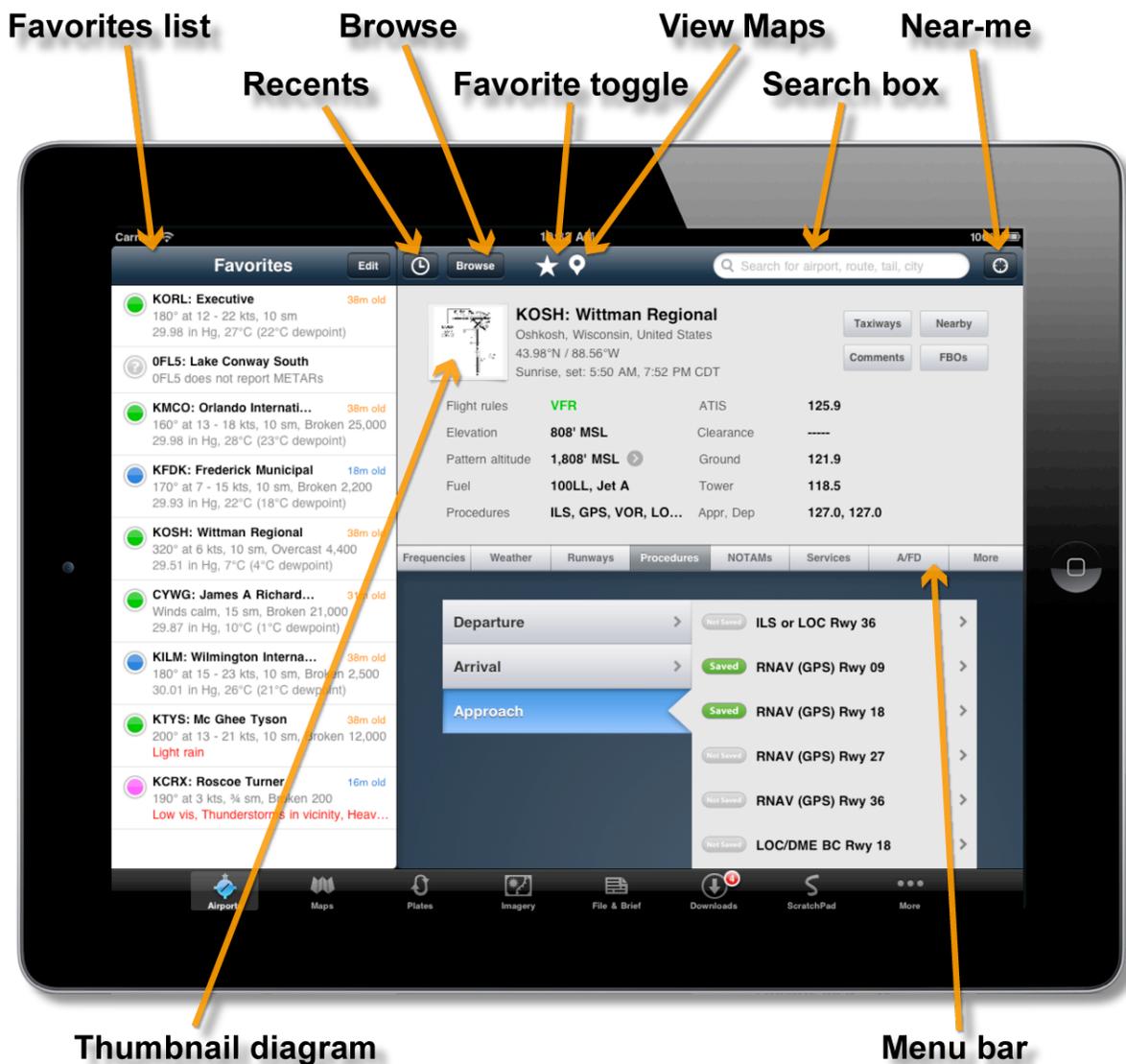
❖ **Brightness Control:** There is a brightness control accessible from the iPad's Settings app. It is also available by double-tapping the home button below the screen and sliding the icons that are shown off to the right. This control is helpful for reducing brightness at night. If that brightness control is not sufficient, further reduction can be gained within the ForeFlight Mobile app by using the brightness slider in the *More* view.

❖ **Inverted ("Night") Mode:** There's a clever, hidden feature in the iPad Settings app that inverts the iPad display's colors, creating a "night mode" color scheme. To enable this in iOS 5 or later, open the iPad Settings and select the General section on the left side. Tap Accessibility toward the bottom of the General options and find the "Physical & Motor" section. Tap the "Triple-click Home" option and change it to "Toggle White on Black". Now when you tap the home button below the screen three times quickly, the screen colors will invert. This will work for any app you've installed.

Airports

The *Airports* view displays airport information, airport thumbnail diagrams, taxi diagrams, terminal procedures, service provider details, fuel prices and terminal area weather for over 20,000 airports worldwide.

Buttons located on the *Airports* view menu bar will help you find airports near the current airport, find airports near your current position, display the airport's location in the *Maps* view, and add or remove an airport to your *Favorites* list.



ABOUT THE DESIGN

The *Airports* view is designed to fill the whole screen, reduce scrolling, and reduce the effort required for your eyes to lock on to important airport information. The colors selected reduce brightness, draw attention to the top half of the page, and help highlight critical information.

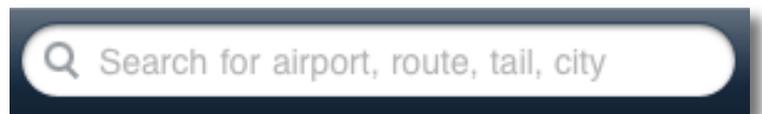
Airport Detail information is displayed on the top half of the Airports view. Refer to this portion of the view when preparing to taxi or when approaching an airport, as it contains elements such as the current flight rule; field elevation and pattern altitude; automated weather frequencies, and controller frequencies.

Additional information from one of the eight available lower views is displayed in the bottom half of the screen. There are views for airport related frequencies, current and forecast weather, runway details, terminal procedures, notices to airmen, airport services, the Airport/Facility Directory entry, and supplemental airport information.

FINDING AN AIRPORT USING SEARCH

Search is a useful method of finding information and creating flight plans within ForeFlight Mobile. Find airports by entering a search term in the search box, then tapping the 'Search' button displayed on the iPad's on-screen keyboard.

Valid search strings include Federal Aviation Administration airport identifiers (three-letter identifiers), International Civil Aviation Organization identifiers (four-letter identifiers), city name, or keyword.



If ForeFlight doesn't find an instant match for the search term used, a list of close matches will appear.

Example Searches:

- ❖ **KJFK** - immediately displays airport information for Kennedy Int'l.
- ❖ **CDG** - immediately displays airport information for Charles De Gaulle.
- ❖ **Kennedy** - produces a list of all airports with "kennedy" in the airport or city name.
- ❖ **N35388** - returns aircraft information for the tail number N35388, including a link to FlightAware.com to track that aircraft's flights.
- ❖ **KXIH** - shows the METAR and related info for the KXIH weather station

FINDING AN AIRPORT USING BROWSE

The **Browse** button on the *Airports* view menu bar allows browsing airport listings by country and region. Search is the preferred method for locating airports, but Browse is a helpful option for locating an airport using the same State/City hierarchy you may already be familiar with from using Airport/Facilities Directories.

Tap the **Browse** button to display the *Airports* List. Use the 'A - Z scroller' on the right hand side of the Airports List to move forward and backwards quickly through the list. Tap the *All Countries* tab at the bottom of the airports list to view airports outside of the United States.



VIEWING A PROCEDURE

Terminal Procedures include Standard Terminal Arrival Routes (STARs), Departure Procedures (DPs), and approach plates. These are all accessible from the *Airports* view. Use the search or browse methods of finding an airport, then tap the **Procedures** tab located on the segmented menu bar in the middle of the *Airports* view. Depending on the procedures available for this airport, several types of procedures may be displayed according to type (e.g., Arrival, Departure, Approach, Other). Custom procedures can be added using ForeFlight Mobile's *Bring Your Own Plates* feature. For information about using BYOP, see:

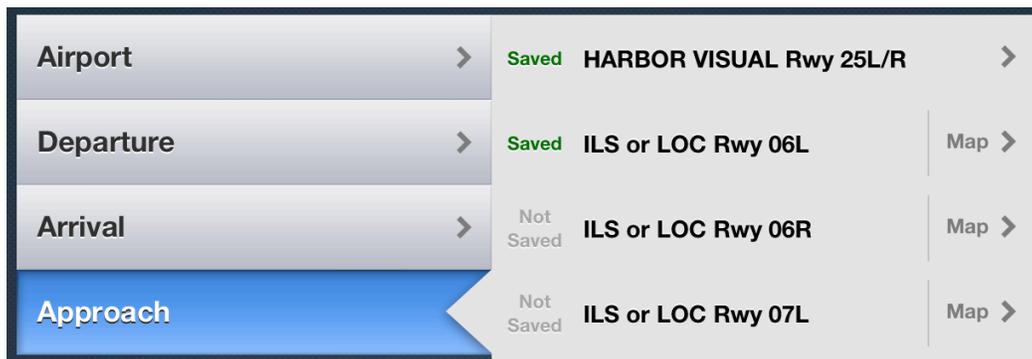
www.foreflight.com/support/byop

Procedures are organized by their type in order to reduce scrolling. Procedures are saved to the device in one of two ways:

❖ **Downloads View** (bulk downloading procedures): Using the *Downloads* view allows bulk downloading of procedures for one or more regions for access when offline. This is the preferred and most efficient method for ensuring you'll have the procedures you need, whether or not you're online when it's time to view them.

❖ **On-demand** (downloading procedures one at a time): If you have not previously downloaded a procedure, tap a procedure name to download it immediately. This download method requires an Internet connection and thus will be unavailable while in flight. For this reason, ForeFlight recommends either using the bulk download functionality described above, or using this on-demand method while on the ground to ensure you'll always have the procedures you need while in flight.

Procedures are marked as **Saved** or **Not Saved**. Procedures marked *Saved* (in green) are stored locally on your iPad and are available when offline. Procedures marked **Not Saved** are **NOT stored** on your iPad and must be downloaded by viewing them or by using the Downloads view to download that region's terminal procedures in bulk.



Airport	>	Saved	HARBOR VISUAL Rwy 25L/R	>
Departure	>	Saved	ILS or LOC Rwy 06L	Map >
Arrival	>	Not Saved	ILS or LOC Rwy 06R	Map >
Approach	>	Not Saved	ILS or LOC Rwy 07L	Map >

From the **Procedures** tab, touch a procedure's name to display the ForeFlight procedure viewer. The procedure viewer includes buttons for: accessing a list of recently viewed procedures, [sending a plate to the Map](#) (if you have a Pro subscription) printing a procedure, adding a procedure to your current Plates binder, and locking the procedure.

ForeFlight Mobile's **Lock** button disables touch interaction (zooming and scrolling) with the terminal procedure viewer, which minimizes the risk of accidental closure when in turbulence. It also disables the automatic rotation that would normally occur when the iPad is turned. The lock button can also, optionally, disable all buttons on the screen, including those that change views. That feature is configured in Settings.

Multi-page procedures can be viewed by sliding pages left or right with a single finger.

To print the plate, tap the **Send to** button in the upper toolbar and choose "Send to Printer. An AirPrint capable printer is required. For more information about this requirement, see:

support.apple.com/kb/HT4356

Tap the **Rotate** button  in the upper toolbar to rotate the plate clockwise 90 degrees per tap.

Note: Procedures are also available directly from the [Plates](#) view.

SWIPE TO CHANGE PLATES

When viewing a plate from the Airports page or the Plates page (including in a binder) you can quickly change between plates by **swiping three fingers** from Left to Right (or Right to Left).

When viewing plates at an Airport, swiping from Left to Right with three fingers will display the next Procedure in that airport's list and swiping from Right to Left will display the previous Procedure in that airport's list.

When viewing plates in a binder on the Plates page, swiping from Left to Right with three fingers will display the next Procedure in the binder and swiping from Right to Left will display the previous Procedure in the binder.

In either case the lists do not "wrap around" so when you get to the end of the list, additional swipes in the same direction will not take you to the end (or beginning) of the list or binder.

IMPORTANT: The “Zoom” Accessibility option (in Apple Settings, General, Accessibility) must be OFF for plate swiping to work. If the “Zoom” Accessibility feature is ON, swiping with three fingers will not change between plates.



USING GEO-REFERENCED PROCEDURES

Geo-referencing is an optional feature that requires a ForeFlight Pro subscription. Go to www.foreflight.com/buy or the *Accounts* view to learn how to purchase or upgrade from “Standard” to “Pro”.

Most instrument procedures can be geo-referenced. This allows ForeFlight Mobile to display the aircraft's position on the procedure.

FAVORITE AIRPORTS LIST

Use this favorites list to store frequently visited airports, area airports, and airports for upcoming flights. Having a nicely populated list of favorite airports makes scanning airport conditions a snap.

While viewing an airport, tap the single star button on the Airport view menu bar to add the airport to your Favorites list. Tap the button a second time to remove the airport from your Favorites list.



When in landscape mode, the Favorites List is displayed on the left side of the screen. When the iPad is in portrait mode, tap the double-star button on the Airports View menu bar to display the Favorites list. While the Favorites list is visible, tap any airport listed to display that airport's full information.



Use the **Edit** button in the upper right corner of the Favorites list to add, remove, or reorder your favorite airports. Tap the **Edit** button to enter edit mode. When in edit mode, the delete and re-order controls are displayed. Tap **Edit** again to exit edit mode.

Each airport in the Favorites list displays the most recent weather information for the airport (if available).

Information displayed includes the current flight rule, observation age, wind speed and direction, ceiling, barometric pressure, temperature, and dew point. Weather warnings (i.e., fog, thunderstorms, cumulonimbus clouds, lightning, mist) - are displayed and highlighted in red when present. ForeFlight Mobile automatically checks for updated weather observations every minute. If a more current observation is available, it is downloaded immediately and the display is updated.

Favorites		Edit
	KSFO: San Francisco Intern... 53m old 260° at 16 - 25 kts, 10 sm, Broken 1,400 29.98 in Hg, 20°C (13°C dewpoint)	
	KSGR: Sugar Land Regio... 56m old Winds calm, 10 sm 29.99 in Hg, 28°C (26°C dewpoint)	
	KAXH: Houston-Southwest 24m old Winds calm, 10 sm 29.99 in Hg, 29°C (26°C dewpoint)	
	KSQL: San Carlos 62m old 270° at 12 - 17 kts, 30 sm, Broken 1,700 29.99 in Hg, 19°C (14°C dewpoint)	

ForeFlight uses the following convention for conveying the airport's current flight rule:

Green VFR

Blue MVFR

Red IFR

Pink LIFR

RECENT AIRPORTS LIST

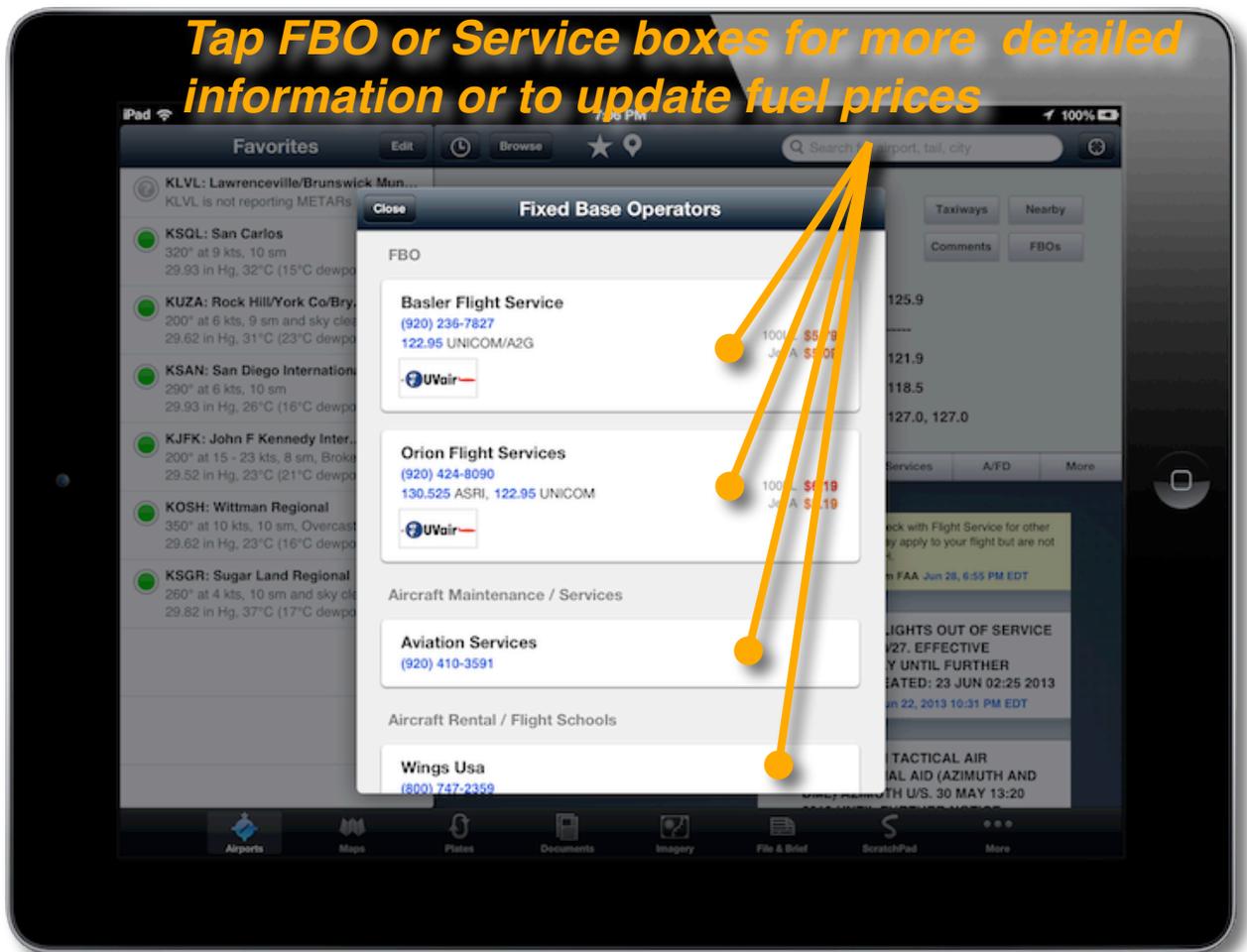
Tap the history button to display the Recents list. The Recents list displays the last twenty airports viewed in the order they were viewed.



To remove airports from the Recents list, there are two methods available: *clear* and *swipe-to-delete*. Tap the **Clear** button to remove *all* airports from the list. To remove a single entry from the Recents list use the standard Apple 'swipe-to-delete' function: swipe your finger across the airport, then tap the red "Delete" button.

FBO INFORMATION

To access a list of Fixed Based Operators providing pilot services at an airport, tap the **FBOs** button. FBO details displayed include hours of operation, fuel prices, location on field, fuel availability, comments, contact numbers and frequencies, and any additional services provided. ForeFlight includes FBO details for thousands of airports worldwide.



Fuel prices

Fuel price data is provided for thousands of FBOs. This price data is not guaranteed, so it is important to verify the price information with the FBO when complete accuracy is required. The price data does not differentiate between cash or credit pricing, nor will it reflect any discounts that may be available.

Fuel price data updates can be submitted within the application. Tap the Update Fuel Prices button when viewing an FBO's details. When submitting price data, leave unknown prices blank. Blank values will be ignored when the prices are updated on the ForeFlight system.

Comments

User-provided comments are available for FBOs and airports. View FBO comments by tapping the Comments button just under the fuel price information. Once you access comments, they are saved to your device so you'll be able to view them again later - even when you are offline.

To add a comment, tap the Add Comment button. Comments are moderated by ForeFlight and will appear for all users to see after they are reviewed.

AIRPORT/FACILITY DIRECTORY (A/FD) OR CANADA FLIGHT SUPPLEMENT (CFS)

For additional airport information like pilot-controlled lighting procedures, parachute jumping activities, etc., sometimes there's just no better place than a good old-fashioned Airport/Facility Directory (or the Canada Flight Supplement).

Each airport's A/FD entry is available from the A/FD tab (or CFS tab for Canadian airports) - just as you'd see it in the familiar green-covered printed version. If the entry has multiple pages, look for the faint dashed arrow to the right or left of the A/FD or CFS page, then single-finger swipe to the left or right to change pages.

198 **NEW YORK**

JOHN F KENNEDY INTL (JFK) 13 SE UTC-5(-4DT) N40°38.39' W73°46.74' **NEW YORK COPTER**
 14 B S4 FUEL 100LL, JET A OX 1, 3 LRA Class I, ARFF Index E NOTAM FILE JFK H-101, 121 L-33B, 34H
RWY 13R-31L: H1451X200 (CONC-GRVD) D-210, 2S-175, 2D-550, IAP, AD
 2D/2D2-1100 PCN 98 R/B/W/T HIRL CL
RWY 13R: RLLS. PAPI(P4L)—GA 3.0° TCH 73'. Thld dspcd 2043'. Rgt t/c.
RWY 31L: PAPI(P4L)—GA 3.0° TCH 67'. Thld dspcd 3263'.
RWY 04L-22R: H11351X150 (ASPH-CONC-GRVD) D-210, 2S-175, 2D-550, 2D/2D2-1100 PCN 90 F/B/W/T HIRL CL
RWY 04L: PAPI(P4L)—GA 3.0° TCH 72'.
RWY 22R: Thld dspcd 2696'. Fence.
RWY 13L-31R: H10000X150 (ASPH-GRVD) D-210, 2S-175, 2D-550, 2D/2D2-1100 PCN 90 F/B/W/T HIRL CL
RWY 13L: ALSF2. TDZL. VASI(V12)—GA 2.75° TCH 65'. Thld dspcd 905'. Road. Rgt t/c.
RWY 31R: MALSR. TDZL. Thld dspcd 1030'.
RWY 04R-22L: H8400X200 (ASPH-GRVD) D-210, 2S-175, 2D-550, 2D/2D2-1100 PCN 90 F/B/W/T HIRL CL
RWY 04R: ALSF2. TDZL.
RWY 22L: ALSF2. TDZL. PAPI(P4L)—GA 3.0° TCH 66'.
RUNWAY DECLARED DISTANCE INFORMATION
RWY 04L:TORA-11351 TODA-11351 ASDA-11351 LDA-11351
RWY 04R:TORA-8400 TODA-8400 ASDA-8400 LDA-8400
RWY 13L:TORA-10000 TODA-10000 ASDA-10000 LDA-9095
RWY 13R:TORA-14511 TODA-14511 ASDA-14511 LDA-12468
RWY 22L:TORA-8400 TODA-8400 ASDA-8400 LDA-8400
RWY 22R:TORA-11351 TODA-11351 ASDA-11351 LDA-8655
RWY 31L:TORA-14511 TODA-14511 ASDA-14511 LDA-11248
RWY 31R:TORA-10000 TODA-10000 ASDA-10000 LDA-8970
ARRESTING GEAR/SYSTEM
RWY 04R: EMAS
RWY 22L: EMAS
AIRPORT REMARKS: Special Air Traffic Rules—Part 93 High Density Arpt. Prior reservation required. See Aeronautical Information Manual. Attended continuously. Acft opr and twy restrictions exist for A380, B747-800, B777-300ER, and A340-600, please etc JFK arpt ops for more information. Parasail and banner towing ops 1000 ft and blo in upper and lower New York bays including Rockaway inlet indef. For noise abatement restrictions call 212-435-3747 during normal business hours. Flocks of birds on and in/ov arpt. Rwy 22L ALSF2 NSTD lgt spacing. Rwy 22L PAPI horizontal offset 4° to left. Rwy 13L VASI unusable left side centerline. Lead-in Rwy 13L uses the 1000 ft light station of the approach light system only with CRI VOR approaches and is angled toward AQUEDUCT. Also 5 sequence flashing lgts from 1200 ft-2000 ft and a 5 sequence flashing lgts grouping approximately 1 mile from rwy plus 1 adjacent forming an approach gate are angled 35° south of Rwy 13L centerline designed to provide earlier ident of rwy environment. Converging ops on Rwy 13R and Rwy 22L conducted via arrival distance window. Coded transponder required. General Aviation: non based commercial aircraft operators must make arrangements for fuel prior to arrival call 347-566-6620 or UNICOM 122.95. Forest to tower and to enter the Class B airspace during operations to have critical needs. Rwy 04L touch down and

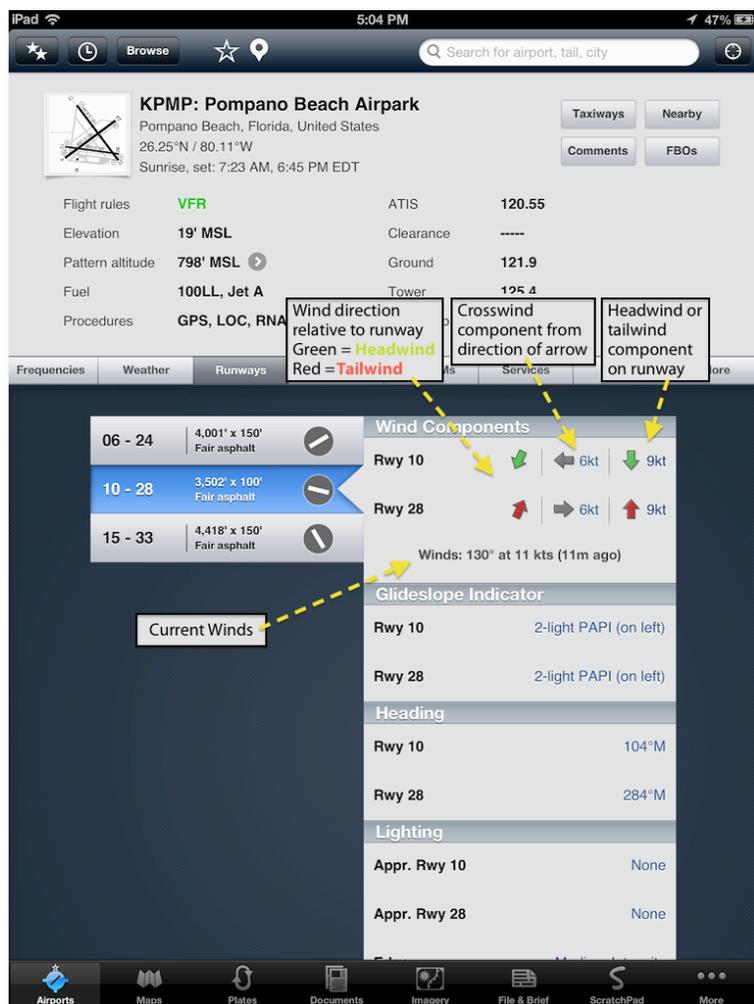
RUNWAY WINDS

Tap on the Runways tab to view the preferred runway based winds reported in the last METAR received by ForeFlight Mobile. Headwinds are indicated by a green arrow and tailwinds by a red arrow in the first column. The magnitude and direction of the crosswind are shown next to the grey arrow in the middle column. The far right column shows the magnitude of headwind or tailwind.

In this example, the most recently received METAR for KPMP reports the winds are from 130° at 11 knots. This means that the wind on Runway 10 is a headwind from the right: the resulting right crosswind component is 6 knots and the headwind component is 9 knots.

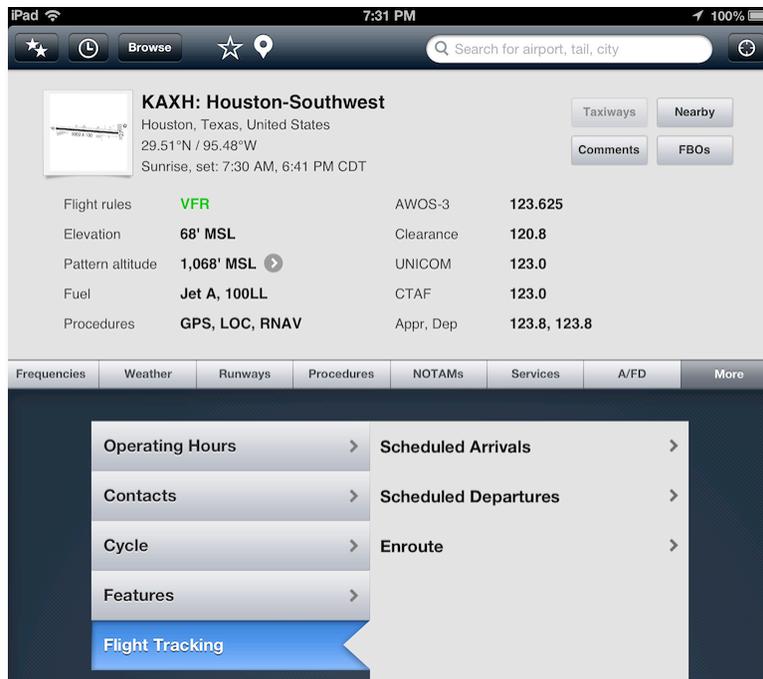
Keep in mind that runway headings are magnetic and wind directions are reported as true, so the wind direction is automatically converted to magnetic before calculating the crosswind component.

Tap on each runway in turn to view the expected headwind and crosswind components for that runway.



AIRPORT AND AIRCRAFT FLIGHT TRACKING

Flight tracking data is provided by FlightAware.com, and is available only while connected to the internet. On the Airports page, tap on the **More** tab then choose **Flight Tracking**. Tap Scheduled Arrivals, Scheduled Departures or Enroute to open Safari and show a list of aircraft scheduled to arrive or depart, or that are enroute to the airport.



To track an individual aircraft, type an aircraft Tail-number in the Search box, then tap the "Track" button in the aircraft registration information pop-up.

Maps

ABOUT THE DESIGN

The Maps view is the place to visualize airspace, weather, terrain and other factors that may affect your route. The maps view is also the place to chart your progress during a flight. The maps themselves take center stage with supporting data surrounding them.



PINCH, ZOOM, AND PAN

Each map in the Maps view supports the standard iPad gestures for zooming and panning. Drag your finger on the map to slide it to a new region. Use two fingers in a pinch or expand gesture to change the zoom scale of the map. You can also double tap the map to zoom in one level or tap once with two fingers at the same time to zoom out one level. Anytime you display a new route on the map the zoom level and region shown will auto-adjust to bring your route into view.

Tap the Zoom to Route button in the lower left of the Maps screen to automatically zoom the map in or out to show the entire Route.



CHANGING MAPS / MAP OVERLAY

A variety of map types are available. To change which map is displayed, tap the map mode button at the top left of the view. This displays the map mode menu. Tap a map name to select it and update the map.

The current zoom and location will not change when you change maps.

If you have entered a route of flight, the route line is always displayed no matter which map type you're viewing.

Each map is geo-referenced and seamless. This means that you can view your current location on the map and do not need to change maps to view a new region - simply drag with your finger.

Radar or Satellite data can be overlaid on any base map selection (such as VFR charts). Additionally, any marker or shape overlay can be selected for viewing. Examples of these are TFRs or Visibility. Only one marker-type can be selected at once. To de-select an overlay and hide it, tap it in the menu.

Available map types include:

- ❖ **World Map** - Global map with geopolitical



borders, cities, major highways, and bodies of water. This map can be downloaded for offline use.

❖ **Terrain Map** - Global terrain map, colored based on terrain height data. Low resolution data available for the planet, higher resolutions available for certain regions. *Available on iPad 2 or iPhone 4 (or newer).*

❖ **Street Map** - Detailed street map. However, views you display while connected to the Internet are cached in memory and may be available in-flight, provided the cache is not cleared or filled to capacity.

❖ **Aerial Map** - Satellite image map including street labels. Like the Street Map, this map can only be used when connected to the Internet. However, views you display while connected to the Internet are cached in memory and may be available in-flight, provided the cache is not cleared or filled to capacity.

❖ **U.S. VFR Sectional** - Terminal Area Charts (TACs) are automatically displayed when a VFR sectional is zoomed in to major cities containing a TAC inset.

❖ **U.S. IFR Enroute** - low or high.

❖ **Canada VNC** - VFR Terminal Area Charts (VTAs) are automatically displayed when a VNC is zoomed in to major cities containing a VTA inset. Requires ForeFlight Canada subscription. *Includes Flight Bag Tiles feature with "tap to bring forward" charts and chart legends.*

❖ **Canada IFR Enroute** - low or high. Requires ForeFlight Canada subscription.

❖ **U.S. IFR Planning** - IFR planning chart covering contiguous 48 states. *Includes Flight Bag Tiles feature with "tap to bring forward" charts and chart legends.*

❖ **U.S. IFR Ocean** - Atlantic and Pacific ocean IFR charts. *Includes Flight Bag Tiles feature with "tap to bring forward" charts and chart legends.*

❖ **Carib/Mexico IFR** - IFR Low or High charts covering Mexico and the Caribbean. Tap **More > Downloads > Canada, Mexico, Central America**, then turn **IFR Low Charts** and/or **IFR High Charts** to **ON**. *Includes Flight Bag Tiles feature with "tap to bring forward" charts and chart legends.*

❖ **U.S. Helicopter** - Three-color charts showing aeronautical information useful to helicopter pilots navigating in 9 major metro areas with heavy helicopter activity. Includes helicopter routes, heliports, nav aids and obstructions. Can be selected with any U.S. base map. *Includes Flight Bag Tiles feature with "tap to bring forward" charts and chart legends.*

❖ **Heli Gulf VFR** - U.S. VFR Sectional-style chart of the Gulf of Mexico (GOM) showing airspace, GOM blocks, airspace, and oil rig and weather station locations.

Can be selected with any U.S. base map. *Includes Flight Bag Tiles feature with “tap to bring forward” charts and chart legends.*

❖ **Heli Gulf IFR** - IFR style chart of the Gulf of Mexico (GOM) showing GOM blocks, GPS waypoints, airspace and weather station locations. Can be selected with any U.S. base map. *Includes Flight Bag Tiles feature with “tap to bring forward” charts and chart legends.*

Available map overlays include:

❖ **Radar** - composite radar for the US and Canada. This can be animated by pressing the “play” button in the lower left corner of the map. See the references at the end of this manual for the radar map legend. The radar map checks for updates every three minutes.

❖ **Satellite** - Visible or Infrared depending on time of day. This can be animated by pressing the “play” button in the lower left corner of the map. The satellite map checks for updates every three minutes, but new images are typically transmitted every 30 minutes.

❖ **Hazard Advisor** - Terrain-based map, colored red or yellow based on terrain height relative to aircraft position (yellow for terrain between 1,000’ and 100’ below the aircraft, red for higher terrain). Also shows obstacles in local area within 1,000’ of aircraft altitude. *Available on iPad 2 or iPhone 4 (or newer) with a ForeFlight Mobile Pro subscription.*

❖ **Search & Rescue Grids:** *These map overlays are available when Search and Rescue is enabled in Settings. For more details see the Search and Rescue Supplement in Documents > Catalog > ForeFlight:*

❖ **CAP Grid** - “Conventional” 15-minute quadrangle grid squares, in the format ORD385.

❖ **Cell CAP Grid** - “new” grid based on 1 degree of latitude/longitude, in the format 40092AA.

❖ **GARS Grid** - Grid Area Reference System made up of 30-minute cells with 15-minute quadrants and 5-minute areas, in the format 175LX.

❖ **Traffic** - When connected to a Stratus ADS-B receiver, the Traffic option is shown. When selected, ADS-B traffic received by the Stratus is displayed on the map. *Suggested: iPad 2 or iPhone 4 (or newer).* **TRAFFIC DISPLAY WILL BE LIMITED UNLESS YOUR AIRCRAFT IS EQUIPPED WITH ADS-B OUT. SEE ADS-B TRAFFIC SECTION FOR MORE DETAILS.**

❖ **TFRs** - covers regions provided by FAA. Tap a TFR shape to see more details. Red TFRs are active or will be active in the next 24 hours. Yellow TFRs are inactive for at least the next 24 hours.

❖ **AIR/SIGMETs** - covers regions provided by FAA. The shapes are colored-coded based on type. Gray is used for IFR and obscuration, yellow for convective, orange for turbulence and high winds, and blue for freezing level and icing conditions. Tap a AIR/SIGMET shape to see more details.

❖ **Weather Overlays** - a variety of weather measurements can be displayed on the map, such as temperature, surface winds, PIREPs, and visibility. The weather maps check for updates every five minutes. See [Weather Overlay Color Coding](#) for details of color coding for each type of overlay.

❖ **Obstacles** - shows obstacle markers based on the FAA's USA data.

❖ **User Waypoints** - all User Waypoints view are shown on the Map.

❖ **Fuel prices** - prices for 100LL or JetA fuel. Fuel prices are color coded by price in the region where the airport is located - less expensive prices are in green, average in orange, most expensive in red.

The radar map requires an Internet, ADS-B, or XM WX connection. The satellite map requires an Internet or XM WX connection. Weather maps require an Internet connection. Fuel price maps require an Internet connection the first time they are used. The **Downloads** view can be used to download Obstacles as well as World, IFR, and VFR charts for use when offline.

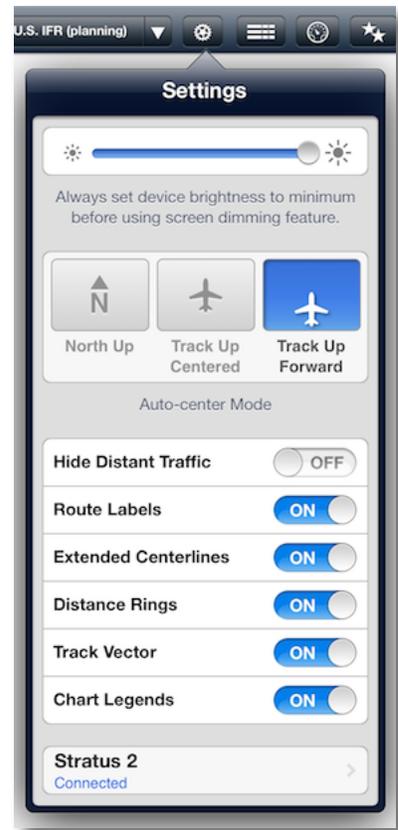
WEATHER OVERLAY COLOR CODING

Weather Overlay	Color coding
Flight Rules	 LIFR: Magenta  IFR: Red  MVFR: Blue  VFR: Green
Dew Point Spread	 0-4° C: Orange  ≥5° C: Green
Temperature	 <3° C: Red  3-34° C: Green  ≥35° C: Orange
Visibility <i>(Like Flight Rules colors)</i>	 <1 SM: Magenta  1-2 SM: Red  3-5 SM: Blue  >5 SM: Green
Surface Wind <i>(wind barb color)</i>	Peak <20 knots: Black Peak 20-30 knots: Orange Peak >30 knots: Red
Ceiling	 <500': Magenta  500'-999': Red  1000'-2999': Blue  ≥3000': Green

MAPS SETTINGS

Tap the Maps **Settings** button  next to the map selection button in the dark blue tool bar to show the following Map settings:

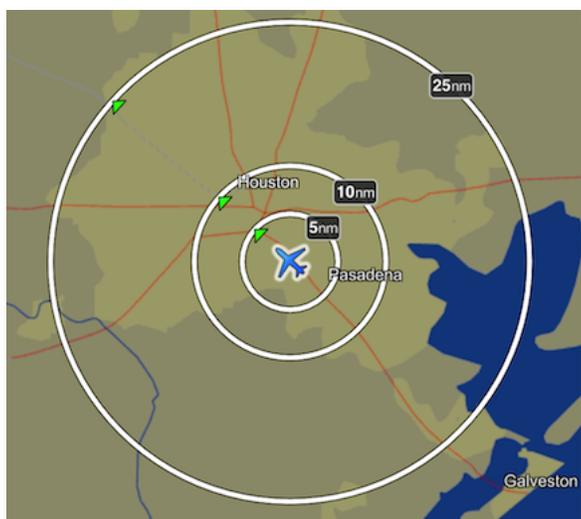
- ❖ The “extra dimming” slider (see the Settings section for more info).
- ❖ Mode selector for auto-center/moving-map operation: North up, Track up, Track up Forward (see additional details in Engaging the Moving Map - Track Up section).
- ❖ Hide Distant Traffic: switch ON to hide traffic beyond 15nm radius and +/- 3,500' from your location/altitude (setting is only shown when connected to a Stratus ADS-B receiver; see ADS-B Traffic section).
- ❖ Route Label: switch ON to enable/disable labels on the Map route lines.
- ❖ Extended Centerlines: switch ON to enable extended runway centerlines at airports in the current route.
- ❖ Distance Rings: switch ON to enable the 3 concentric rings around your aircraft (see additional details in Distance Rings section below).
- ❖ Track Vector: switch ON to display a projected track vector ahead of your aircraft icon (see additional details in Engaging the Moving Map - Track Up section).
- ❖ Chart Legends: switch ON to display the Chart Legend around Flight Bag Tiles-enabled Charts: Canadian VNCs, U.S. Helicopter charts (see additional details in Flight Bag Tiles section below).
- ❖ Overlay opacity slider to change how visible the colors are for radar, satellite, and other overlays.
- ❖ Quick access to external device status info.



DISTANCE RINGS

Distance Rings displays 3 concentric rings with markers around your aircraft's current position, so you can quickly judge the distance or time from your location to other locations on the chart.

The small green triangles on the rings align with your track and the ring scale labels (either nm or time) align with your right wing.



To display the Distance Rings, tap the Map Settings “gear” button to display the drop-down menu, then slide the Distance Rings switch ON or OFF, or change the setting in **More > Settings**.

As you zoom out on the Map the inner rings and scale markers automatically hide to de-clutter the view.

The 3 concentric Distance Rings can be displayed in several styles, selected in **More > Settings**.

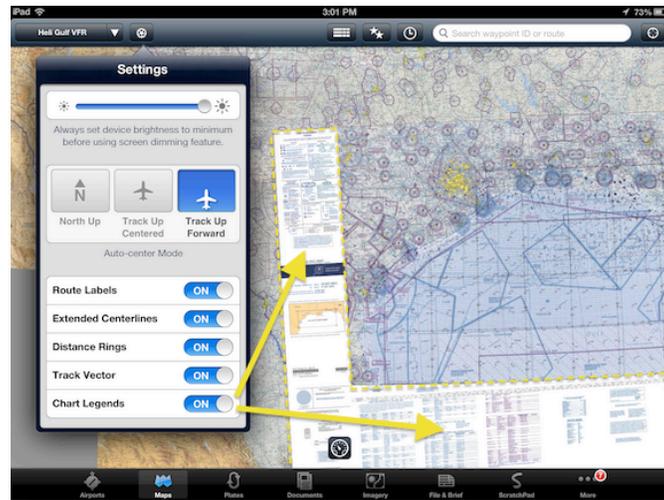
Automatic	Distance	Time
NM, ring scales adjust automatically as the map is zoomed in and out	5, 10, 15 NM	5, 10, 30 minutes
	10, 20, 50 NM	10, 20, 60 minutes
	20, 40, 100 NM	

If an Automatic or Distance-based measurement is selected, the rings are only displayed if you have a GPS fix. If a Time-based measurement is selected, the rings are only displayed when you have a GPS fix AND are moving at more than ~10 knots. The

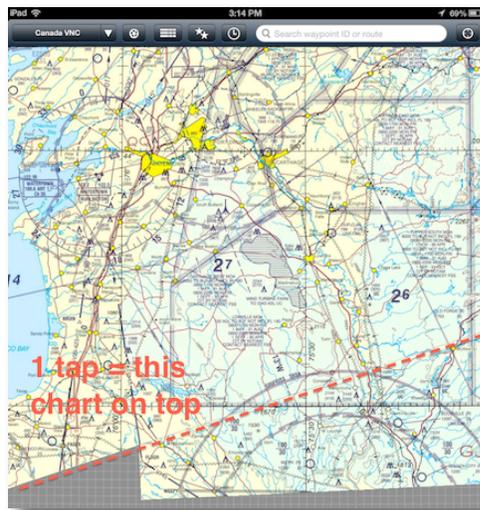
rings are hidden when there is no GPS fix, or when moving at less than ~10 knots when a Time-based measurement selected.

FLIGHT BAG TILES AND “TAP TO BRING FORWARD”

Flight Bag Tiles (FB Tiles) is an enhancement to the traditional seamlessly-stitched charts that allows each individual chart to be displayed either as a “trimmed” version without legends or margins, or as a “collared” version that shows the unaltered chart with all legends. The FB Tiles chart Legends are switched ON and OFF using the Maps Settings menu. In the example below, the Heli Gulf VFR chart Legend is shown with the arrows and dashed-yellow outline.

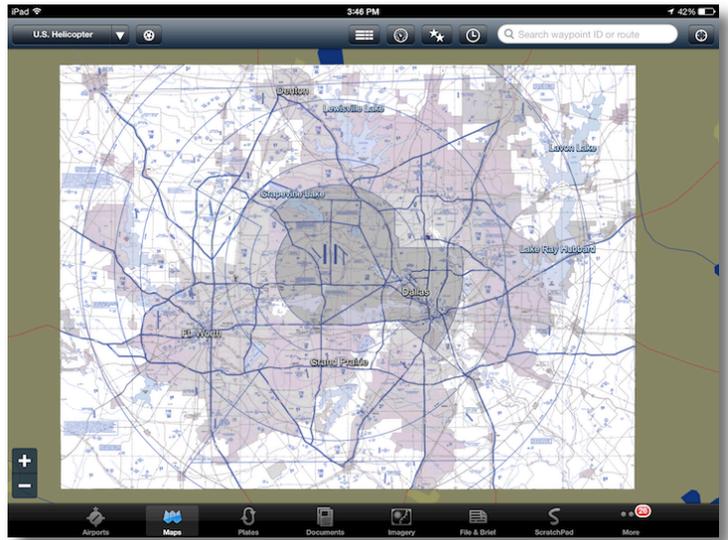


Where multiple FB Tiles-enabled charts overlap on the Maps page, a single tap on a chart will “bring it forward” over the other chart(s). This is useful if there is information on one chart that is obscured by the seamless chart “cut” line. Additional single taps will bring each chart forward in turn. **IMPORTANT:** Because not every chart is published at the same time, airspace or restricted areas may not be depicted the same on overlapping charts. Consult all applicable charts when planning a flight.



FB Tiles-enabled charts include:

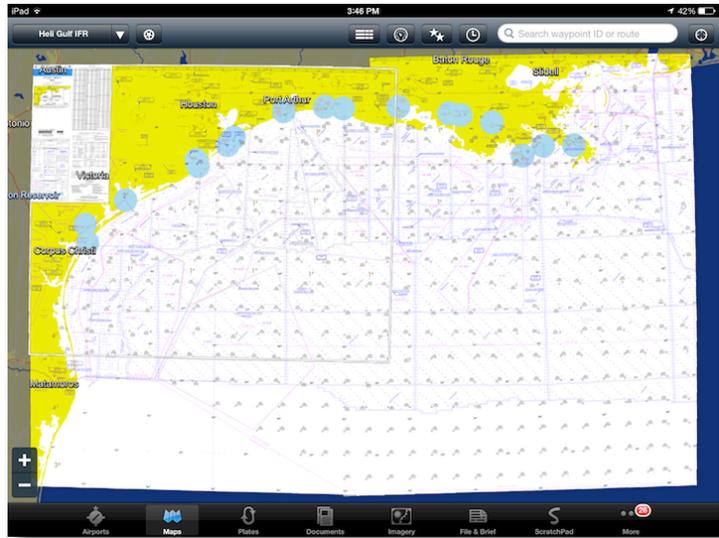
US Helicopter



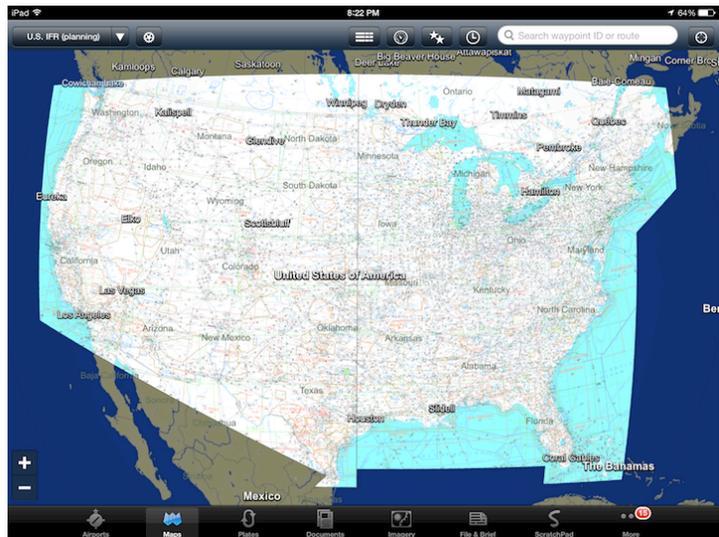
US Gulf of Mexico VFR



US Gulf of Mexico IFR



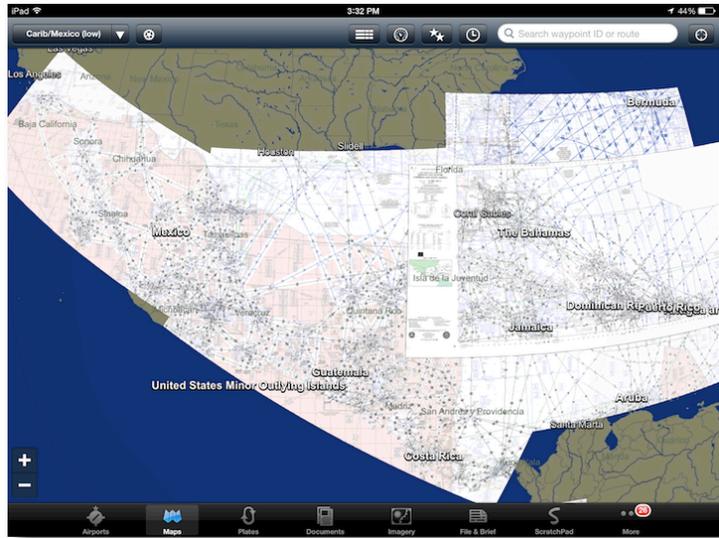
US IFR Planning Charts



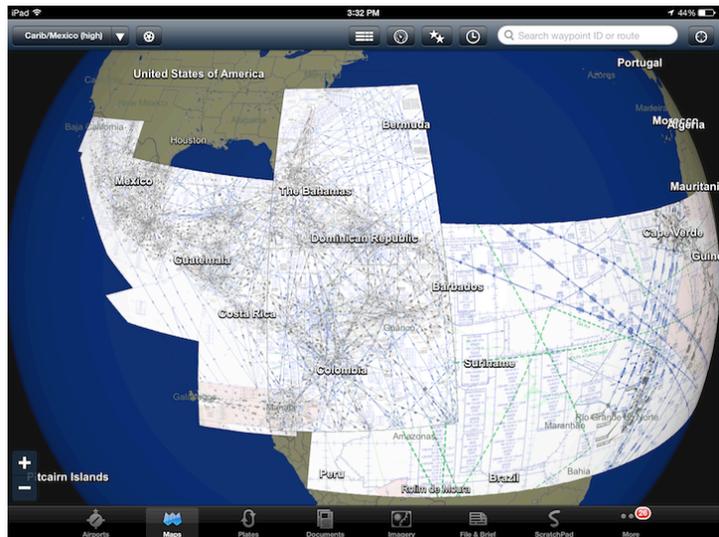
US IFR Ocean (Atlantic & Pacific)



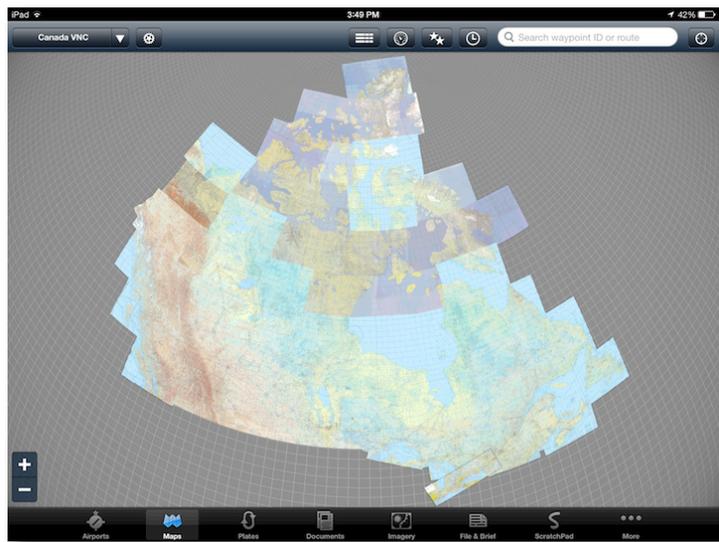
Caribbean/Mexico IFR Low



Caribbean/Mexico IFR High



NavCanada VNC/VTA
(Canadian subscription required)



FINDING AN AIRPORT OR NAVIGATION AID USING SEARCH

To quickly center the map on an airport, navigation aid, or waypoint, tap the *search box* in the top right of the view. Type the location's identifier, and tap the **Search** button on the keyboard.

You can search by identifier, latitude/longitude, or bearing and distance from a waypoint.

The waypoint will be shown with a marker. Typing in a waypoint will not clear any route showing on the Maps view.

To remove the animated waypoint marker, simply tap elsewhere on the map.

Example Searches:

- ❖ **KJFK** - Centers the map on KJFK airport
- ❖ **FLW** - Centers the map on the FLW VOR
- ❖ **32.3N/99W** - Centers the map on the latitude/longitude
- ❖ **324455/-0804557** - Centers the map on 32°44'55"N, 80°45'57"W
- ❖ **N324455/W0804557** - Centers the map on 32°44'55"N, 80°45'57"W
- ❖ **3244.92/-08045.95** - Centers the map on 32°44'55"N, 80°45'57"W
- ❖ **3244556/-08045576** - Centers the map on 32°44'55.6"N, 80°45'57.6"W
- ❖ **HIGAL/320/15** - Centers the map on 15nm bearing 320°M from HIGAL. If a VOR is given as the reference waypoint, then the directional information is assumed to indicate a radial, not a bearing
- ❖ **LAX/246R/20** - Centers map on the 246 radial, 20nm from LAX
- ❖ **MZB293/SLI148** - Centers map on intersection of MZB's 293 radial and SLI's 148 radial

*For more information about the following SAR grid waypoint options, see the Search and Rescue Supplement in **Documents > Catalog > ForeFlight**.*

- ❖ **CAP@ORD451C** - Centers the map on the middle of CAP Grid ORD451, quadrant C.
- ❖ **CAP@40092CD** - Centers the map on the middle of CAP Cell Grid 40092CD.
- ❖ **GARS@176LW3** - Centers the map on the middle of GARS Grid 176LW, quadrant 3.

❖ **MGRS@15RTN50008000** - Centers the map on the middle of MGRS grid UTM zone 15, latitude band R, 100,000m grid square TN, easting 5000, northing 8000.

PLANNING A FLIGHT USING SEARCH

Create a route across any of the available maps by typing in multiple identifiers in the *Search* box, separated by a space, in the order in which you will visit them.

When typing a search, look for the helpful hints that appear underneath the search box. These hints provide example route searches that act as great reminders for quickly visualizing your route. Any of the search options specified in the



“Finding an Airport or Navigation Aid using Search” section are supported as route waypoints. Additionally airways, arrivals and departures are supported, as well as any custom waypoints you have created.

Your current location, if it can be determined, can be used as the origin for your route, as in the last example in the screenshot above: D KSGR. ForeFlight will replace the “D” with the coordinate for your position.

Entire airways can be viewed on the map by searching for just the airway identifier, for instance: *V16*. Airways can also be used in a route, just as ATC would issue them. For example: *NIKOL V244 ILC*.

DPs and STARs (as well as associated transitions) are also supported in a route. If the DP or STAR requires a runway input, ForeFlight Mobile will prompt you for one and provide an example. When briefing and flying these procedures, it is critical to *always* refer to the official arrival/departure plate from the Airport view as the ForeFlight Maps view is *not able to show heading vectors, altitude info, and certain other details you'll need*.

When building a route in the search box you can also provide basic performance information about your aircraft. These can be in any order, but must come after the route waypoints. These include:

- ❖ **True airspeed** in knots or miles per hour. Knots is the default unit unless MPH selected in the Settings view.
- ❖ **Altitude** in feet.
- ❖ **Fuel burn** in gallons, liters or pounds per hour. GPH is the default unit.

Example route searches:

- ❖ **KJFK KSFO** - this is a simple direct route from NY to San Francisco.
- ❖ **D KSFO** - this is a direct route from your current position to San Francisco.
- ❖ **KJFK FLW 32.3N/99W** - this is a route from NY to the FLW VOR to a lat/lon waypoint.
- ❖ **KSFO FLW/320/15** - this is a route from KSFO to a point on the 320 radial 15nm from FLW VOR. If a VOR is not given as the reference waypoint, then the directional information is assumed to indicate a bearing, not a radial
- ❖ **KCLT 36R.MERIL6 RDU J209 ORF J121 SIE CAMRN4 KJFK** - this route includes a runway-specific departure, multiple jet airways and an arrival.
- ❖ **KUZA KOSH 165kts 17gph 8000ft** - this is a route from Rock Hill to Oshkosh with a true airspeed of 165 knots, a fuel burn rate of 17 gallons per hour, and an altitude of 8,000'.
- ❖ **KUZA KOSH 165 17 8000** - this is the same route and performance data as the previous example, this time using the default units.

A route search can also include a *tail number* of an aircraft setup in the **More > Aircraft** view. When that aircraft has performance data it will be automatically used. In this case, you won't need to include altitude, fuel burn, or true airspeed - unless you'd like to use different numbers than you provided in the aircraft's profile.

Lastly, you can also indicate a departure time in your route search; ForeFlight will use this time to incorporate the proper winds aloft forecasts into your time and fuel usage calculations. If you don't provide a time, ForeFlight Mobile assumes you are departing ASAP. You can include the departure time as a specific time or as a time relative to *now*, as a local time or Zulu time, like this:

- ❖ **KUZA KOSH 165 17 8000 1315Z** - The route details will be calculated for conditions starting at 1315Z. The time can be designated in Zulu time, as in the example, or local time, such as: **13:15**, **1:15p**, **1:15pm**, **1:15a**, **1:15am**, or **1:15** (with no am/pm given, ForeFlight will assume you desire the next upcoming 1:15).
- ❖ **KUZA KOSH 165 17 8000 +60** - The route details will be calculated for conditions starting 60 minutes from now. This relative time *must* begin with a + and may be specified in minutes, hours, or a combination; **+60** or **+60m** for minutes, **+2h** for hours, **+2:30** for 2 hours 30 minutes.

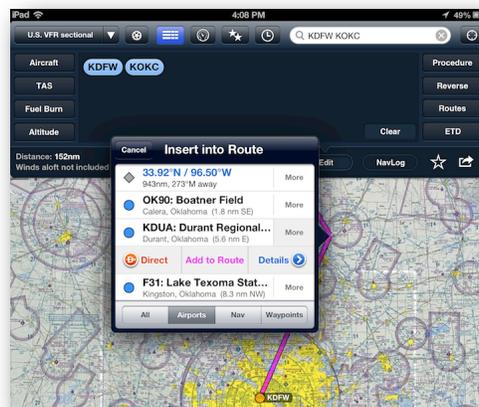
To clear the current route, bring up the edit view and tap the Clear button.



PLANNING A FLIGHT USING TOUCH

You can also create or edit a route using a single finger with ForeFlight Mobile's "Touch Planning". Touch planning is based on touch-and-hold gestures on the Map: place your finger on a waypoint or other location on the map and hold it there for a second. A dialog will appear asking you to specify which location near your touch point should be used.

- ❖ **Add** a waypoint to your current route, or **start a new route**: Touch-and-hold (or just tap) until a pop-up is displayed. Then, select the desired waypoint in the pop-up by tapping the name. If you already have a route on the map, the new waypoint will be added to the end.
- ❖ **Remove** a waypoint from your current route: Touch-and-hold on the waypoint. Tap the **Delete** button in the top right of the pop-up.
- ❖ **Insert** a waypoint in the middle of an existing route leg: Touch-and-hold on the route leg line until it turns blue. Then, keeping your finger on the screen, drag to the location you want to add. Remove your finger from the screen and select the desired waypoint from the pop-up view by tapping its name. Or tap **More** to see additional options: **Direct**, **Add to Route**, or **Details >** on the Airports page.



The pop-up view that appears as part of touch planning allows you to select from a list of locations near your touch point, sorted by distance. The list shown is filtered by *All* (which includes airspaces), *Airports*, *Nav* (VORs, NDBs), and *Waypoints* (intersections and user waypoints). To change the filter mode, tap the buttons in the bottom of the pop-up view.



To cancel a touch planning operation, tap the **Cancel** button that appears in the pop-up view or tap the map outside the pop-up view.

When Adding a waypoint using touch, the pop-up window shows an icon next to the name to help identify the type of waypoint:

- User Waypoint
- VOR, VORTAC
- Waypoint
- NDB
- Airport

Tap the **“More”** button next to an entry in the pop-up to show additional options for that entry (see following example for KTUL):



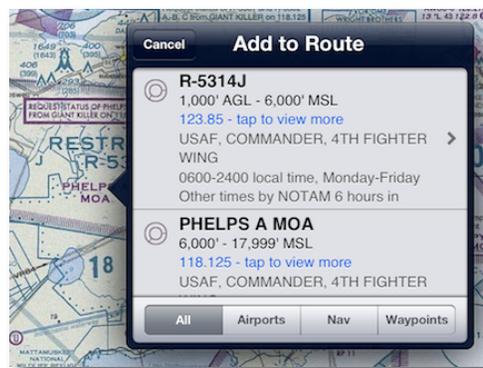
Tap the orange **Direct** button to make a new route direct-to that waypoint from your present position.

Tap the magenta **Add to Route** to add that waypoint to the end of the route.

Tap the blue **Details** chevron next to an airport name to see that airport’s details in the Airports view.

AIRSPACE INFORMATION

To see information about airspace, MOAs and Restricted Areas, touch and hold on the airspace or area on the Map, then tap the **All** filter at the bottom of the pop-up. The airspace info is shown in gray at the top of the pop-up. Tap “Cancel” (or anywhere on the screen) to close the pop-up.



ROUTE LINE

The route line drawn on the map is color-coded to indicate the active leg. Magenta is the current leg, blue is a future leg, and orange is a past leg. Waypoints in the route are drawn with an icon to represent their type, such as a VOR.

MANAGING USER WAYPOINTS

Sometimes you'll want to include a waypoint in your route that isn't an airport or a navaid. A user waypoint is a method of saving any single point on the map for future reference, inclusion in routes, or direct-to operations. Use a custom user waypoint any time you'd like to save a position that isn't already associated with an existing waypoint.

While using touch-planning, create your own custom waypoint from a point on the map: Tap-and-hold the point until a pop-up is displayed. Tap the More button, then the  **Save** button to create and name the waypoint, which you'll be able to use in future routes.

User Waypoints may be entered one at a time at **More > User Waypoints**, and can also be added in bulk from KML or CSV files. See the ForeFlight website for more details.

❖ **Name:** Create a recognizable name for the waypoint. Names must be one word with no spaces and must contain at least one letter. Once a waypoint has been named, you'll be able to reference it while creating routes just as you would any other waypoint.

NOTE: "D" and "CAP" are reserved and may not be used as User Waypoint names.

❖ **Description:** Provide a brief description of the waypoint. The description appears in the waypoint callout when you tap that waypoint in your route in the Maps view.

❖ **Lat/Lon:** When creating a user waypoint via touch-planning, the latitude and longitude are determined for you based on the point on the map that you touch. These can be edited here.

NOTE: You can also enter a user waypoint as a distance and radial from an aviation point by entering the point/radial/distance information in Latitude and leaving Longitude blank. For example, entering GEP/125/10 in Latitude would create a user waypoint 10 NM away from the GEP VOR on the 125 Radial.

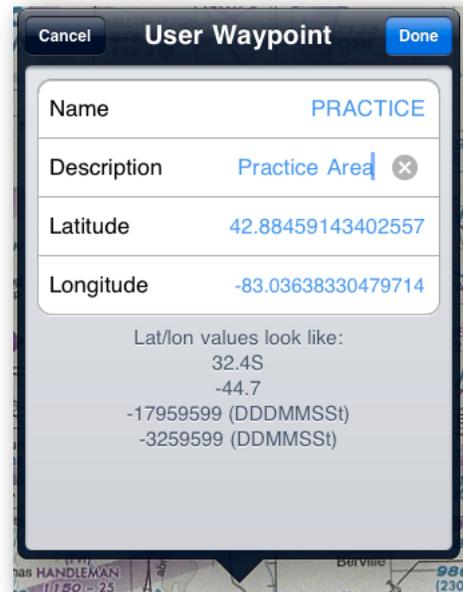
Tap the **Done** button to finish creating the user waypoint. Once the waypoint is created, it functions just as any other waypoint in ForeFlight Mobile.

To **delete** a single user waypoint, use the swipe-to-delete gesture: swipe your finger across the name of the waypoint, then tap the red Delete button. To delete ALL User Waypoints, tap the "Clear" button.

User waypoints can be:

❖ **Searched for:** Using the *Search* box at the top of the *Maps* view.

❖ **Included in a route:** By entering the name of the user waypoint in the same way you would use any other airport name or navaid when planning via search.



WORKING WITH THE NAVIGATION LOG AND EDIT VIEW

Overview

The Maps view has an overlay view at the top that can be hidden or shown. Use the  button in the top *Maps* view toolbar to hide or show this upper overlay view.

This overlay view can be setup to show either a route edit view or the NavLog view. To change between the two, tap the selectors in the lower portion of the overlay view.



At the bottom of the view is a summary of route and performance data (when available), as well as the winds aloft for the flight. Winds aloft are *only* incorporated if a true airspeed *and* altitude are provided as part of the route.

Winds aloft calculations also require an active network connection to retrieve the latest winds aloft forecast. However, once a forecast has been downloaded it will be saved for a few hours for use when offline.

To see your route without wind adjustments input an altitude that is too high in the route search, such as 80000. That will override any altitude in the default aircraft and prevent the calculations.

The star button toggles the favorite status of the current route. When the star icon is filled in solid, the current route is a favorite route. When marking a route as a favorite, you have the opportunity to name the route as something other than the default "<Origin> to <Destination>" name; having a custom name can be helpful when locating a route in the Favorite Routes list.

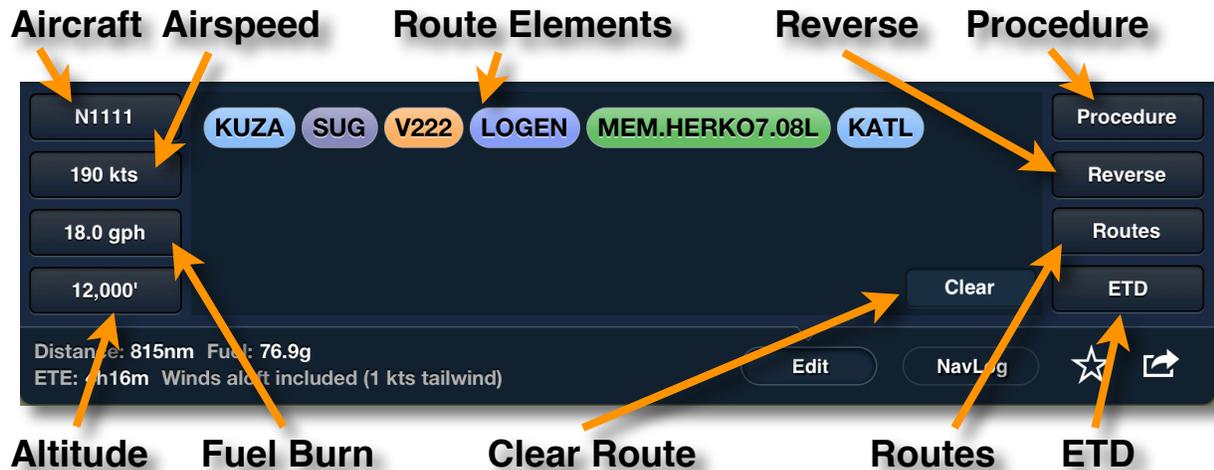
The rectangle-with-arrow button is the "Send to" button. Tapping this will show multiple options:

- ❖ "File & Brief" copies the current route and performance data to the File & Brief view, creating a new flight plan there. *Note:* tapping this button does not file the flight plan or submit a request for a briefing. Rather, it takes you to a page where these actions can be performed.
- ❖ "Email" creates a new email message with your navigation log and a screenshot of your trip. The message also includes a link that other ForeFlight Mobile users can tap to load your route onto their iPad or iPhone.
- ❖ "Printer" allows printing of the navigation log to a connected AirPrint printer. (Requires iOS 4.2 or higher.)

- ❖ "Clipboard" will copy the flight plan to the iPad internal clipboard to allow "pasting" in another application.
- ❖ Other devices on the same WiFi network that are running ForeFlight (listed by device name). See [Cockpit Sharing](#).
- ❖ "Twitter" composes a new Twitter message with your route and a screenshot of your trip. (Requires iOS 5 or higher.)
- ❖ "Aspen" will copy the flight plan to your Aspen Connected Panel.

Edit View

The NavLog Edit view allows for easy creation and editing of routes on the iPad. To create or append to a route, simply tap the center area and use the keyboard to enter the new route element. Any route element accepted via the search input is valid in the edit view, including airways and SIDs/STARs. As you make changes to the entries, the Map and NavLog views will update to reflect the new route.



The Route Elements are color-coded for easier identification:

Airport	KIAD	Airway (J or V)	J53	VOR	PSK
SID/STAR	01L.RNLDI2.LDN	Waypoint	DANBI	NDB	TEC
Traffic Pattern	TEARDROP TO 04	Error	VFREWA		

While performance information (such as airspeed or fuel burn) can be typed into the route elements area these values can also be configured using buttons provided in the edit view. Tap either the aircraft, airspeed, fuel burn, altitude, or ETD button to configure those items.

The Altitude button displays the Altitude Advisor™ (see next page), which shows the modeled winds aloft at various altitudes, provided the required route and performance data are available. Altitudes resulting in a net average tailwind over the route are shown in green, while those resulting in a net average headwind are shown in red.

When connected to a Stratus ADS-B receiver, Altitude Advisor™ will only display wind effects if you have received recent winds aloft data for the entire route.

Altitude		10,000	
Winds aloft: 12 kts tailwind			
1,500'	1 kts headwind	3h19m	51.1g
2,000'	1 kts headwind	3h19m	51.1g
2,500'	1 kts headwind	3h19m	51.1g
3,000'	1 kts headwind	3h19m	51.1g
3,500'	winds calm	3h18m	50.8g
4,000'	1 kts tailwind	3h17m	50.5g
5,000'	2 kts tailwind	3h15m	50.0g
7,000'	7 kts tailwind	3h10m	48.9g
9,000'	12 kts tailwind	3h05m	47.6g

VFR IFR Westerly Easterly All

The Procedure button allows for adding or replacing arrival procedures, departure procedures, and VFR traffic patterns for the route. Simply tap the Procedure button and make the appropriate selections to add/alter the procedure in the route.

Traffic Pattern Advisor

Tap the **Procedure** button, then tap **Traffic Pattern** to display VFR traffic patterns for the airport at the end of the current route. Runway selections are provided with those having the best headwinds highlighted in the list when recent wind data is available. Wind direction, speed and age of observation are also shown



at the bottom of the list. After selecting a runway the available pattern entry options are displayed, such as Cross Midfield or Straight-in. For non-towered airports the entries are sorted based on each runway's pattern side (right or left).

Additionally, entries are highlighted that make the most sense for your route's direction of flight. Tap an entry to add it to the end of the current route (or to replace one already in the route). Traffic patterns are automatically removed from a route when certain route edits are made, such as reversing the route.

IMPORTANT: Traffic patterns cannot currently be sent to another device via [Cockpit Sharing](#).

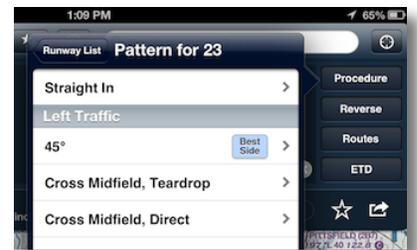
Search and Rescue (SAR) patterns can also be inserted using the **Procedure** button (when the Enable Search and Rescue setting is ON). For more details about SAR features, see the Search and Rescue Supplement, in **Documents > Catalog > ForeFlight**.

The **Reverse** button will reverse the current route.

The **Routes** button will display the Route Advisor™, which shows any special routes that can be found for the origin and destination you entered in the route entry area. When selecting a route in the list, it will replace the route setup in the entry area. Multiple types of routes are displayed when available, these include:

- ❖ **TEC/Preferred** - these routes are commonly used and can be viewed even when offline.
- ❖ **ATC** - these are routes that ATC has issued as clearances for in the past.
- ❖ **Airway** - these are victor-airway based routes. These are generally only available when connected to the internet, though all routes are saved to the iPad once downloaded.

The Clear Route button can be used to remove all route entries. A confirmation button will be shown when the Clear button is tapped.



Route Entry Area

The main route entry area is used to add, reorder, or remove route entries. A route entry is any waypoint, airway, or other route element. To add an entry to the end of the route, tap anywhere in the dark blue area of the route entry box. This will show the keyboard. Type in the ID of the route entry to add.

To add a route entry in the middle of the route, tap any existing entry to reveal the action menu for that entry.

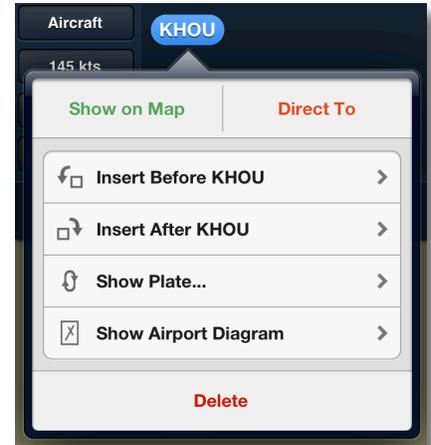
Tap either of the insert buttons to show the ID entry field. Type in the new entry to add and press Insert or tap the return key on the keyboard.

To jump to an entry on the Map, tap the entry and tap the "Show on Map" button.

To go Direct-To a route entry, tap it and tap the "Direct To" button.

To remove an entry, tap it and select Delete. Alternatively, you can hold your finger on the entry briefly to "pick it up". Then drag it out of the route edit area and release it to delete it.

To move an entry, hold your finger on it briefly to "pick it up" then move it to the new location and let go.



NavLog View

The navigation log displays each leg of the route, with course (or heading, if winds aloft are included for your route), distance, fuel burn, and time statistics.

The table listing shows the start and end points of each leg, along with the leg statistics. You can select whether to display only Totals columns, only Leg columns or Both Totals and Leg columns (as below) in **More > Settings > Nav Log Columns**.

From	To	Heading	Totals		Leg			Remaining		ETA	
SUG	ODF	237°M	131nm	11.8g	0h47m	66nm	6.0g	0h24m	1,891nm	29h12m	4:28 PM
ODF	WOMAC	228°M	176nm	15.8g	1h03m	45nm	4.1g	0h16m	1,937nm	29h54m	5:10 PM
WOMAC	LOGEN	226°M	187nm	16.9g	1h08m	11nm	1.0g	4m09s	1,948nm	30h05m	5:21 PM
LOGEN	MFM	285°M	487nm	42.3g	2h49m	299nm	25.4g	1h41m	2,248nm	34h42m	9:58 PM

Distance: 815nm Fuel: 69.5g
ETE: 4h38m Winds aloft Included (4 kts headwind)

Edit NavLog ☆ ↗

❖ **Planned Data:** Information in the *From, To, Heading (or Course), Totals, and Leg* columns represent the *planned* route and is based on the information provided in

the *Search* box, or based on your selected aircraft's performance profile. This information is *not* updated once displayed.

❖ **Real-Time Distance, ETE/ETA:** The *Remaining* and *ETA* columns are updated in real-time based on current GPS position and groundspeed. The distance remaining on the leg, estimated time enroute for the leg, and estimated time of arrival at the next waypoint are displayed.

NOTE: during pre-flight planning on the ground, the *Remaining* and *ETA* columns will not show accurate information, because they require actual (real-time) GPS speed and position to update.

Tap on a waypoint ID in the table to jump to that waypoint on the map.

Tap the  icon to adjust your route to any leg, or direct to a waypoint on a leg.



Single-waypoint Search

To find out about another waypoint, airport or navaid that is not on the active route in the NavLog, simply enter the waypoint, airport or navaid into the Search box. The route will remain active, but the searched-for item will be highlighted on the screen. You can explore that waypoint (such as viewing an airport's details in a popover view) without affecting the active route, and you can also add it to the route as you would any other location on the map.

ENGAGING THE MOVING MAP

When the aircraft is not in motion, the current location is shown as a blue dot. When the aircraft is in motion, the current location is shown as an aircraft, which is selected in the **More** > **Settings** view. If the aircraft doesn't show up on the Map, please review the GPS troubleshooting tips on our web site at www.foreflight.com/support/gps

The map can be set to automatically scroll to keep the current location on the screen. Activate this auto-centering mode by tapping the crosshair button in the top right of the screen, in the gray toolbar. The button turns blue when auto-centering is engaged.

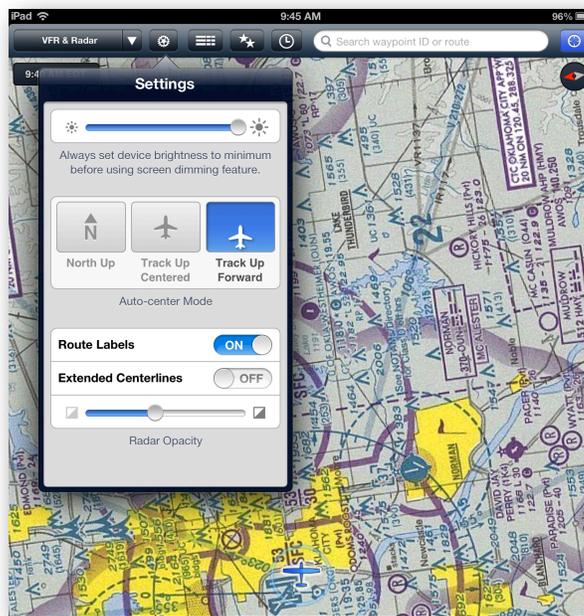


Track Up

Auto-centering can be set to operate in Track Up mode (the top of the screen is rotated to your current GPS track direction), Track Up Forward mode (Track Up mode with the aircraft moved slightly down the screen) and North Up mode. Change modes by tapping the “configure” button with the gear icon in the Maps toolbar. You can also quickly toggle between North Up and your last Track Up mode by tapping the circular “orientation” button just under the auto-center button.

NOTE: If Track-up is selected while stationary, the map will not rotate. Once the aircraft starts moving, the map will rotate so the direction of travel is at the top of the map.

Tap the gear icon in the Maps toolbar to display Settings, then choose Auto-center Mode:
North Up
Track Up Centered
Track Up Forward



Tap the crosshair button to engage Track Up

Tap the orientation button to toggle between
Track Up:
and
North Up:



Tap the crosshair button again or manually pan or zoom the map to disable the auto-centering mode. If you pan the map while in track-up mode the current map rotation will be maintained until you tap the auto-center or orientation button in the upper right of the Maps view.

You can prevent the automatic disabling of auto-center mode when panning by changing the Auto Center Deactivate mode in Settings. When that is set to Manual, you cannot pan the map when auto-center mode is ON. Tap the crosshair button to turn auto-center mode OFF so you can pan the map.

Note that only the iPad Cellular model contains a GPS receiver. The Wi-Fi-only iPad does not contain a GPS receiver. In order to use the mobile map functionality with a Wi-Fi-only iPad, you must use a Stratus ADS-B + GPS receiver, or an external GPS receiver (see: www.foreflight.com/support/gps).

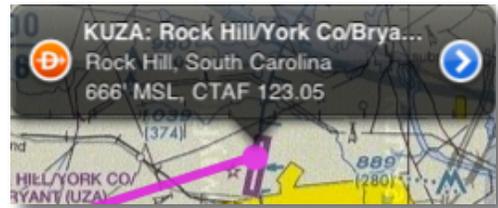
When the Track Vector is ON, a projected track is displayed in front of the aircraft icon. The length of the vector is controlled by the setting on the More page under Settings, and can be 15, 30, 45, 60 seconds; 2, 5, 10 minutes or 1/2, 1, 2, 5, 10, 25, 50 Nautical Miles.



While your track direction is changing at more than 2 degrees-per-second (ie: the aircraft is turning) the track vector changes to a curve in the direction of your turn.

DIRECT-TO

To create a direct-to change to your route, tap a waypoint on the route. Then tap the orange  button. An alternate method is to tap the  icon in the navigation log.

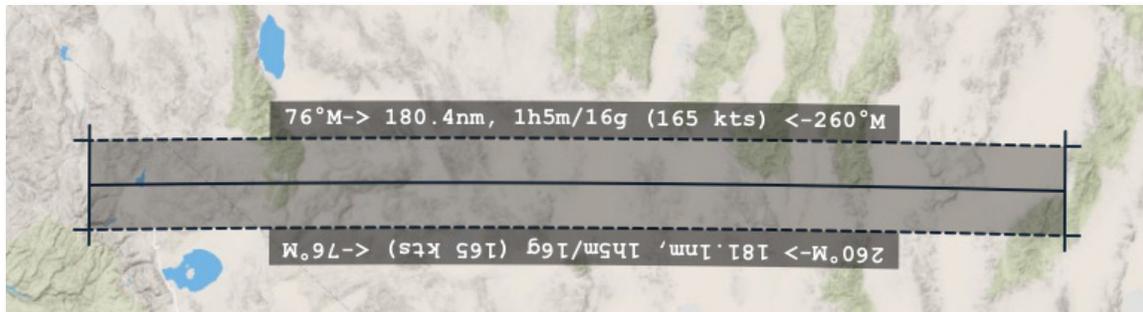


This removes all waypoints in the route prior to the selected waypoint and adds a new direct-to leg from present position to the selected waypoint.

Additionally, a direct-to change can be made to utilize a waypoint not already in the route. See the "Touch Planning" section for details.

RULER

Distances can be measured on the Maps view at any time by holding down two fingers on the map until the ruler appears. The ruler can be moved across the map to take measurements between any locations. The ruler is also handy for quickly visualizing great-circle (direct) routes between two points.



When using the ruler in flight, the current groundspeed will be used to show the time of travel for the distance measured. When not in flight, the TAS from your current route or default aircraft will be used instead.

Fuel burn estimates are also shown using the fuel burn provided for the current route or from the default aircraft.

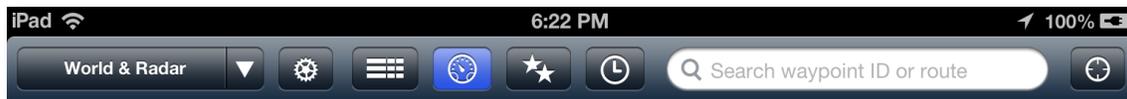
All time and fuel estimates are based on no-wind conditions.

Initial course bearings are also shown from each side of the ruler.

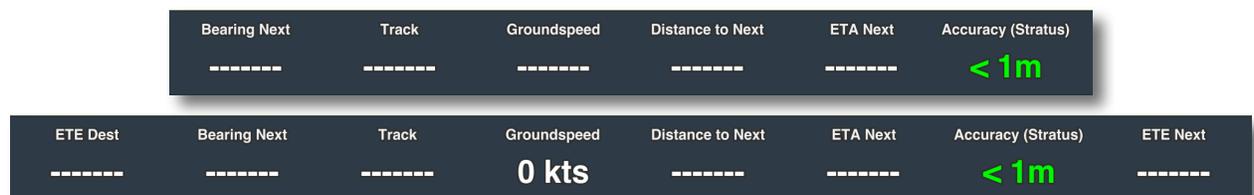
The ruler will remain on the Map after you remove your fingers. To remove the ruler, tap on the Map.

VIEWING AND HIDING THE HEADS UP DISPLAY

To show or hide the Heads Up Display, tap the “instrument” icon (on the iPad, now located in the menu at the top of the screen)



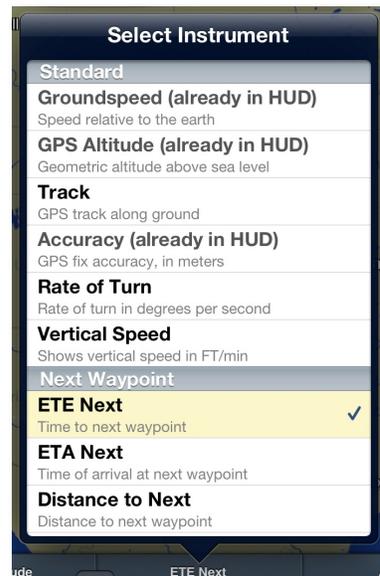
When a position fix is available, the data fields in the Heads Up Display (HUD) at the bottom of the map update to reflect the latest values for groundspeed, track, and geometric MSL altitude. Additionally, an accuracy value is provided as an indication of the quality of the fix (lower numbers are better).



On the iPad 6 instruments are displayed on the HUD in portrait orientation and 8 in landscape orientation. On the iPhone, 4 instruments are displayed in portrait and 6 in landscape.

The instruments on the right and left ends of the HUD in Landscape mode are hidden when the device is rotated to Portrait. The default instruments displayed on the HUD can be replaced with an instrument of your choice by tapping an instrument and selecting a new one from the pop-up list.

The *Select Instrument* pop-up displays all available instruments. Be sure to scroll the list up/down to see each instrument. The list provides a description of each instrument's function, as well as an indication of which ones are already displayed. **NOTE:** When in Portrait orientation, the 2 additional instruments visible in Landscape are shown as being “(already in HUD)” even though they are not visible on the screen.



The following instruments are available in the HUD:

Standard	Next Waypoint	Destination	Other
Groundspeed	ETE Next	ETE Dest	Current Lat/Lon
GPS Altitude	ETA Next	ETA Dest	Zulu Time
Track	Distance to Next	Distance to Dest	Blank
Accuracy	Bearing Next	Bearing to Dest	
Rate of Turn	Cross Track Error		
Vertical Speed	Nearest Airport		
	Nearest Navaid		

NOTE: Nearest Airport shows the Cardinal position and distance from the nearest airport to your present location. Nearest Navaid shows the Navaid identifier and the radial and distance from that Navaid.

USING FAVORITE ROUTES

To view a favorite route, tap the double-star button in the dark blue tool bar at the top of the Maps view. A list of your favorite routes is displayed.



Tap a route in the list to make it the current route.

To delete a route from the favorites list, use swipe-to-delete on the route.

The favorites list can be re-ordered by tapping the **Edit** button. Once in *Edit* mode a three-bar icon is displayed on the right of each route in the list. Tap-and-hold on the three bar icon until the row appears to lift up, then drag the row to the desired location in the list. You can also delete the route by tapping the red button on the left.

Note that removing routes from your *Favorites* list will not affect items displayed in the *File and Brief* view.

USING RECENT ROUTES

Every route shown on the Map is automatically saved to the Recent routes list. This provides a great way to quickly jump to a previously viewed routing or performance configuration.

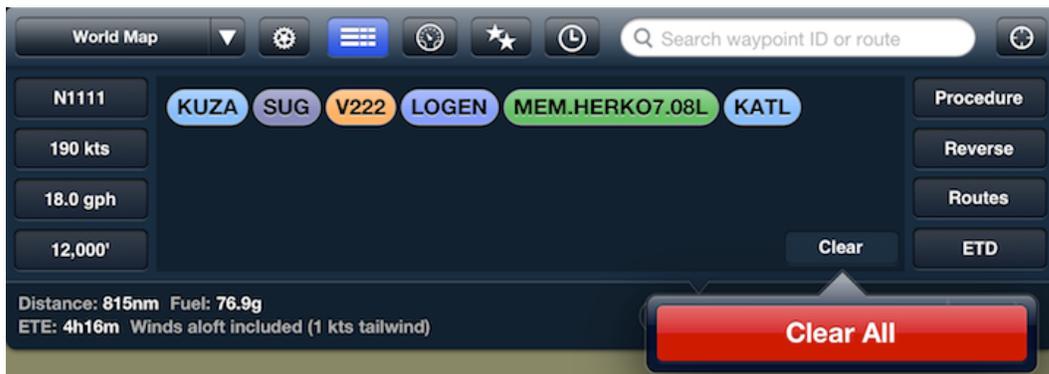


View this list by tapping the clock icon in the dark blue tool bar at the top of the view. Tap a route in the list to make it the active route.

Delete a route from the recents list using swipe-to-delete, or delete all routes from the recents list by tapping the **Clear** button at the top of the list.

CLEARING A ROUTE

Clear a route from the Map by tapping the “Clear” button in the NavLog Route Entry area bar in the upper overlay view of the *Maps* view. Tap the “3-bar” NavLog button (bright blue in top-middle of this screenshot) to show the NavLog:



Cockpit Sharing

ABOUT THE DESIGN

Cockpit Sharing (available in ForeFlight Mobile 5.4.2 or later) allows you to share a route with another device running ForeFlight Mobile 5.4.2 or later, provided both devices are on the same WiFi network, either an internet-connected WiFi-hotspot on the ground or a WiFi-equipped ADS-B receiver like the Stratus 1 or 2.

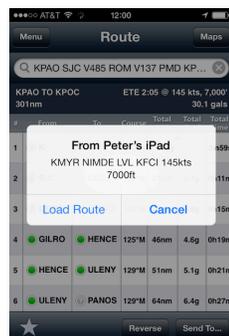
USING COCKPIT SHARING

Activate Cockpit Sharing on each device by tapping on **More > Settings** and turning “Cockpit Sharing” **ON**.

When two or more iPads, iPhones or iPod Touches running ForeFlight Mobile in the foreground are connected to the same WiFi network, tap the “Send to” button on the NavLog to see a list of all possible destinations. Tap the desired destination to send the route.



As soon as the route is sent, a route confirmation pop-up will open on the other device. Tap **Load Route** to load the route into the NavLog (or into the active route on the iPhone) or tap **Cancel** to ignore the route sharing request.

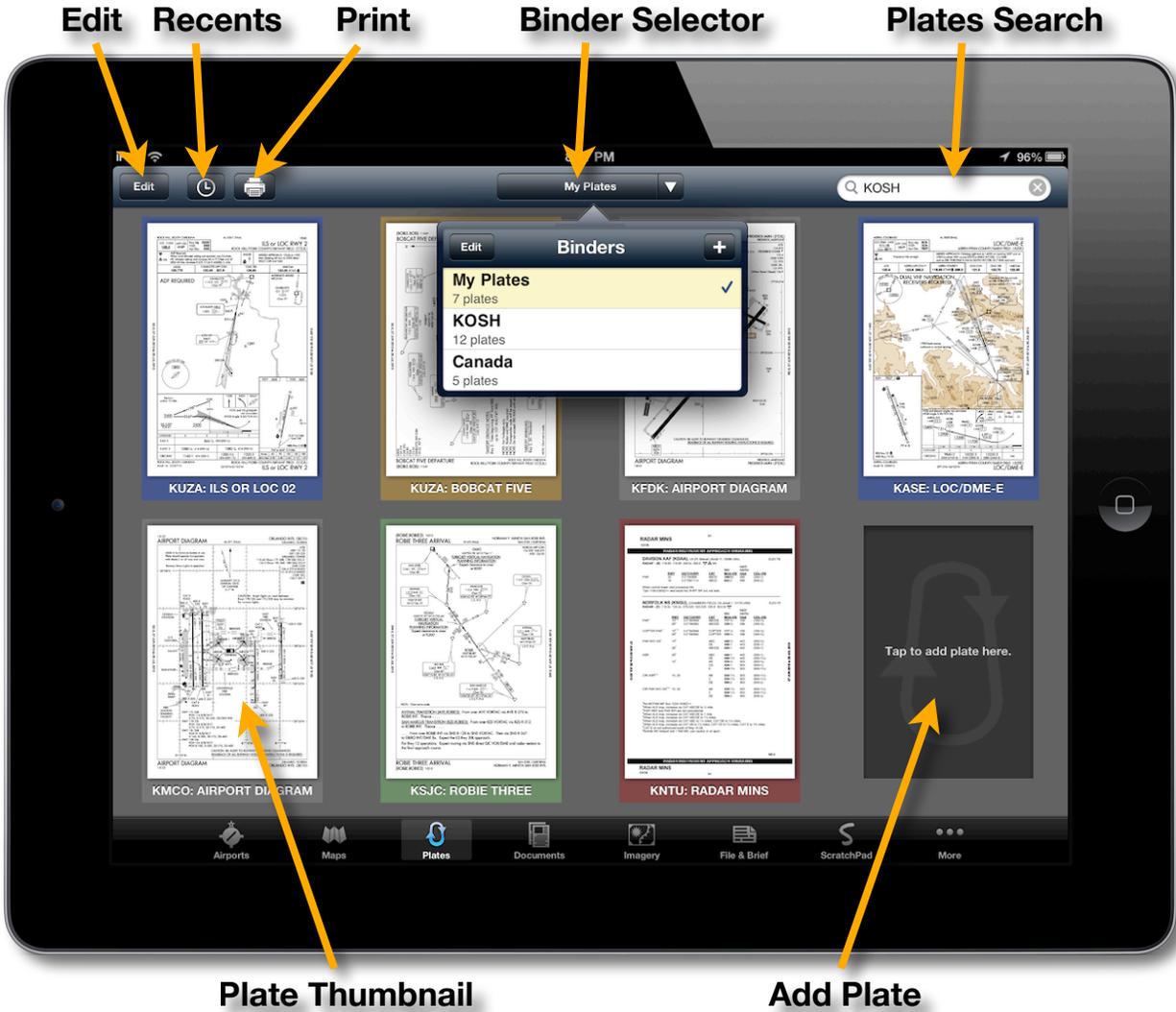


Plates

ABOUT THE DESIGN

Instrument pilots use their procedures differently in the air than when on the ground. Often, you'll view an arrival, approach, and then taxiway diagram - all without needing to return to a chart or A/FD in between. The *Plates* view is designed to account for the way you use procedures *while* you're flying.

The *Plates* view provides access to approach plates; taxiway diagrams, and arrival and departure procedures. This view enables you to organize the plates in the way that makes the most sense to you and streamlines your access to each procedure.



ABOUT PLATE BINDERS

Binders provide a method for organizing plates into logical groups for easy access while in flight. A plate binder can contain any combination of:

- ❖ **Airport Diagrams**
- ❖ **Hot Spots**
- ❖ **Take-Off Minimums**
- ❖ **Departure Procedures**
- ❖ **Arrival Procedures**
- ❖ **Instrument Approach Procedures**

CREATING A BINDER

To create a new binder, tap the *Binder Selector* in the top toolbar. Use the + button to add a new binder and provide a name when prompted.

The binder is created and the *Plates* view automatically displays your new (empty) binder.



MANAGING PLATES

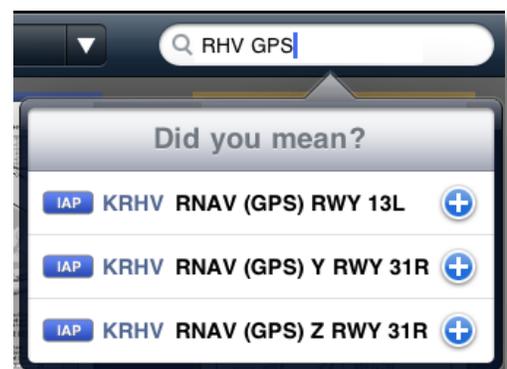
There are two methods of adding plates to a binder.

The '*Tap to add plate here*' thumbnail displays an intelligent list of airports gathered from airports you've used in other parts of ForeFlight Mobile. Tap an airport to see the available plates. Tap one or more plates to add them to the binder.

The *Plate Search* box in the top toolbar allows you to search for a plate by airport, or by a specific procedure.

Example Searches:

- ❖ **KJFK** - Lists all procedures associated with the JFK airport
- ❖ **RHV GPS** - Lists the RNAV (GPS) approaches to the RHV airport



❖ **MDW ILS 13-** Displays the ILS Rwy 13C approach to MDW airport in the procedure viewer.

Tap the  icon to the right of any procedure to add it to the current plate binder. Tap the procedure name to view it.

To reorder or delete plates in a binder, tap the **Edit** button on the left side of the top toolbar.

To change the order in which a plate is displayed in the binder, hold and drag the plate to the new location. Note that you can add the same plate to the same binder more than once. For example, you might create a binder that contains plates for three local airports. You could elect to include each airport's taxiway diagram both before each airport's departure procedures *and* after each airport's approach plates, making it easier to find the diagram in context during both arrival and departure operations.

To remove a plate from the binder tap the **X** icon in the upper left of the plate thumbnail.

PRINTING PLATES FROM A BINDER

Tap the **Print** button in the top toolbar of the *Plates* view. The *Printer Options* dialog box is displayed. From here, select a printer and a number of copies. Tap the **Print** button to send the selected number of copies of *all* plates in the binder to your printer.



To print only *one* procedure, tap the plate's thumbnail to display it in the procedure viewer, then tap the **Send to** button and choose "Send to Printer."

Printing requires an AirPrint capable printer. For more information about this requirement, see:

support.apple.com/kb/ht4356

ENSURING YOUR PLATES DON'T EXPIRE

When you view a plate or add it to your binder, ForeFlight Mobile uses either a copy of the plate stored locally on your iPad (by virtue of the fact that you've already downloaded it), or uses your iPad's Internet connection to fetch the plate and store it locally on your iPad. In either case, the plates are viewable *until they expire* - whether you have an Internet connection at the time you view them or not.

When these plates expire, *they are only automatically replaced if you have used the Downloads view to download new terminal procedures for the states/regions associated with the plates in your binder*. Otherwise, the plates are only replaced when you open the binder *and* have an Internet connection. In-flight is not the time to discover this.

Be sure to check the *Downloads* view to ensure ForeFlight Mobile is set to download terminal procedures for all states covered in your binders and that all requested data has been downloaded. This ensures all plates in your binder will be current and available to you at any time - on the ground or in the air.

Plates and Taxi Diagrams on a Map

ABOUT THE DESIGN

This feature allows you to overlay georeferenced US approach plates or airport diagrams on the Maps page. Viewing plates and taxi diagrams on a Map requires an active ForeFlight Mobile Pro subscription. To upgrade, visit www.foreflight.com/buy. Currently this feature is not available for Canadian approach plates or Airport diagrams.



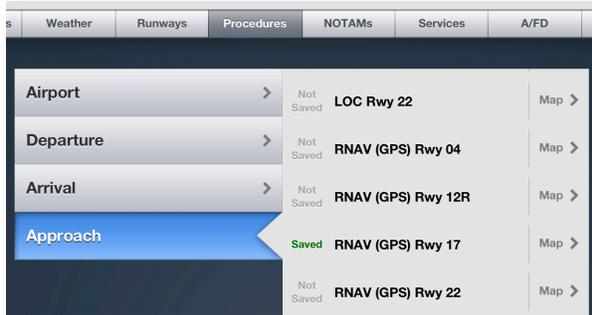
In North-up mode, the plate or airport diagram is displayed on the chart right-side-up; in Track-up mode, the plate rotates along with the chart so that your ground track is towards the top of the map.

Using in-flight ADS-B or XM weather, radar and other weather information can also be displayed on the Map with the plate. Radar or Satellite can be displayed while on the ground and connected to the internet.

You can add the waypoints on the approach by rubber-banding your route: for each waypoint, touch-hold the route line, then drag it to the waypoint and release to display the waypoint pop-up. Choose the waypoint name to add that point.

DISPLAYING A PLATE ON A MAP

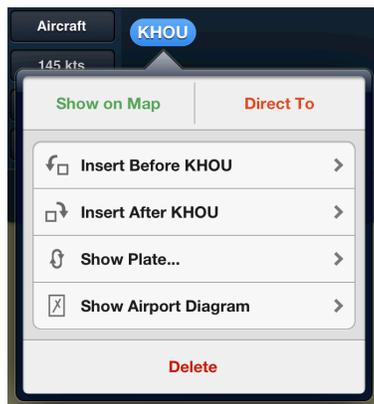
You can display a US Approach plate or Airport diagram on the map in five ways:



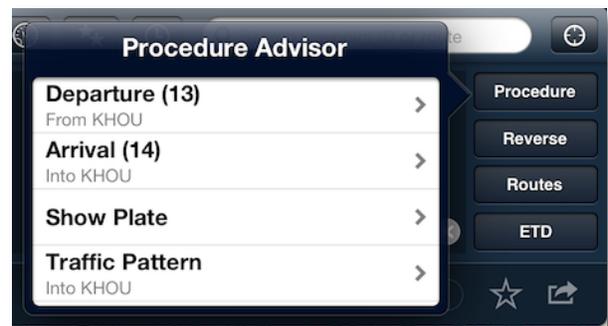
1. From the **Airports** page, tap the **Map >** button next to the desired approach in the Procedures list.



2. From the **Maps** page, tap the desired airport, then tap the blue icon in the pop-up to select the airport, then scroll down to the Procedures section and tap Approaches, then tap the **Map >** button next to the desired approach.

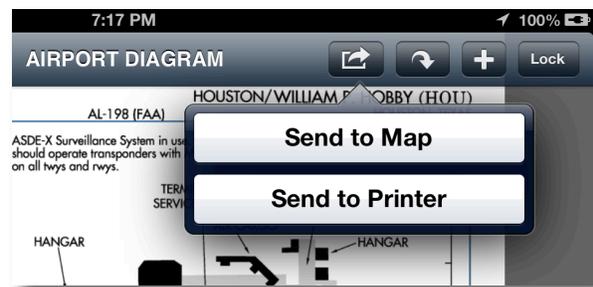


3. From the **NavLog Edit** box, tap the colored oval and choose "Show Plate..." (or "Show Airport Diagram").



4. From the **NavLog Edit** box, tap the Procedure Advisor button then choose "Show Plate" and select the approach.

5. From the **Plates** page tap the Send to button and choose "Send to Map":

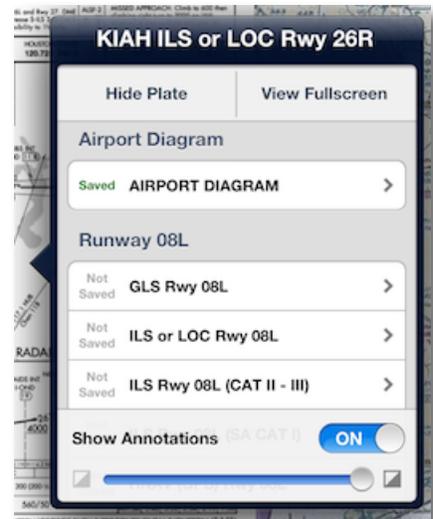


CHANGING OR HIDING THE PLATE ON A MAP

Once you have displayed an approach plate or airport diagram on the map, you can change or hide it

by tapping the gear button  or by tapping on the plate itself to display the pop-up. There you will see the selected plate (highlighted in yellow with the check-mark) and you can scroll through the list of available plates to select a different plate. Tap a different plate to display it on the Map.

You can also tap **Hide Plate** to remove the plate from the Map, or tap **View Fullscreen** to open the plate on the Plates page. Turn **Show Annotations** OFF to hide any annotations you made to the plate, and you can adjust the transparency of the Plate on the chart using the slider.

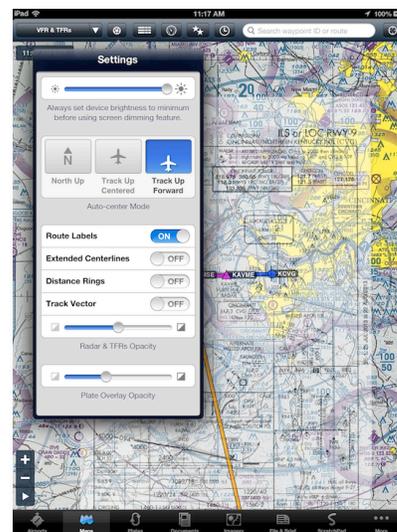


ADJUSTING PLATE TRANSPARENCY

Once you have displayed an approach plate or airport diagram on the map, tap the Map Settings “gear” button to adjust the transparency of the plate from fully opaque (completely covers the underlying map) to more transparent so the underlying map shows through. You can also adjust the transparency of the Radar overlay (if selected).



Fully-opaque (slider to right)



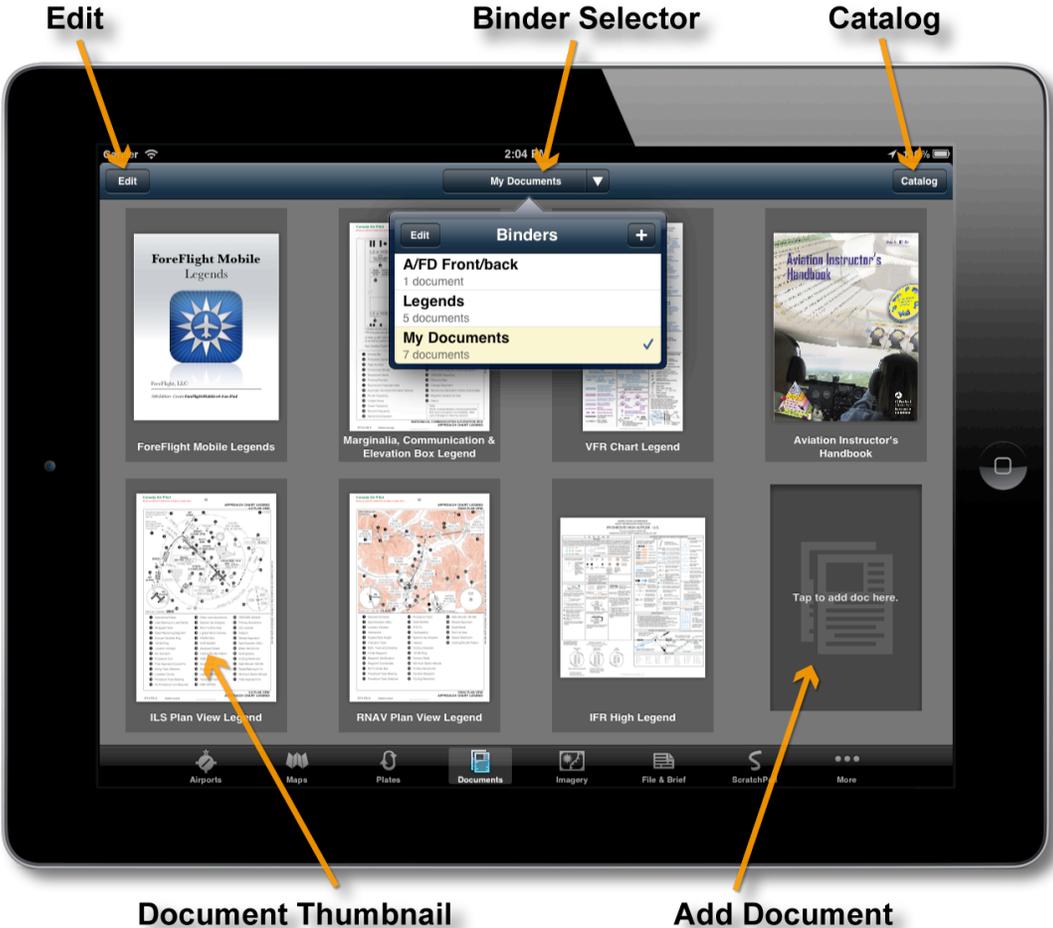
Mostly Transparent (slider to left)

Documents

ABOUT THE DESIGN

The Documents view provides access to legends, manuals, or any document you wish to bring with you. This view enables you to organize documents in the way that makes the most sense to you, bookmark areas of interest inside of a document, and quickly switch between reading a document and other views in the app.

Documents for the FAA, NAV CANADA, and ForeFlight are provided in the Catalogs view. These catalogs include useful supplemental materials like the Digital Terminal Procedures Supplemental, Class B enhancement graphics, and Aeronautical Information Manual. The Catalog view also includes any PDF or image documents you have imported into ForeFlight Mobile from iTunes or apps like Safari, Mail, or Dropbox.



ABOUT DOCUMENT BINDERS

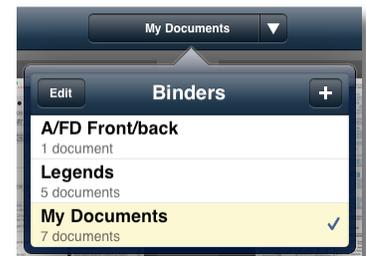
Binders provide a method for organizing documents into logical groups for easy access while in flight. A document binder can contain any combination of:

- ❖ **FAA Documents**
- ❖ **NAV CANADA Documents**
- ❖ **ForeFlight Documents**
- ❖ **Imported PDF files**
- ❖ **Imported image files (PNG, JPG, TIF, GIF)**

CREATING A BINDER

To create a new binder, tap the *Binder Selector* in the top toolbar. Use the + button to add a new binder and provide a name when prompted.

The binder is created and the *Documents* view automatically displays your new (empty) binder.



ADDING DOCUMENTS FROM A CATALOG

The Catalog view lets you add documents to your binder from the FAA, NAV CANADA, or ForeFlight catalogs. If you have a ForeFlight Mobile Pro subscription, see [Document Syncing](#) for details about automatically adding documents to ForeFlight Mobile.

The Catalog view also lets you add documents to your binder that you have previously imported into the app. You can bring up the Catalog view by tapping the **Catalog** button in the top-right corner, or by tapping the 'Tap to add doc here' thumbnail at the bottom of your binder.

The Catalog view has two panes. On the left pane is a list of the available catalogs. Tap the catalog name to view that catalog. On the right pane is the list of documents for that catalog.



Tap the  icon to the right of any document to download the document. After the download is complete, it will be added to your current binder.

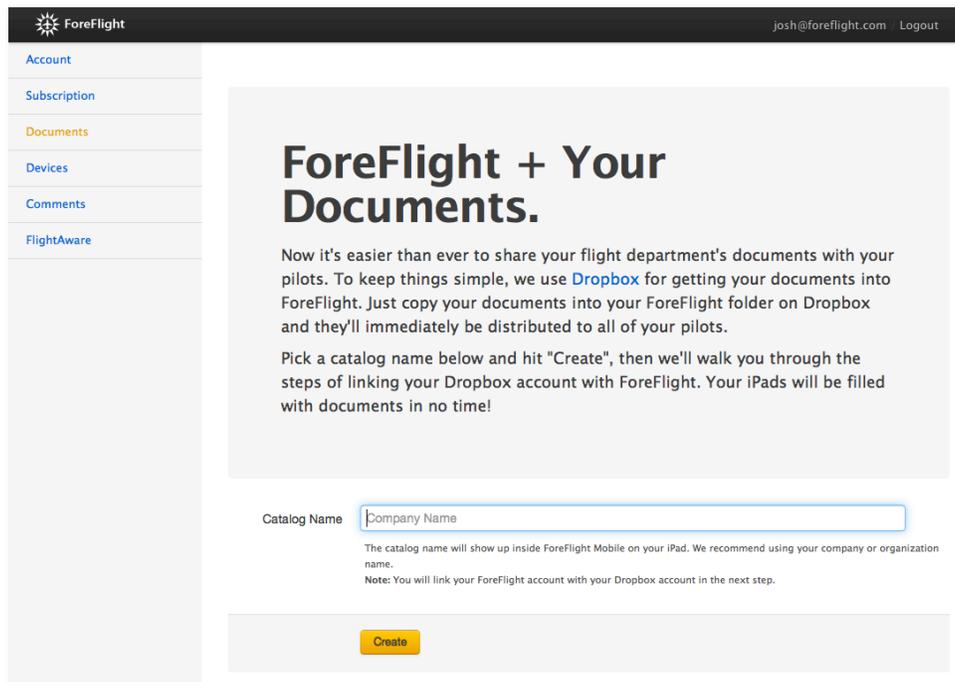
Tap the  icon to the right of any document to add it to the current binder. This icon indicates that the document has already been downloaded to your iPad, but is not included in the current binder.

The  icon indicates that the document has been downloaded and is already in the current binder.

If you wish to delete a document from your iPad and from all binders, find the document in the Catalog view, swipe from left-to-right on the name of the document, and then tap the red **Delete** button.

DOCUMENT SYNCING VIA DROPBOX

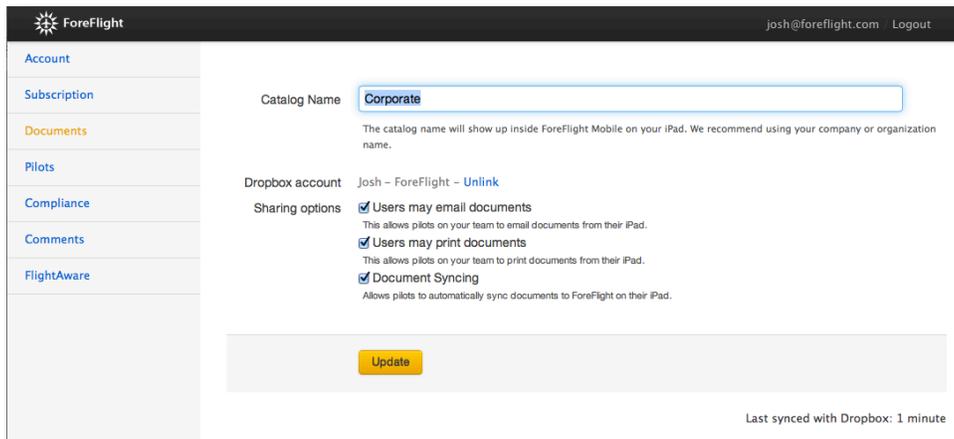
If you have a ForeFlight Mobile Pro subscription, you can link your ForeFlight account to a Dropbox account (free or paid) at www.foreflight.com/manage/documents.



The screenshot shows the ForeFlight web interface. At the top, there is a navigation bar with the ForeFlight logo on the left and the user's email 'josh@foreflight.com' and a 'Logout' link on the right. A sidebar on the left contains a menu with items: Account, Subscription, Documents (highlighted in orange), Devices, Comments, and FlightAware. The main content area has a heading 'ForeFlight + Your Documents.' followed by a paragraph explaining that documents are shared via Dropbox. Below this is a form with a 'Catalog Name' label and a text input field containing 'Company Name'. A note below the input field states: 'The catalog name will show up inside ForeFlight Mobile on your iPad. We recommend using your company or organization name. Note: You will link your ForeFlight account with your Dropbox account in the next step.' At the bottom of the form is a yellow 'Create' button.

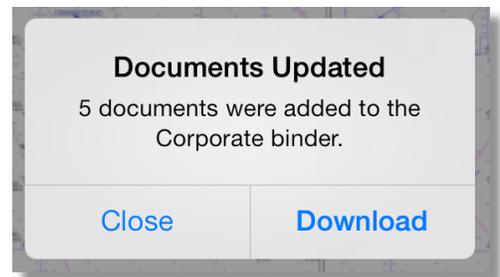
Once linked, any compatible documents you place in the /Dropbox/Apps/ForeFlight folder on your computer are automatically shown in the Smart Binder download list in ForeFlight mobile. The Smart Binder name is set to whatever you enter in the "Catalog Name" box.

If you do not want document to synchronize automatically with the Smart Binder in ForeFlight Mobile, un-check the “Document Syncing” option:

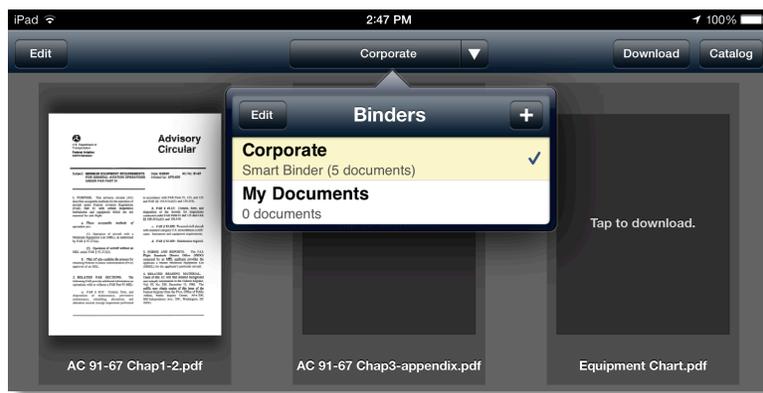


If “Document Syncing” is checked, once you download a document any changes or updates you make to that document in the Dropbox folder on your computer will be synchronized to ForeFlight automatically.

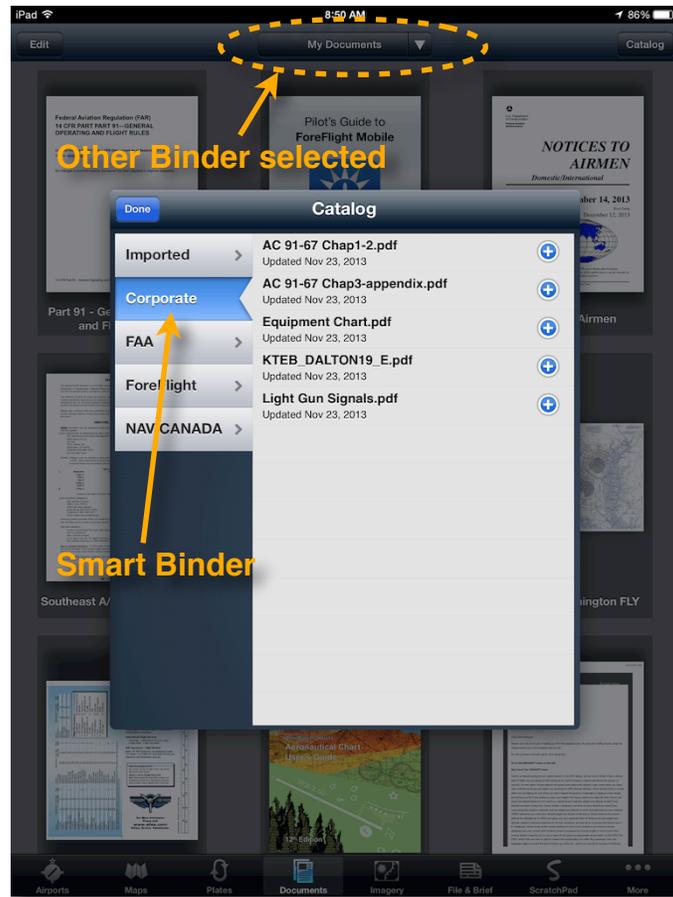
Whenever new documents are added to your / Dropbox/Apps/ForeFlight folder, ForeFlight Mobile will display a “Documents Updated” pop-up. Tap the **Download** button to download all new documents to the Smart Binder, or tap **Close** to dismiss the pop-up.



To download individual documents into the Smart Binder, tap on the **Documents** tab, then tap the **Binders** drop-down to choose the Smart Binder. Then tap on the rectangle with the document title that you wish to download. To download ALL listed documents into the Smart Binder, tap the Download button in the upper-right corner of the Smart Binder. The Download button is only visible when the Smart Binder is selected.



Documents listed in the Smart Binder can also be saved into another binder: switch to the other Binder using the **Binders** drop-down, tap the **Catalog** button, then select the name of the Smart Binder from the category on the left of the screen, then tap the Document title.



After a document is removed from the /Apps/ForeFlight folder on Dropbox, it will also be automatically deleted from any iPads that have downloaded it the next time the iPad(s) connect to ForeFlight's servers via the Internet. The removed document(s) will be deleted from both the Smart Binder and any other binders where the document(s) had previously been saved.

IMPORTING DOCUMENTS FROM ITUNES OR OTHER APPS

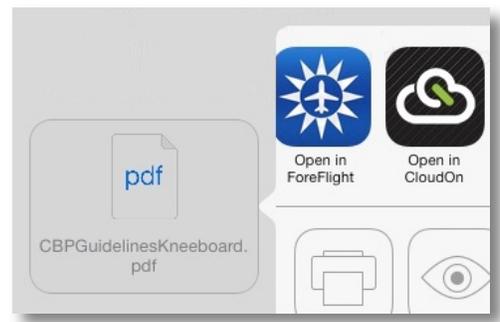
You can import PDF, JPG, TIF, PNG, and GIF files into your document binders using iTunes, and you can import PDF documents from other other apps.

- ❖ **Importing from iTunes** - Plug your iPad into your computer using the Apple USB cord and start iTunes on the computer. Inside iTunes, click on the name of your iPad under the Devices listing on the left. On the right pane, click the Apps

tab at the top. Scroll to the File Sharing section at the bottom of the page and click on ForeFlight. On the right, you will see a table titled ForeFlight Documents. Drag and drop your files onto this table. While the files are copying over, you will see a brief Sync in Progress message on your iPad. After the copying has completed, launch ForeFlight Mobile and tap on the Documents tab. The files will be imported into the app and appear at the end of your current binder. After a file is imported, it will disappear from the iTunes listing.

You can import PDF (but **not** JPG, TIF, PNG or GIF) files from other apps, such as Safari, Mail, or the Dropbox app.

❖ **Importing from other apps** - Send yourself the PDF document via email as an attachment, open the email on the iPad, then tap the PDF icon, or touch-hold the PDF document if it is displayed to show the “Open in” pop-up menu. Then tap “Open in ForeFlight.”



If a document does not import, make sure it is a supported file format: PDF, JPG, TIF, PNG, GIF. Very large image files or PDF files containing scanned images may open slowly, especially on earlier iPad models.

After a document is imported, it is always added to the current binder. To also add it to a different binder, open that binder, tap the **Catalog** button at the top right, and select that document from the **Imported** catalog.

VIEWING A DOCUMENT

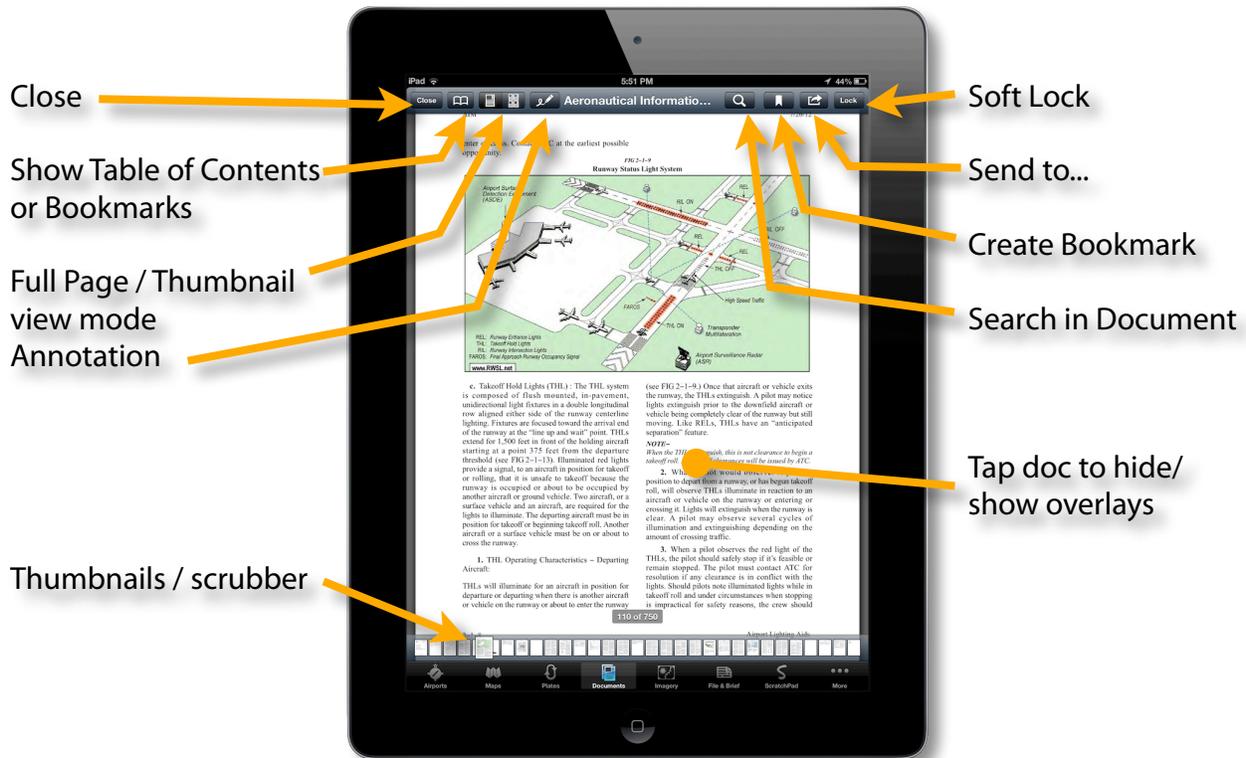
Tap any document thumbnail in a binder to launch the ForeFlight Document Viewer. This viewer supports standard pinch and expand zooming, and panning touch gestures. Swipe left and right with a single finger to change pages. You can close the document by pinching (zoom out gesture) from the view on any page and you can open a document by expanding (zoom in gesture) from the Binder view.

Tap once on a document page to bring up the toolbar at the top and page scrubber at the bottom. Tap again on the document to hide these overlays.

	Shows the table of contents for a document (if available) and any pages you have bookmarked. This menu is only shown for PDF documents.
	Toggles between full page view and thumbnail view, which shows a thumbnail for each page in the document. This button is only shown for PDF documents.
	Display the Annotation menu. This button is only shown for PDF documents
	Search for text in the document. This button is only shown for PDF documents
	Bookmarks a page in the document. This button is only shown for PDF documents.
	Shows a menu for Printing or Emailing a document. Emailing is not available for copyrighted document catalogs.
	Disables touch interaction (zooming and scrolling), which minimizes the risk of accidental closure when in turbulence. It also disables the automatic rotation that would normally occur when the iPad is turned. The lock button can also, optionally, disable all buttons on the screen, including those that change views. That feature is configured in Settings ("Lock Disables Buttons").

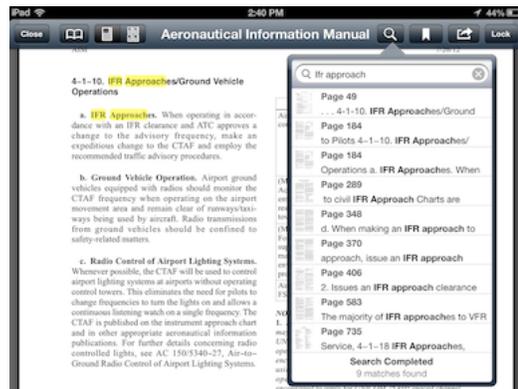
Document View Toolbar Buttons

At the bottom of the screen, the page scrubber shows thumbnails for each page and lets you quickly jump around in your document.



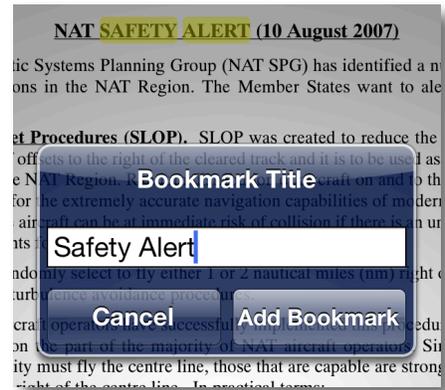
SEARCHING IN A DOCUMENT

Tap the Search button  to display the search box, then enter your search term(s). All matches will be shown in the scrollable expanding list. Tap the entry to jump to the desired page, where the search term(s) will be highlighted in yellow.



ADDING BOOKMARKS

While viewing the page you would like to bookmark, tap the Bookmark button  then enter the name you would like to give the bookmark and tap the “Add Bookmark” button. View all bookmarks for the current document by tapping the Table of Contents/Bookmark button and choosing the Bookmarks filter.



MANAGING DOCUMENTS IN A BINDER

To reorder or delete documents in a binder, tap the **Edit** button on the left side of the top toolbar.

To change the order in which a document is displayed in the binder, hold and then drag the document to the new location.

To remove a document from a the binder tap the **X** icon in the upper left of the plate thumbnail while in edit mode. If a document is saved in multiple binders, removing a document from only one binder does not delete it from your iPad (see below for information on how to permanently delete a document).

DELETING DOCUMENTS FROM YOUR IPAD

There are two ways to permanently delete a document from your iPad:

1. If the document is only saved in a single binder, delete it by tapping the “Edit” button in the upper-left corner, then tapping the “X” in the corner of the document. This will remove it from the binder as well as the Download list.
2. If the document is located in multiple binders, delete it by opening the Document Catalog then using “swipe-delete”: swipe your finger from right-to-left across the name of the document (or from left-to-right on iOS 6 or earlier) then tap the red **Delete** button to delete it from all binders as well as the Download list.



IMPORTANT: If you “swipe-delete” the document from the Document list on **More > Downloads**, the document will be removed from memory but immediately queued for download. Use one of the methods above to delete the document completely from the iPad.

ENSURING YOUR DOCUMENTS DON'T EXPIRE

When a new version of a document is available, a red badge will appear on the app icon and there will be a new item in the Downloads view. Tap the green **Download** button at the bottom of the Downloads view to download the latest documents, along with any other data updates that are available.

FAA and NAV CANADA documents that are updated on a regular 28-day or 56-day cycle will be available for download a few days before the document expires. Your document binder will always show the version of the document that is effective, if it is available. Once the new version of a document becomes effective, it will automatically start showing in your binders and any old, expired versions will be deleted from your iPad.

Annotating Plates and PDF Documents

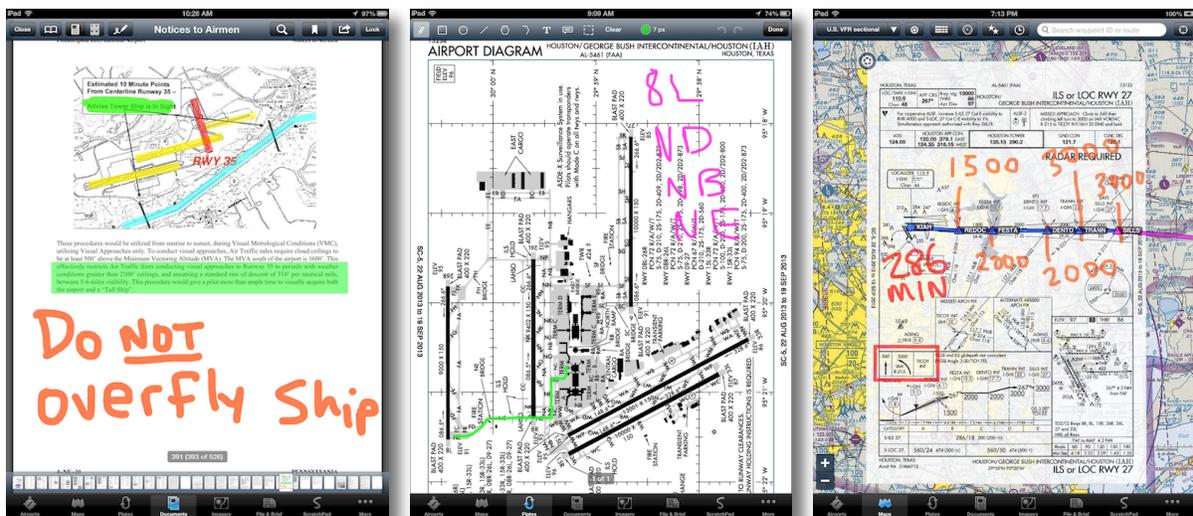
ABOUT THE DESIGN

This feature allows you to add your own full-color annotations to Approach plates, SIDs, STARs, Airport Diagrams and PDF Documents. This can be useful for highlighting important elements such as crossing altitudes or taxi instructions, or adding notes to your PDF documents.

Annotations require a ForeFlight Mobile Pro or ForeFlight Canada subscription, and an iPad 2 or higher. Annotations are not available on the iPad 1. To upgrade, visit www.foreflight.com/buy or www.foreflight.com/buy-canada. If you have a ForeFlight Mobile Pro subscription, annotations you make on an Approach plate are displayed when you show the annotated [Plate on the Map](#).

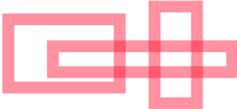
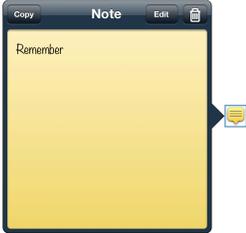
Annotations you add to a Plate, SID, STAR or Airport Diagram are saved at the data cycle change-over, unless the SID, STAR or Plate name changes in the new data cycle (ie: if the TEXXN5 STAR becomes TEXXN6, or RWY03 ILS becomes RWY04 ILS due to updated magnetic variation).

Annotations you add to a PDF Document are saved if the document is updated, provided the document title stays the same during the update.



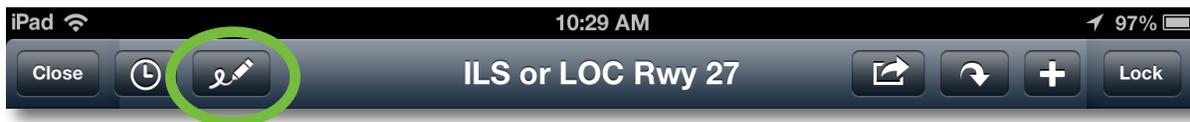
TYPES OF ANNOTATIONS

There are 8 kinds of annotations available:

Drawing 		Text Box 	
Rectangle 		Ellipse 	
Line 		Polygon 	
Polyline 		Sticky-note 	

ADDING AND EDITING ANNOTATIONS

There are two ways to add an annotation. When you open a plate or PDF Document, tap the Annotation button in the menu at the top of the page to display the annotation toolbar:



or simply touch-hold on the plate or PDF Document until the magnifying glass appears, then release your finger to display the pop-up Annotation menu:

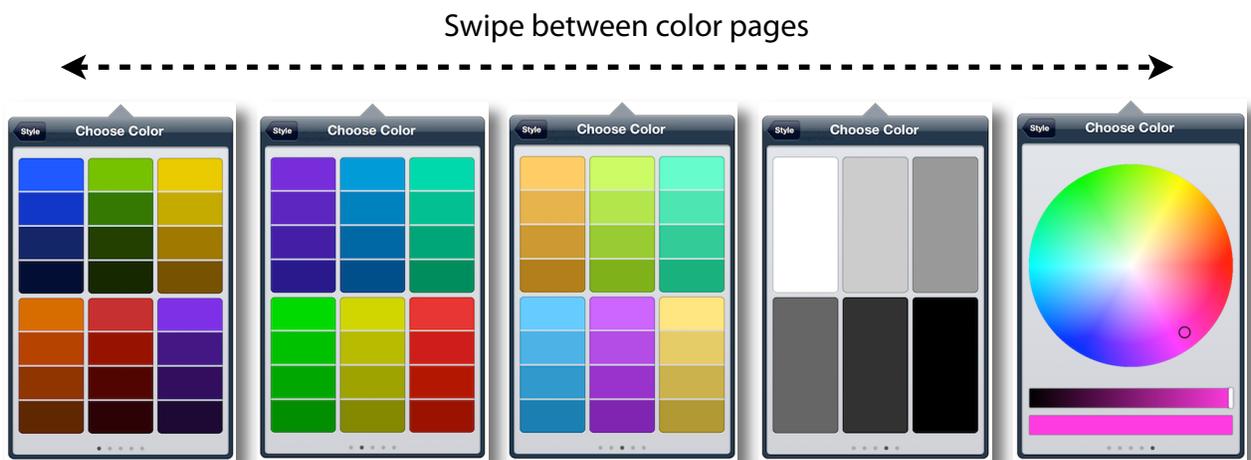


Tap the button to choose the type of annotation you want to add, then adjust the formatting and color of the annotation (if needed) by tapping the colored Annotation setting button (the colored dot) at the top of the page.

You can reposition an annotation by touch-dragging inside of the selection box, and you can resize the annotation by touch-dragging one of the blue "handles" around the annotation.

Choosing Annotation Color

Tap the Color button in the Annotation Edit menu to display the color picker. Change between the 5 color selection pages by swiping from left to right.

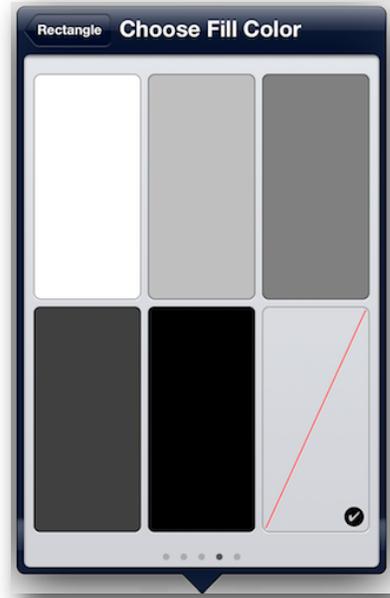


When using the color "circle", touch in the circle to choose the color you want, then slide the horizontal slider below the circle to adjust the brightness of the color:



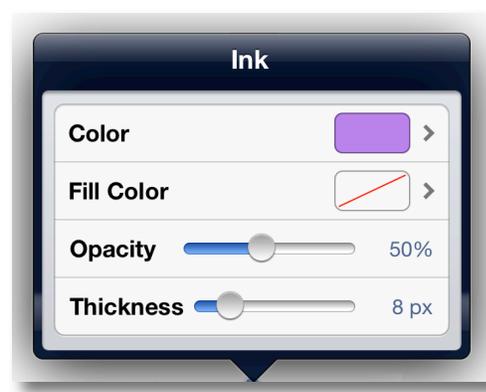
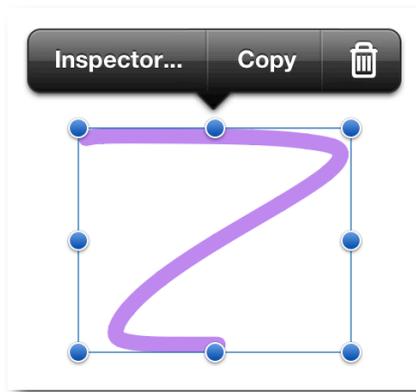
Fill Color: Transparent or “No Fill”

To choose a transparent or “no fill” color, select the Fill Color box with the red diagonal line.



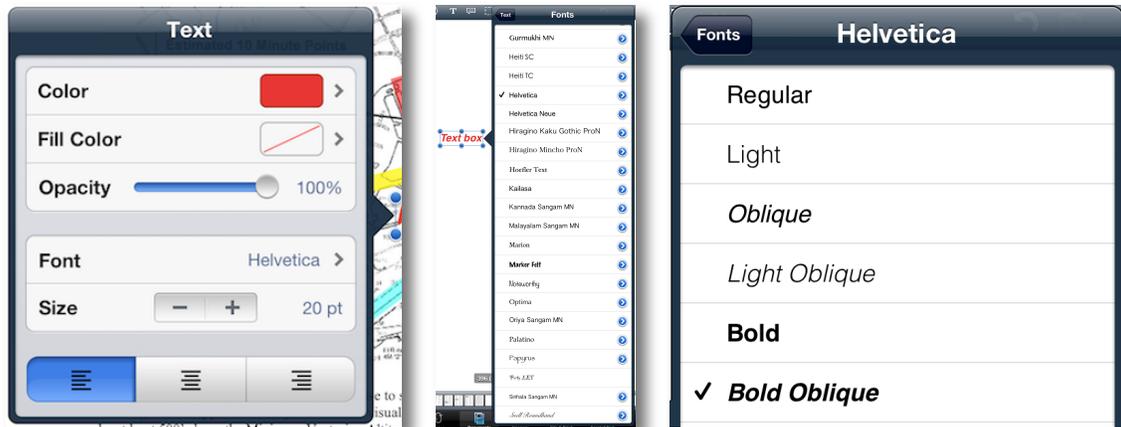
Drawing/Ink

The freehand Drawing/Ink tool allows you to choose the line Color, Opacity and Thickness. To edit a previously drawn line, tap it, then choose the “Inspector” menu.



Text Box

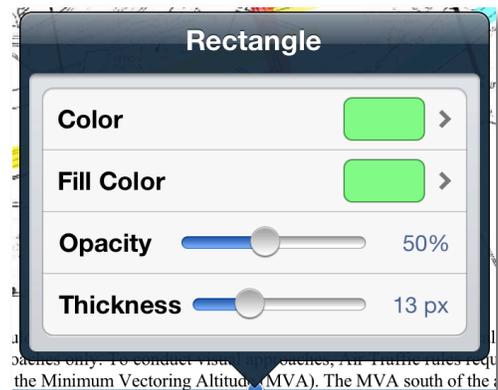
The Text Box tool lets you pick the Text Color, the Text Box fill Color, the Opacity, the Font (Font style in a sub-menu), Font Size and text alignment in the text box.



To create a text box, select the Text Box tool, tap on the Plate or Document where you want the text to appear, then type the desired text. To edit a previously drawn text box, tap it, then choose the "Inspector" menu.

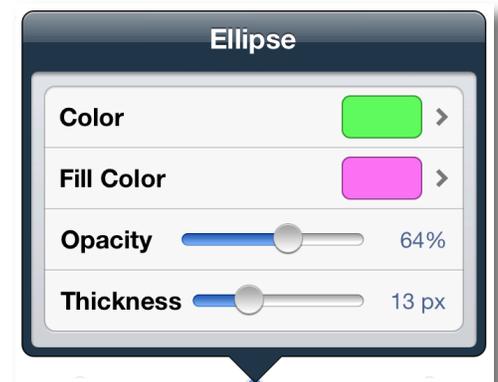
Rectangle

The Rectangle tool allows you to choose the line and Fill Color, rectangle Opacity and line Thickness. To draw a rectangle, touch-hold then drag your finger to make the rectangle. Lift your finger to complete the drawing. To edit a previously drawn rectangle, tap it, then choose the "Inspector" menu.



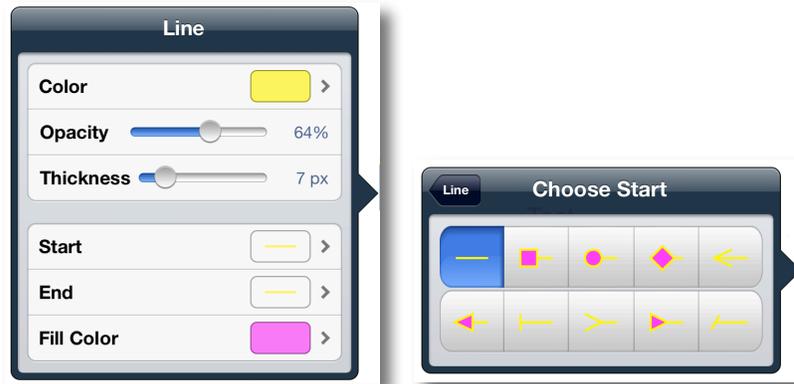
Ellipse (Circle)

The Ellipse tool allows you to choose the line and Fill Color, ellipse Opacity and line Thickness. To draw an ellipse, touch-hold then drag your finger to make the ellipse. Lift your finger to complete the drawing. To edit a previously drawn ellipse, tap it, then choose the "Inspector" menu.



Line

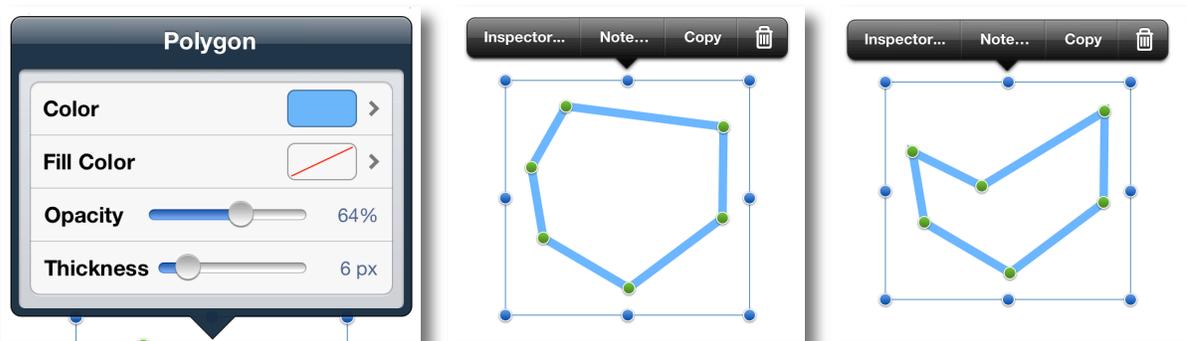
The Line tool allows you to choose the line Color, Opacity, Thickness as well as start and end-point type (ie: arrow, dot, diamond, etc...) and fill color. To draw a line, touch-hold then drag your finger to make the line. Lift your finger to complete the drawing. To edit a previously drawn line, tap it, then choose the "Inspector" menu.



Polygon

The Polygon tool lets you choose the line and Fill Color, polygon Opacity and line Thickness. To draw a polygon, tap your finger to each desired "corner" of the polygon. Each additional tap will extend a line segment from the previous corner to the new tap. When you tap "Done" in the menu bar, a final line segment will automatically be added to "close" the polygon.

To edit a previously drawn polygon, tap it, then choose the "Inspector" menu.



You can edit the corners of the polygon by touch-dragging the green "corner" point handle to the desired corner position.

Polyline

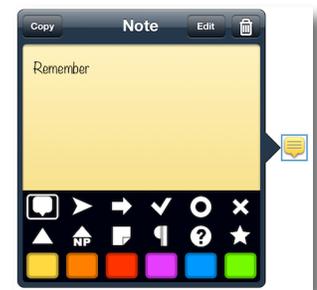
The Polyline tool is similar to the Polygon tool, except that the shape is not automatically “closed” when you tap “Done”, and like the Line tool you can choose the start and end-point types (ie: arrow, dot, diamond, etc...).



To edit a previously drawn polyline, tap it, then choose the “Inspector” menu.

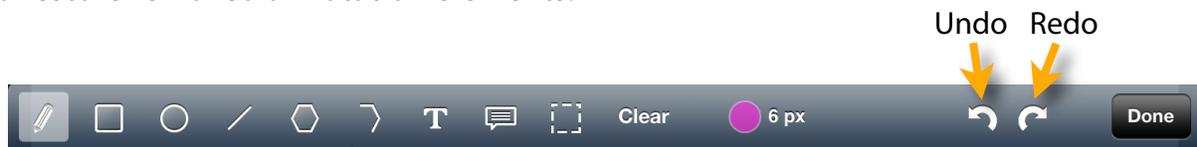
Sticky-note

Tap the note icon, then tap the “Edit” button to choose the note background color and icon type. Tap anywhere not on the Sticky-note to close the Edit menu.



UNDO/REDO

While adding annotations to a Plate or Document, tap the Undo (left) arrow button to remove recent annotation elements, and tap the Redo (right) arrow button to restore removed annotation elements.



SELECTING MULTIPLE ANNOTATIONS

Tap the Selection button  then touch-drag across multiple annotations to select several at once, then tap Group to group the items together, Copy to copy all items, or the Trash can to delete the selected annotations.

COPYING AND PASTING AN ANNOTATION

Tap a previously added annotation to select it and display the edit pop-up menu, then tap the Copy button.

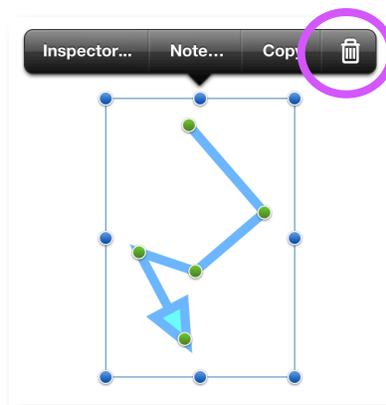


Paste the copied annotation in a different location or onto a different page (or document) by touch-holding on the Plate or Document until the magnifying glass appears. Lift your finger, then tap the Paste button in the pop-up Annotation menu.

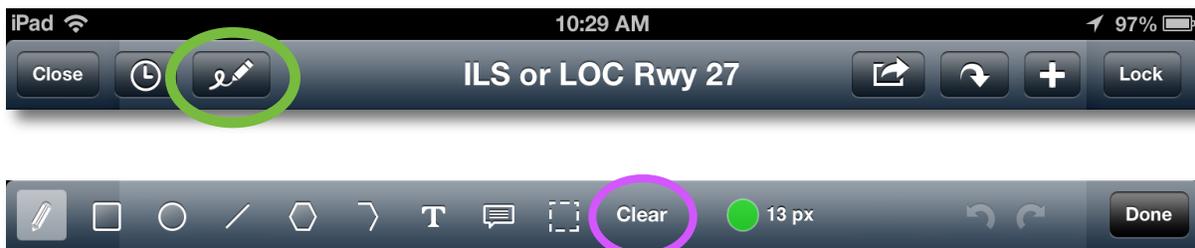


DELETING ANNOTATIONS

Tap the annotation to select it, then tap the Trash-can button in the edit pop-up menu.



To remove all annotations from a page, tap the Annotation button, then tap Clear:

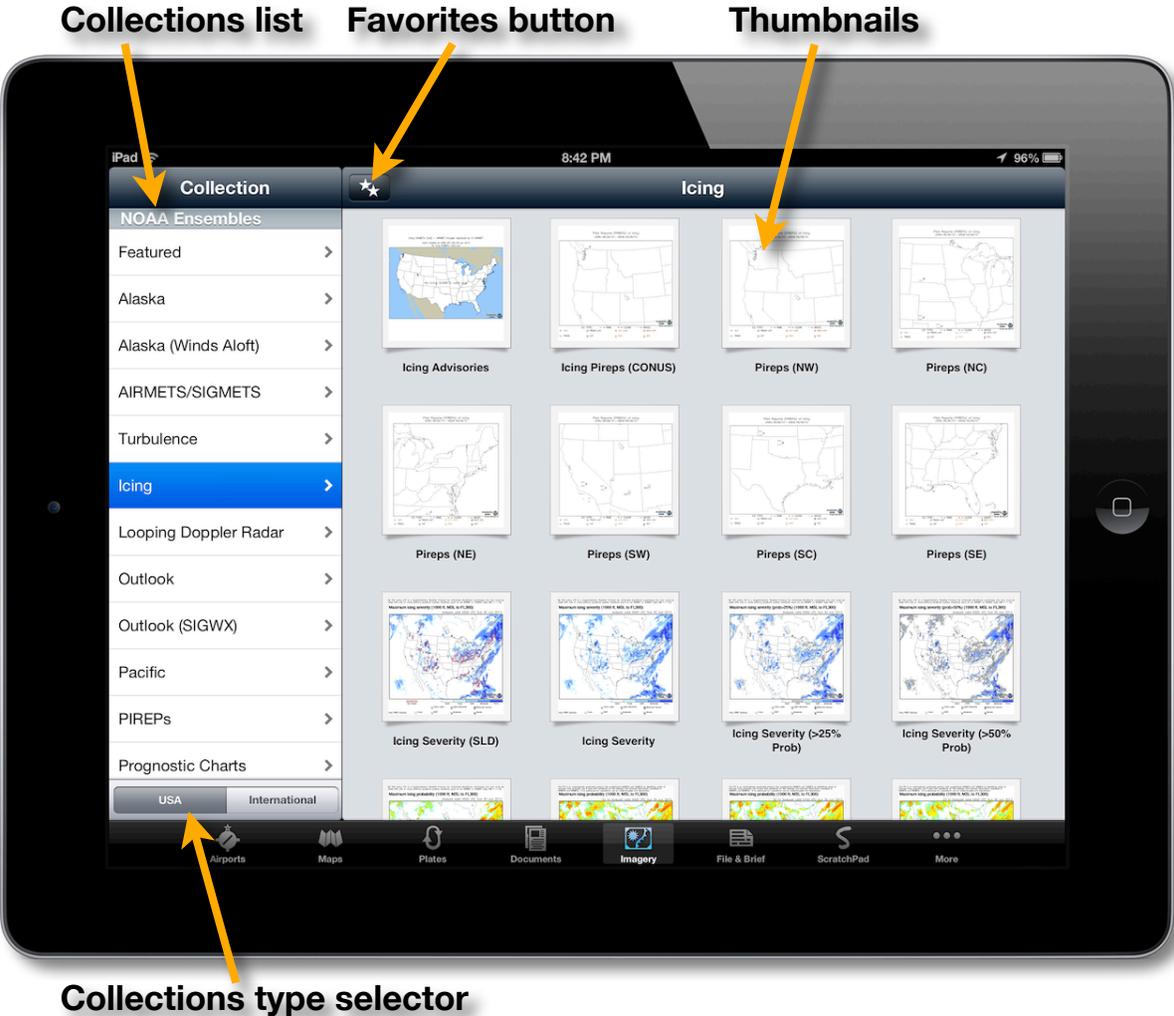


Imagery

ABOUT THE DESIGN

The Imagery view provides collections of weather images from around the globe. Images are divided into categories by type. When viewing a category a current thumbnail image is shown for each available image.

Full size images are displayed full screen and support standard pinch and expand zooming, and panning touch gestures.



SELECTING A COLLECTION

Tap a collection in the left-side list to show thumbnails from that set on the right side. Other collections are available by tapping the USA/International mode selector at the bottom of the list.

VIEWING AN IMAGE

View a image full screen by tapping on its thumbnail. The full screen view supports all the standard zoom and pan gestures, as well as rotation.

Dismiss the full screen image by tapping the **Close** button at the top left.



Tap the star at the top right to add the current image as a favorite.

USING FAVORITE IMAGES

View all favorite images by tapping the double star button in the dark blue tool bar above the thumbnail images area.



Tap an image in the list to view it full screen.

The favorites list can be re-ordered by tapping the **Edit** button. Once in Edit mode, a three-bar icon is displayed to the right of each image in the list. Tap-and-hold on the three bar icon until the image row appears to lift up, then drag the row to the desired location in the list.

Delete an image from the favorites list using swipe-to-delete. Or, tap the **Edit** button and then the red circle icon beside the image. Then, tap the **Delete** button.

File & Brief

ABOUT THE DESIGN

The *File & Brief* view of ForeFlight Mobile provides a quick way to enter details about a flight to depart 10 minutes from now or days in advance. The fields in the flight plan form correspond to the standard paper form, with the added ability to specify an email address to which a filing confirmation and briefing will be sent.



CREATING A NEW FLIGHT PLAN

Flight plans can be created in three ways: From a route created in the *Maps* view, or by tapping the New or Copy button on the File & Brief page.

Map: As discussed in the [Maps](#) section of this guide, a new flight plan form can be started from a map-based route by tapping the **Send To...** button on the Navigation Log and choosing **File & Brief**. The flight plan form will be filled in according to the route details (including speeds, times and fuel burn) and last-filed values as in a new plan.

New: To create a new flight plan form from scratch, tap File & Brief button at the bottom-right, then tap the New Flight Plan button in the upper-right corner. This displays a new flight plan form and automatically fills in some details by using the last filed values such as pilot name, phone number, and aircraft. The majority of the fields will be blank.

Copy: To use a previous flight plan form as a template for a new one, select the desired plan form from the list and press the **Copy** button at the bottom right. This creates a new flight plan form and fills in all details based on the selected plan with an updated departure time; any fields can be changed as needed.

Tapping the **Maps** button on the File & Brief page will display the current flight plan on the Maps page. Use this option if you edit the route or altitude on the File & Briefs page. Changes made on the Maps page are not automatically reflected in the plan on the File & Brief page, so if you make changes you will need to tap the **Send To...** button on the Navigation Log and choose **File & Brief** to start a new plan with the updated details.

CHOOSING BETWEEN FAA/DOMESTIC AND ICAO FLIGHT PLANS

Beginning with ForeFlight Mobile 5.6, you can create either an FAA/Domestic flight plan or an ICAO flight plan. ICAO flight plans are required when:

- 1) The flight will enter international airspace, including Oceanic airspace controlled by FAA facilities.
- 2) The flight expects routing or separation based on Performance Based Navigation (PBN), ie: RNAV SIDs and STARs
- 3) The flight will enter Reduced Vertical Separation Minima (RVSM) airspace, ie: FL290 or above.
- 4) The flight expects services based on ADS-B.

Flights that remain wholly within domestic United States airspace and do not meet any of the 4 criteria listed above can still use a FAA/Domestic flight plan.

So if you are filing a regular VFR, IFR, or non RVSM flight-level IFR flight plan, you can file using the FAA/Domestic flight plan. If you're planning to file for a GPS T-route or to fly a GPS approach at your destination, then you can still file using the FAA/Domestic flight plan.

FILLING OUT AN FAA/DOMESTIC FLIGHT PLAN

The majority of the flight plan form has the same usage as the corresponding field on the paper form. A few items are described below in greater detail.

In the *Flight Rules* section at the top, the options are *VFR*, *IFR* and *VFR (DC SFRA)*.

When *VFR (DC SFRA)* is selected, you need to provide an appropriate gate for SFRA entry as your departure point (when inbound to the SFRA) or the appropriate exit gate in the destination field (when outbound). Your ETE value should match when you expect to enter the SFRA (when inbound) or exit it (when outbound). If you wish to do non-towered airport pattern work within the SFRA enter + *REQ PTTN* in your remarks).

ForeFlight Mobile can store profiles for your aircraft. In the *Aircraft* section, the aircraft used for the most recently filed flight plan will be chosen by default.

Tap the *Aircraft* row to edit or change the aircraft. To change the selected aircraft for the current flight, tap on the appropriate tail number in the list of aircraft. New aircraft can also be created. See the *Aircraft* section of this guide for more details.

The *Route* entry in the *Enroute* section can be as simple as DIRECT (leave blank for DIRECT routing) or as complex as you like, but note that the departure and destination airports are specified separately and thus should not be entered in the *Enroute* field.

All required fields are marked as such. Your email address is required for receiving a filing confirmation and a copy of the briefing for your flight. This email address is independent of your ForeFlight subscription account, and you can change it at any time.

CREATING AN ICAO FLIGHT PLAN

Before creating an ICAO flight plan, you should make sure that you have [entered the ICAO-specific information](#) for your aircraft on **More > Aircraft**. Once you have entered this information, create a new flight plan, then tap on the Form Type and choose ICAO.



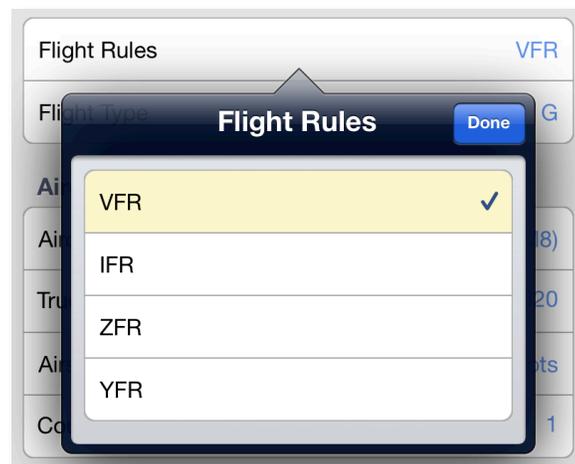
Flight Rules

Besides VFR and IFR, pilots filing ICAO flight plans can choose from two additional options: YFR and ZFR.

YFR is for flights that will initially will be operated under IFR, followed by one or more changes of flight rules.

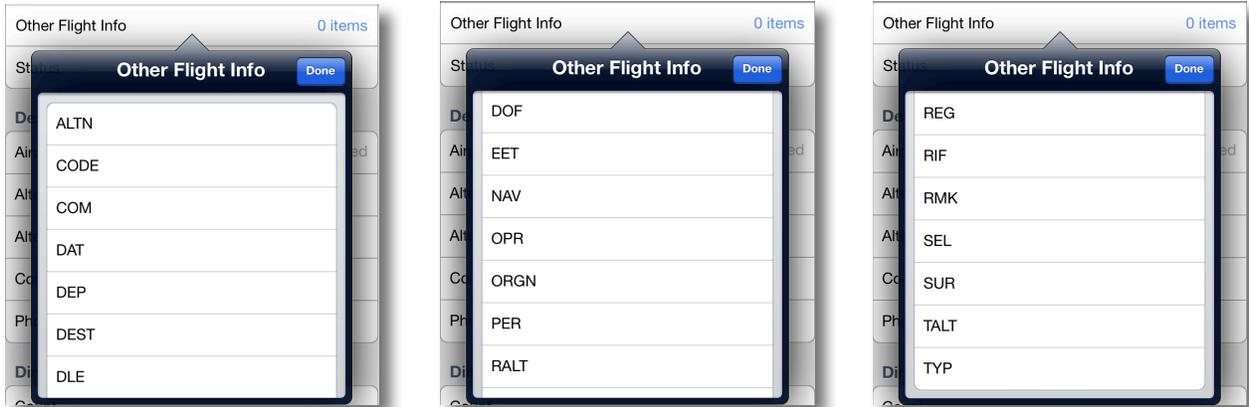
ZFR is for flights that will initially will be operated under VFR, followed by one or more changes of flight rules.

Tap the Flight Rules box and choose the appropriate rules.



Other Flight Info

Other Flight Info includes the following ICAO flight plan optional fields. Some entries may be required depending on the information you include in your flight plan. Tap on the field to type in the required information (see below for definitions.) Tap “Done” when you have entered all “Other Flight Information” needed.



Field	Definition
ALTN	If no ICAO four letter identifier exists for Alternate, enter ZZZZ for Alternate on flight plan form, then enter the non-ICAO location identifier, or fix/radial/distance from a nearby navaid, followed the name of the aerodrome.
CODE	Mode S code (6 characters, hexadecimal) when required by the appropriate ATS authority
COM	Communication capabilities not specified in Aircraft Radio Communication section.
DAT	Data capabilities not specified in CPDLC section.
DEP	If no ICAO four letter identifier exists for your Departure, enter ZZZZ for the Departure on the flight plan, then enter the non-ICAO identifier, or fix/radial/distance from navaid, or Latitude/Longitude. Optionally append the name of the departure point Ex 1: T23 ALBANY MUNI Ex 2: T23 Ex 3: UKW197011 TICK HOLLR RANCH Ex 4: 4620N07805W

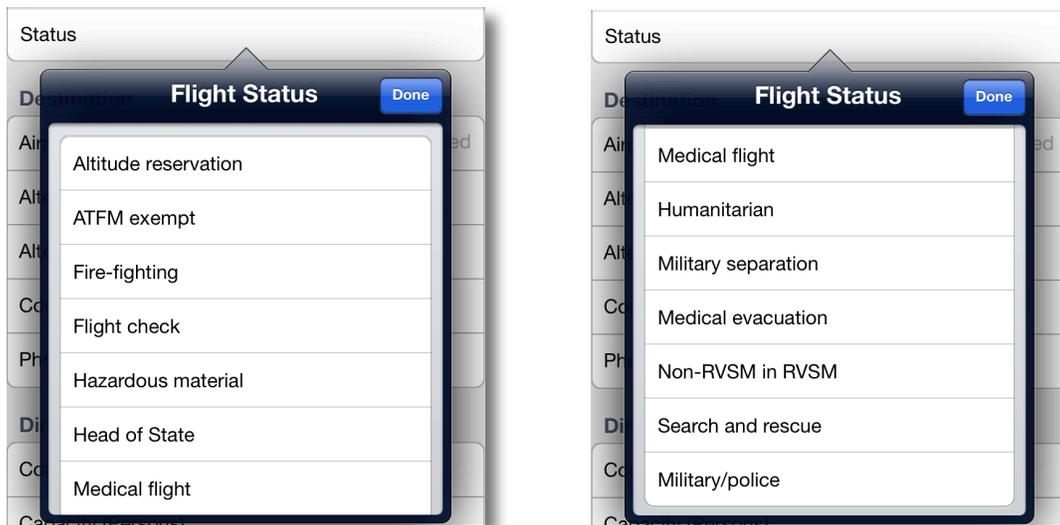
Field	Definition
DEST	If no ICAO four letter identifier exists for your Destination, enter ZZZZ for the Destination on flight plan, then enter the non-ICAO location identifier, or fix/radial/distance from a nearby navaid, followed the name of the aerodrome.
DLE	Enroute delay or holding, insert the significant point(s) on the route where a delay is planned to occur, followed by the length of delay using four figure time in hours and minutes (hhmm). Ex: MDG0030
DOF	The date of flight departure in a six figure format (YYMMDD, where YY equals the year, MM equals the month and DD equals the day). The FAA will not accept flight plans filed with Date of Flight resulting in more than a day in advance.
EET	Significant points or FIR boundary designators and accumulated estimated elapsed times to such points or FIR boundaries. Ex: KZLA0745 KZAB0830
NAV	For US flights requesting assignment of RNAV1 SIDs/STARs, in addition to the PBN information entered for an Aircraft, enter RNV followed by: D# - Departure segment RNAV capability (# = nm accuracy) E# - En route segment RNAV capability (# = nm accuracy) A# - Arrival segment RNAV capability (# = nm accuracy) Ex. If your aircraft can fly SIDs and STARs with 1nm accuracy, enter RNVD1A1
OPR	Name of the operator, if not obvious from the aircraft identification entered in the flight plan.
ORGN	Not required by FAA Originator's 8 letter AFTN address or other appropriate contact details, in cases where the originator of the flight plan may not be readily identified, as required by the appropriate ATS authority.

Field	Definition
PER	<p>Not required by FAA <i>Performance category based on Vref or 1.3Vso. Enter:</i></p> <p>A: Less than 91 kts IAS B: 91 kts to less than 121 kts IAS C: 121 kts to less than 141 kts IAS D: 141 kts to less than 166 kts IAS E: 166 kts to less than 211 kts IAS H: Helicopters</p>
RALT	<p>ICAO four letter indicator(s) for en-route alternate(s), as specified in Doc 7910, Location Indicators, or name(s) of en-route alternate aerodrome(s), if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP above</p>
REG	<p>The registration markings of the aircraft, if different from the aircraft identification entered on the Flight Plan. Note that the FAA uses this information in monitoring of RVSM and ADS-B performance.</p>
RIF	<p>The route details to the revised destination aerodrome, following by the ICAO four-letter location indicator of the aerodrome. The revised route is subject to reclearance in flight.</p> <p>Ex 1: DTA HEC KLAX Ex 2: ESP G94 CLA YPPH</p>
RMK	<p>Any other plain-language remarks when required by the ATC or deemed necessary.</p> <p>Ex 1: NRP Ex 2: DRVSN</p>
SEL	<p>SELCAL Code</p>
SUR	<p>Surveillance capability not specified in ICAO Surveillance section. NOTE: If ADS-B capability is compliant with RTCA DO-260B, enter 260B. If ADS-B capability is compliant with RTCA DO-282B, enter 282B.</p>

Field	Definition
TALT	ICAO four letter indicator(s) for take-off alternate, as specified in Doc 7910, Location Indicators, or name of take-off alternate aerodrome, if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP above.
TYP	Insert the type of aircraft if ZZZZ was entered for Aircraft . If necessary, insert the number and type(s) of aircraft in a formation. Ex. 1: Homebuilt Ex. 2: 2 P51 B17 B24

Flight Status

If your flight plan includes a special status, tap **Flight Status** and choose one of the following:



Flight Status	Definition
Altitude reservation (aka: ALTRV)	A flight operated in accordance with an altitude reservation.
ATFM exempt (aka: ATFMX)	A flight approved for exemption from ATFM measures by the appropriate ATS authority.

Flight Status	Definition
Fire-fighting (aka: FFR)	Fire-fighting.
Flight check (aka: FLTCK)	Flight check for calibration of nav aids.
Hazardous material (aka: HAZMAT)	A flight carrying hazardous material.
Head of States (aka: HEAD)	A flight with Head of State status.
Medical flight (aka: HOSP)	A medical flight declared by medical authorities.
Humanitarian (aka: HUM)	A flight operating on a humanitarian mission.
Military separation (aka: MARSA)	A flight for which a military entity assumes responsibility for separation of military aircraft.
Medical Evacuation (aka: MEDEVAC)	A life-critical medical emergency evacuation.
Non-RVSM in RVSM (aka: NONRVSM)	A non-RVSM capable flight intending to operate in RVSM airspace.
Search and rescue (aka: SAR)	A flight engaged in a search and rescue mission.
Military/policy (aka: STATE)	A flight engaged in military, customs or police services.

Dinghy & Emergency

If you are carrying one or more dinghies, enter the Number, total capacity (ie: 2, 10-person dinghies = 20 Persons) and Color, and indicate whether the dinghies are covered.



If your aircraft carries Life Jackets, Radios, and/or Survival gear, tap on the entry and choose the appropriate type.

OBTAINING A BRIEFING FROM DUATS

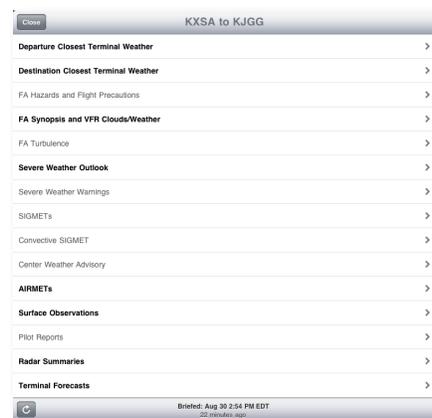
After defining your flight details, you can receive a DUATS briefing by tapping the Brief button at the bottom right. ForeFlight will request the briefing from DUATS, using your DUATS account if specified in the **More > Accounts > Account Logins** area, and present the briefing as a collection of logical sections.

Sections listed in bold have content for you to review; plain sections are empty. Once you have selected a section, you can use the left and right arrows at the top right to skip to the previous or next section, respectively.

Tapping the top left button (labeled with the origin and destination) takes you back to the briefing section list. Tap **Close** at the top left to return to the flight plan form.

Briefings are stored on the iPad. To show a previous briefing, tap the **Briefing** button again when viewing the previously briefed flight plan.

Existing briefings can be refreshed to show the latest data. Select the desired plan form from the list at the left, tap the **Brief** button at the bottom right, and tap the **Refresh** button at the bottom left of the briefing segment list to refresh the briefing.



Briefings may only be obtained or refreshed when an active network connection is available.

FILING YOUR FLIGHT PLAN (FAA/DOMESTIC OR ICAO)

Once your flight plan form is complete, you can file it using the **File** button at the bottom right of the form and confirming the action by pressing the **File** button on the pop-up.

ForeFlight Mobile will file through DUATS using your DUATS account if specified in the Accounts area. If you haven't specified your own account, or if you are filing an ICAO plan, ForeFlight will file for you directly with Lockheed Martin Flight Service.

The flight plan will either be accepted and you will be notified of a successful file, or it will be rejected and ForeFlight Mobile will identify the error reported by DUATS, or LMFS.

If rejected, you can correct the error and re-file.

Once a flight plan has been filed, it will no longer be editable. To create a new flight plan form from the filed plan, tap the **Copy** button.

MODIFYING OR CANCELING A FLIGHT PLAN

Once a flight plan has been filed using ForeFlight Mobile, it **cannot** be modified, cancelled or closed using ForeFlight Mobile. However, if you have entered your own DUATS sign-in credentials in ForeFlight Mobile at **More > Accounts** AND the flight departs in more than 2 hours, you can modify or cancel the flight plan by signing-in to your DUATS account at www.duats.com.

MANAGING FLIGHT PLAN FORMS

When viewing the listing of flight plan forms, you may wish to remove some to keep the length of the list under control. To remove a flight plan form, use the swipe-to-delete gesture. This will not close or cancel a filed plan, but rather remove its details from ForeFlight Mobile.

FLIGHT ALERTS

Flight Alerts (IFR flight plans only, requires a ForeFlight Mobile Pro subscription) notify you when ATC issues an expected route for an IFR flight plan filed using ForeFlight Mobile.

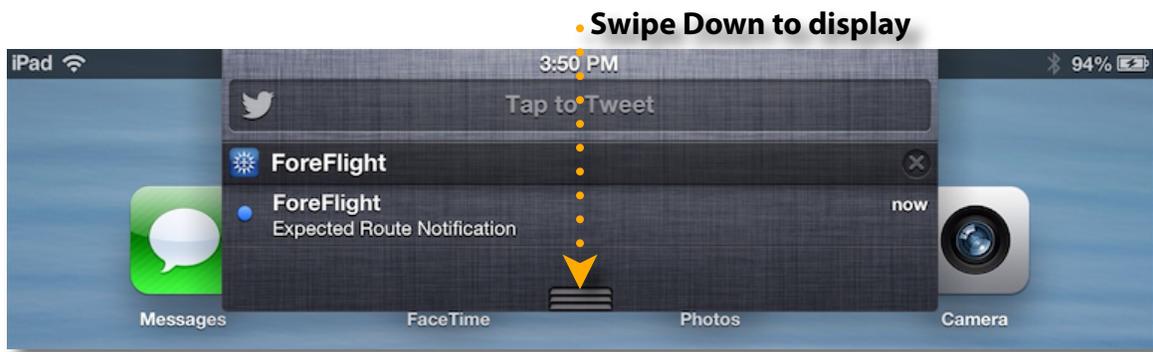
When updated expected route information becomes available from ATC, ForeFlight's servers send a notification of that route information directly to your devices.



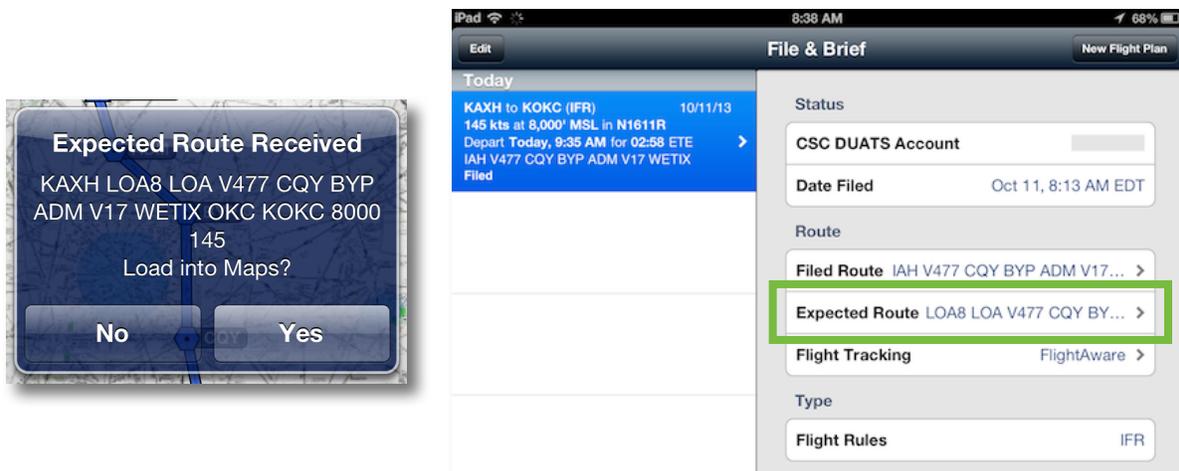
NOTE: if you are a member of a multi-pilot account, the notification is sent only to the device that filed the flight plan.

ForeFlight's servers also send you an email with the expected route.

You can also view Expected Route Flight Alerts in the iOS Notification Center, which is accessed by swiping down from very top of the screen with a single finger.



When you tap on the notification or the link in the email, a pop-up containing the expected route appears on the screen. Tap **Yes** to load the route into the NavLog. When the expected route is loaded, the flight plan form (on File & Brief) is updated with the expected route and a link to FlightAware for flight tracking.



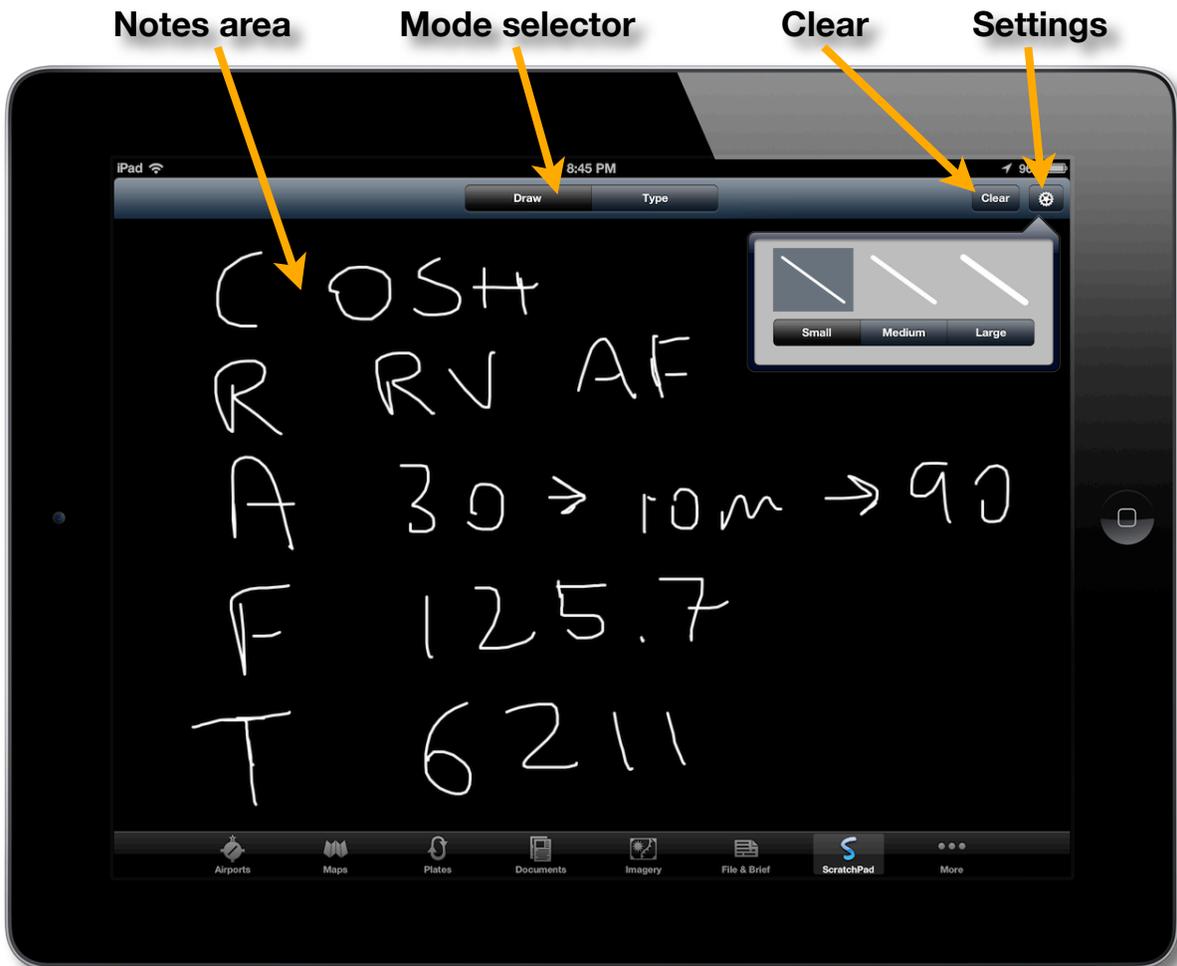
IMPORTANT: ForeFlight cannot parse Expected Routes that do not originate at a Fix (ie: "Radar Vectors to V17..."). If your Expected Route doesn't originate at a Fix, ForeFlight plots a route "direct-to" the next Fix on the route. The "direct-to" route may differ significantly from the instructions you will be given by ATC. After loading an

Expected Route, verify that all legs are displayed correctly and be prepared to follow ATC instructions for legs not originating at a Fix (ie: "Radar Vectors to V17...")

ScratchPad

ABOUT THE DESIGN

ScratchPad lets you quickly jot down notes or draw your clearance. It is intended for temporary notes such as scribbling down frequencies, ATIS information, or clearances - not long term storage.



MAKING NOTES

With *Draw* selected at the top, draw with your finger on the screen. With *Type* selected at the top, use the iPad keyboard to type notes.

All notes are saved until you press the **Clear** button, even if you exit ForeFlight Mobile.

CLEARING NOTES

Tap the **Clear** button near the top-right to clear out your scratchpad. A confirmation window will appear to confirm that you really want to clear everything out.

Tip: to save a drawing before clearing it, use the iPad's screenshot function: Press the top sleep button and the physical, circular home button at the same time to snap the picture. It is saved to your *Pictures* collection (in the *Camera Roll* section) and can be downloaded to your computer or emailed. Typed notes can be saved via the iPad's Copy function. See the iPad Guide from Apple for details on capturing screens, copy/paste functions, and transferring photos and email.

CHANGING PEN SIZE

Tap the **Settings** button at the top-right to change the size of the pen used for drawing on the scratchpad. A window will appear from which you can choose a small, medium or large stroke.

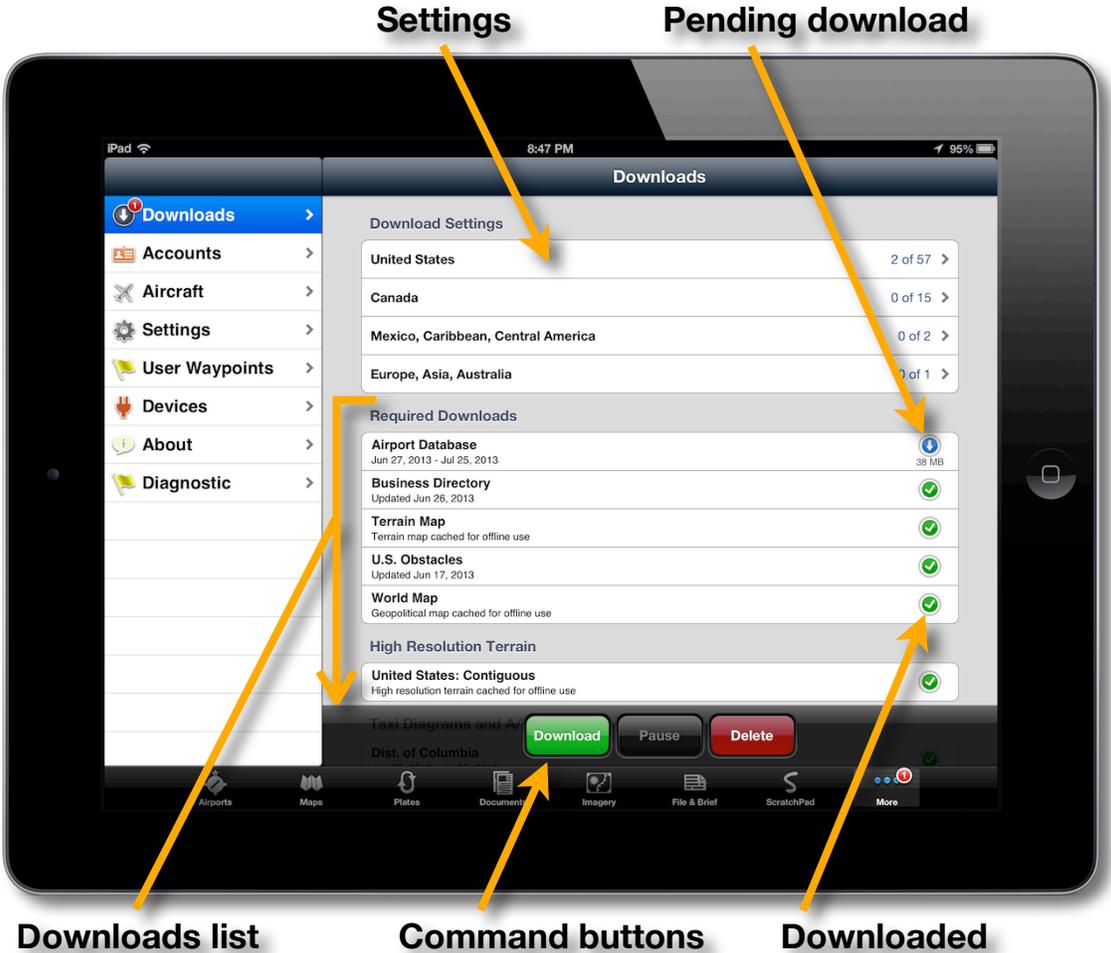
More

The *More* view provides access to account info, application settings, aircraft, user waypoints, and the *About* view. Tap the options on the left to view each of these different sub-views.

DOWNLOADS

About the Design

The *Downloads* view lets you keep ForeFlight Mobile up to date with the latest airport data, diagrams, procedures, and charts. Select the data you want to download, then come back to the screen once a month to download the latest. All the data you download is available offline, whether you're up in the air or just away from an Internet connection.



A Quick Tour of the Data Available for Download

- ❖ **Airport Database** is an international A/FD with over 27,000 airports and NAVAIDS from 220 countries. This data is used in the *Airports* view (frequencies, runways, hours, FBOs, etc) and in the *Maps* view (locations, routes, NAVAIDS, airspaces).
- ❖ **U.S. Obstacles** are FAA-provided towers, bridges, etc. These are shown as markers on the Map view when enabled.
- ❖ **World Map** is the data used to create the world map accessible on the Maps view. This map provides global coverage and is only available if downloaded.
- ❖ **Taxi Diagrams and A/FD** contains thumbnail diagrams with FBO locations for over 1,200 worldwide airports and taxi diagrams for U.S. airports. These are displayed at the top of an airport in the *Airports* view. Additionally, A/FD pages for that region are included. These are displayed in the lower portion of the *Airports* view.
- ❖ **Terminal procedures** and approach plates for U.S. airports or Canadian airports, viewable in the *Procedures* tab of an airport in the *Airports* view.
- ❖ **VFR, IFR High, and IFR Low Charts** (United States) contains FAA seamless sectionals and enroute charts of the U.S. and southern Canada for use in *Maps*.
- ❖ **VNC Charts** (Canada) contains Nav Canada seamless VNC and VFR Terminal Area (VTA) charts. *Includes Flight Bag Tiles feature with "tap to bring forward" charts and chart legends.*
- ❖ **IFR High, and IFR Low Charts** (Canada) contain Nav Canada seamless enroute charts of Canada and the Atlantic ocean.
- ❖ **Helicopter Charts** - US Helicopter charts for 9 major metro areas (downloaded when switch is ON and containing state is selected) and US Gulf of Mexico VFR and IFR Helicopter charts (downloaded when Gulf of Mexico is selected). *Includes Flight Bag Tiles feature with "tap to bring forward" charts and chart legends.*
- ❖ **High Resolution Terrain** (ForeFlight Mobile Pro, or Canada) contains high-resolution terrain data used for the Terrain map and Hazard Advisor™.
- ❖ **Documents** are updated via this Downloads view once added to a binder in the Documents view.

Approximately 8GB of data is available for download each month in the continental United States, and 2GB in Alaska.

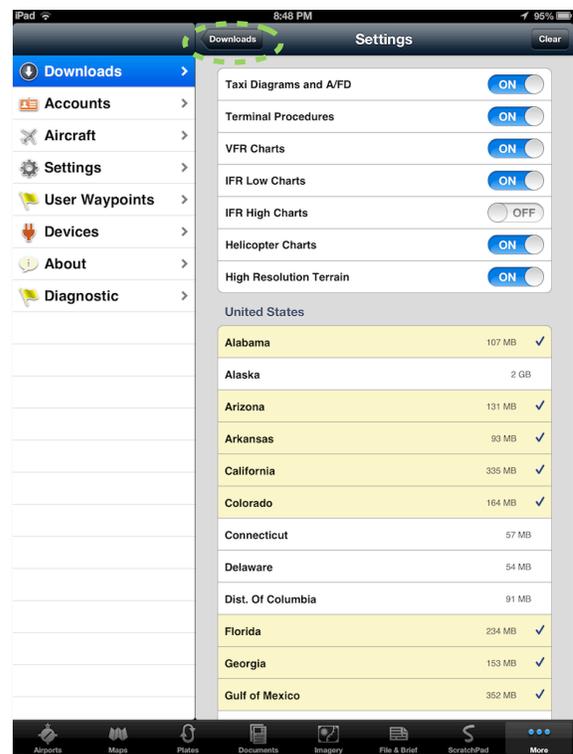
Note: It isn't necessary to have all the data downloaded to make the app function properly. The downloads are only required for in-cockpit (or offline) use. Most pilots will download the states they will be flying through and leave other states alone if they are not flying there. If plans change, you can just grab the additional states in a few minutes of downloading. Downloading all items for all states can be unnecessarily time consuming - particularly if there are items you're likely to only reference when you're on the ground with an Internet connection.

Select Data to Download

When you first install the app, visit *Downloads* and select the data you'll need to bring with you. In *Download Settings* at the top, tap on the country in which you'll be flying. A view will slide in with the available data types for the country listed at the top and an ON/OFF toggle switch next to each one.

Decide on the appropriate data for your type of flying and toggle it to **ON**. VFR pilots will need *Taxi Diagrams & A/FD* and *VFR Charts*, but will not need *Terminal Procedures* or any IFR Charts. IFR pilots will also want terminal procedures along with low and/or high enroute charts.

Below the data types is a list of all regions in the country with available data. Tap on a region to select it - a check mark appears on the right and the row will be highlighted in yellow. To deselect it, tap again and the check mark disappears and the row will no longer be highlighted. U.S. pilots will want to select all of the states in which they regularly fly.



After you have finished selecting your regions, tap the **<Downloads** button in the top-left to go back to *Downloads*.

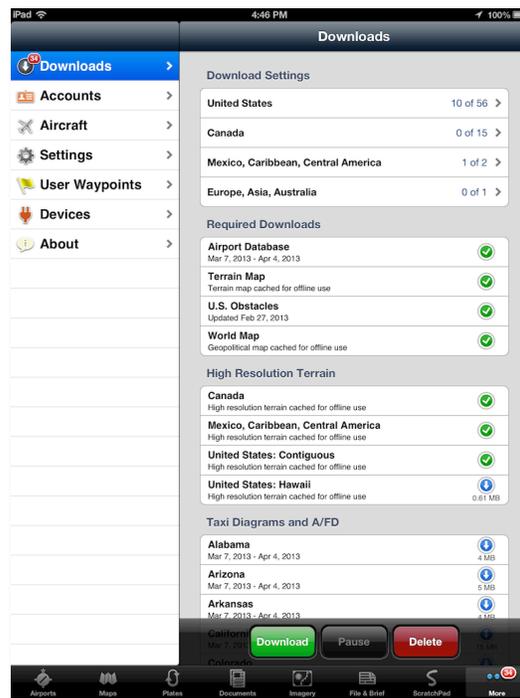
New listings with all of the data types and regions that you selected are displayed. For example, if you had toggled *Taxi Diagrams and A/FD* to ON and selected Texas and Louisiana, you'd see a table titled *Taxi Diagrams and A/FD* with the Texas and Louisiana diagrams. A blue arrow next to each region indicates that it is available to download. A green checkmark next to each region indicates that it has been downloaded.

If you'd like to download additional data types or choose new regions, go back into the *Download Settings* at the top. Continuing our example, if you were to set *Terminal Procedures* to **ON** and also select *Oklahoma*, the *Downloads* screen would add Oklahoma to the list of Airport Diagrams available for download and show a new *Terminal Procedures* table with Texas, Louisiana, and Oklahoma.

Downloading Data

So far, you've selected the items you want ForeFlight Mobile to download, but the download hasn't happened yet. Tap the blue arrow to download an individual region, or tap the big green **Download** button at the bottom of the screen and all of the data will start downloading, two to four at a time. You can stop the download at any time by tapping the **Pause** button. If you stop in the middle of a download, don't worry - it will automatically resume where it left off later.

When your download has finished, you'll see a green check mark on the right side. When all of the downloads have completed, the green **Download** button at the bottom becomes disabled. All the data you downloaded can be used offline - you're now ready to fly!



Green check mark = already downloaded

Blue arrow = not yet downloaded

Red badge on More tab = number of downloads pending

Tip: if at all possible, use a *Wi-Fi* connection for these downloads. Downloads over the cellular network are much slower and, depending on your mobile contract, can result in bandwidth fees.

Downloading in the Background

Once started, downloads in the Downloads view will continue even if the iPad screen is turned off or another app is used.

Note that iOS 6 may halt a batch of background downloads, especially if a large amount of data is being downloaded. Additionally, downloading will automatically

stop if it was started when on a WiFi connection and the signal was lost. A download batch that was started when on a cell-data connection will not continue in the background.

Once the downloads are complete (or if they fail for any reason) an alert notification will be shown.

Keeping Current

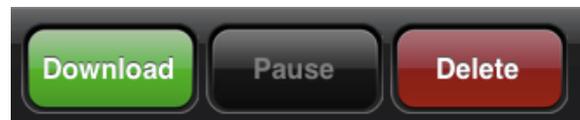
New data is available every 28 days for diagrams, procedures, and VFR charts, and every 56 days for IFR enroute charts. A few days before the current data will expire, you'll see a red badge with a number appear on the **Downloads** button. This is the number of data downloads available for the next data cycle. When you see the red badge, it's time to download new data.

To download the new data, go to the *Downloads* view and tap the big green **Download** button at the bottom. All data you've selected will queue up and download. If you don't already have a region downloaded or it's expired, then the new data will be used by the app immediately. If you already have current data for the region and you're downloading the new data a few days in advance, ForeFlight Mobile will save it on your device but keep using the current data.

The first time you start the app after the current data expires, the new data starts being used and the old data is deleted. This data cycle changeover happens automatically.

Deleting Data Downloads

All data downloads can be deleted by tapping the **Delete** button at the bottom of the *Downloads* view. The option is given to delete *all* data or just *expired* data. Expired data is deleted automatically but, for performance reasons, may not disappear immediately upon expiration. It should be uncommon to make use of the Delete button as downloads are cleaned up automatically.



To delete an individual download, for example if a region has been downloaded that is no longer needed, swipe-to-delete the data row. Slide your finger from left to right over the entry you wish to remove and a red **Delete** button pops up. Tap on the button to remove the download. If you never want to download data for this region again, be sure to remove it from the list of regions that ForeFlight keeps track of for you by unchecking it in the *Download Settings* view.

Preflight Download Check

Remember: If it's not downloaded, you're not going to see it in flight.

Before your flight, make sure you have the necessary data downloaded:

- ❖ Go to **Settings** for your iPad and switch *Airplane Mode* **ON**. This will keep the app from retrieving data over the Internet, simulating the condition in flight.
- ❖ Launch **ForeFlight Mobile**
- ❖ Tap **More** and then **Downloads** and ensure there is a green check mark next to each region where you'll be flying.
- ❖ Tap **Airports** and search for each airport on your route. If you're flying IFR, make sure there is a green "saved" mark next to each procedure.
- ❖ **Tap Maps** and search for each airport on your route. Toggle between *VFR*, *IFR Low*, and *IFR High*, panning around each chart to ensure that it is downloaded properly on your device. Make sure to zoom into the airports you will be flying to and ensure that the charts are downloaded.

Troubleshooting Downloads

ForeFlight hosts all of the data downloads on a network of servers located across the United States and around the world. When you start a download, the data comes from the server that is closest to you in order to provide fast, reliable downloads.

Depending on the amount of data you are downloading, it can take quite a bit of time. If you are selecting everything for the US, that is 8-10 GB of data to download. Even on a Wi-Fi connection, that will take a while.

ForeFlight *strongly recommends* that you only download data for regions you will fly over or near. This saves significant time and disk space.

Given the nature of networks and the large amount of data transferred every month, connection errors can occur. If a download fails, the app will automatically retry it a few times. If you see a red error message on the download, that means the retry attempts did not work and you will need to restart the download for that volume.

Try these troubleshooting tips:

- ❖ **Try downloading on another network** - if you're using your home Wi-Fi, try a download over a different Wi-Fi hotspot or, in a pinch, over 3G/4G.

❖ **Update the firmware on your router** - some older Wi-Fi routers are not compatible with the iPad. Visit your manufacturer's website to see if there is a firmware update available.

❖ **Reboot your iPad** by pressing and holding the button on the top of the iPad. A red slider appears on the screen - swipe where indicated to shut down your device. Wait a few seconds, then press the button again to start it back up. Once it has finished starting up, try the downloads again.

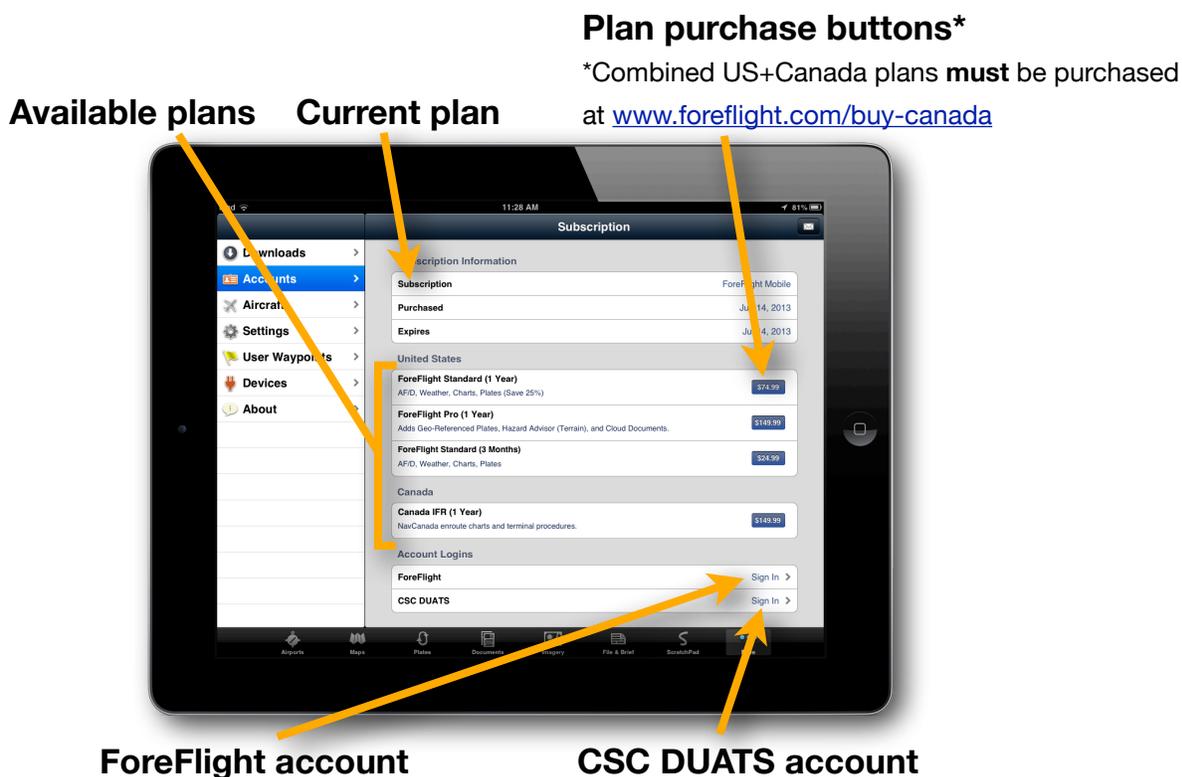
❖ **Double check Download Settings** to ensure the proper regions and data types are still selected

ACCOUNTS

About the Design

The *Accounts* view shows the status of your ForeFlight subscription and allows you to purchase a new subscription or renew your existing subscription.

If you're setting up a new device or retiring an old one, use *Accounts* to sign in and out of your ForeFlight account.



Viewing your Active Subscription

The table at the top of *Accounts* shows the status of your account. If you're a trial user, it shows the day you started using the app and when your trial will expire. If you've already purchased a subscription, it shows the day you placed your order and when you need to renew.

A valid subscription is required to continue using the app.

If your expiration date is not correct, then you need to sign in to your ForeFlight account (see below). Apple does not provide us a consistent method to automatically detect when you start using a new device, so ForeFlight Mobile won't recognize your

subscription until you sign in. Also, subscription information can be lost in certain upgrade, backup and restore operations of the device or application, making it necessary to sign in.

Purchasing or Renewing a Subscription in the United States

To purchase or renew a subscription for the US, visit www.foreflight.com/buy or tap on a plan in the United States table:

❖ **\$24.99 (USD) ForeFlight Mobile (3 months)**

❖ **\$74.99 (USD) ForeFlight Mobile (1 year)**

❖ **\$149.99 (USD) ForeFlight Pro (1 year)**

All three plans give you the same great standard features:

❖ *Monthly data updates* to download gigabytes of terminal procedures, charts, and diagrams for the United States.

❖ FAA VFR sectionals, FAA IFR enroute charts, fuel prices, weather, moving map, and more.

The ForeFlight Pro plan adds geo-referencing to the FAA approach plates and taxi diagrams, along with [Plates on Map](#) and Hazard Advisor™. With this plan, your aircraft's location appears directly on many U.S. plates and diagrams. To learn more about the Pro plan and geo-referencing features, please visit www.foreflight.com/support/georef

These subscriptions do not provide access to Canadian terminal procedures or IFR enroute charts from Nav Canada. You can purchase a combined USA + Canada plan at www.foreflight.com/buy-canada.

After you tap on the plan you wish to purchase, follow instructions for entering your email address and iTunes password. This will place an order through your iTunes account, which will show up on your credit card like other iTunes purchases (e.g., music or apps).

After your purchase is complete, you'll have immediate access to the app and all data downloads. You'll also receive an email with your new ForeFlight Account password, and an email from Apple with your iTunes receipt.

If you have trouble placing an order due to a slow network connection or a "jailbroken" device, you can purchase a subscription online at www.foreflight.com/buy

If you'd like to place an order for multiple iPads, please visit www.foreflight.com/groups or send an email to team@foreflight.com.

Purchasing or Renewing a Subscription in Canada

To purchase or renew a subscription for Canada, tap on a plan in the Canada table:

❖ **\$149.99 (USD) Canada IFR & VFR (1 year)**

This plan gives you access to ForeFlight Mobile with Canadian data from Nav Canada:

❖ *Monthly data updates* to download terminal procedures from the Canada Air Pilot (CAP), Canadian IFR low and High enroute charts, and Canadian VNC & VTR charts and Canadian Flight Supplement (CFS).

❖ Weather, moving map, and more.

This subscription does not provide access to United States plates, sectionals, or enroute charts. You can purchase a combined USA + Canada plan at www.foreflight.com/buy-canada

Signing In to your ForeFlight Account

After you purchase a subscription, you are automatically signed in on that iPad or iPhone.

To use your subscription on a new device, you'll need to sign in to your ForeFlight Account inside the application:

❖ Tap the "More" option at the bottom, then "Accounts" in the left side list

❖ In the *Account Logins* section, tap *ForeFlight*

❖ Tap *Yes, I have an Account*

❖ Enter your email and password for your ForeFlight account. (Your auto-generated password was emailed to you when you originally placed your order.)

If you can't find your password, enter the email address that you originally used to purchase your subscription and tap the **Forgot Password** button. An email is sent to you with your password.

If you receive an *Account in Use* or *Too Many Devices* message and the app will not let you sign in, you'll need to sign out of your old device. Follow the instructions below for signing out.

If your old device accidentally fell in a swimming pool or otherwise met an untimely end, email us at team@foreflight.com and we'll be happy to unhook that device from your account.

Signing Out of your ForeFlight Account

When you're ready to retire your old iPhone or iPad and won't be using it anymore, remember to sign out of your ForeFlight Account on that device:

- ❖ Tap the "More" option at the bottom, then "Accounts" in the left side list
- ❖ In the *Account Logins* section, tap *ForeFlight*
- ❖ A screen is displayed with your email address and password. Tap **Sign Out** at the bottom.

This will unhook the device from your account and let you sign in on another iPad or iPhone. Afterwards, we recommend deleting the app from your device to free up space. Tap-and-hold on the ForeFlight icon until it starts to wiggle, then tap the "X" button displayed on the top-left corner of the icon.

Changing your Password or Email

To change your password or email address inside the app:

- ❖ In the Account Logins table at the bottom, tap *ForeFlight*
- ❖ A screen is displayed with your email address and password. Tap **Change Password** or **Change Email** at the bottom.
- ❖ Follow the on-screen instructions for changing your password or email.

You can also use the ForeFlight Manage website to change your email, password, and manage which devices are associated with your account. ForeFlight Manage is available at: www.foreflight.com/manage.

Device Limit Exceeded / Too Many Devices on your Account

If you receive this message while attempting to sign-in inside the app, go to www.foreflight.com/manage, sign-in with your ForeFlight Mobile subscription email and password, click on the **Devices** tab, and click the red **Remove** button next to any duplicate device entries.

If you aren't sure which device to remove, simply remove ALL devices; when you next open ForeFlight Mobile on each device, it will automatically reconnect itself with our servers.

Providing a DUATS Account

A CSC DUATS account can also be *optionally* provided by tapping the *DUATS* option at the bottom of the *Accounts* view. When your DUATS account is set, the *File & Brief* view will use it when filing or briefing flight plans.

When your CSC DUATS account is not provided, ForeFlight Mobile will automatically use the ForeFlight corporate DUATS account.

SETTINGS

ForeFlight Mobile supports a variety of settings to let you customize how you like to use and view your data. Settings are changed in the *More* view or the main **Settings** application on the iPad.

All settings will be reset to their default values if you uninstall ForeFlight Mobile.

❖ **Brightness Slider** - slide left to reduce screen brightness in ForeFlight Mobile. *Always reduce brightness to its minimum in the iPad **Settings** application before moving the ForeFlight Mobile brightness slider down.*

❖ **Show Weather First** - turn *ON* to show the METAR view first when viewing an airport. Turn *off* to see that last-viewed data category first.

❖ **Past TAF Translations** - turn *ON* to see expired TAF forecast time periods in the weather view. Turn *OFF* to hide expired TAF forecast periods.

❖ **Airway Decoding** - set to *Bends Only* to filter out airway intersections that do not cause a course change. VORs and NDBs will always be shown in an airway.

❖ **Show Local Times** - turn *ON* to see times in the local time zone. Turn *off* to see times in Zulu time.

❖ **Wind Speed** - select preferred units.

❖ **Pressure** - select preferred units.

❖ **Temperature** - select preferred units.

❖ **Visibility** - select preferred units.

❖ **Latitude/Longitude** - select preferred units for viewing coordinates.

❖ **Aircraft Speed** - select preferred units for airspeed and groundspeed.

❖ **Distance** - select preferred units for distance.

❖ **Auto Center Mode** - select track up, track up forward, or north up.

❖ **Auto Center Deactivate** - select from automatic (auto center mode will turn off the instant you manually pan or zoom the map) or manual (the auto center crosshair button must be pressed to disable auto center mode).

❖ **Extended Centerlines** - turn *ON* to see extended runway centerlines for airports in the current route.

❖ **Distance Rings** - turn *ON* to show 3 concentric rings centered around your aircraft's location, in the the style selected in Distance Rings Style.

- ❖ **Distance Rings Style** - Choose between: Automatic, which changes the NM scale of the rings as you zoom in and out on the Maps; Distance-based: 5, 10, 25 NM or 10, 20, 50 NM or 20, 40, 100 NM; or Time-based, which adjust the size of the rings based on groundspeed to show where your aircraft will be in: 5, 10, 30 minutes or 10, 20, 60 minutes.
- ❖ **Track Vector** - turn *ON* to display a vector in front of your aircraft's icon.
- ❖ **Track Vector Length** - tap to select the length of the track vector: 15, 30, 45, 60 seconds; 2, 5, 10 minutes; 1/2, 1, 2, 5, 10, 25, 50 Nautical Miles.
- ❖ **Route Labels** - turn *ON* to see labels on route waypoints on Map. When *ON*, these labels will each hide/show to prevent overlapping with each other.
- ❖ **Nav Log Columns** - Select columns to display in NavLog on Maps page: Totals Only, Leg only or Both (default).
- ❖ **Current Location Marker** - select an image to be used on *Maps* view to show your current location when in motion.
- ❖ **Initial Map** - whether the last-viewed map should be shown when the app starts, or a different base map.
- ❖ **Hazard Advisor** - select minimum groundspeed for Hazard Advisor layer to be active when it is selected on Maps.
- ❖ **Chart Legends** - turn *ON* to display the chart borders and legends around Flight Bag Tiles-enabled charts (currently, US Helicopter and Canadian VNCs).
- ❖ **Cockpit Sharing** - turn *ON* to allow sharing routes between devices running ForeFlight Mobile on the same WiFi network.
- ❖ **Show Annotations on Map** - turn *ON* to show plate or airport diagram annotations when displaying a Plate or Airport Diagram on the Map.
- ❖ **Lock Disables Buttons** - turn *ON* to disable all buttons on Plates view when lock button is bright blue in top toolbar. This will also disable the bottom buttons that are used to change to other views like Airports, Maps, etc.
- ❖ **Reload Download List** - turn this *ON* to force the *Downloads* view to reload the list of available downloads. Normally this happens automatically every 12 hours.
- ❖ **Hide Distant Traffic** (when connected to a Stratus ADS-B receiver) - turn this *ON* to hide traffic more than 15NM from your current GPS location and/or more than 3,500' above or below your current GPS altitude.

- ❖ **Visual Alerts** (Traffic, when connected to a Stratus ADS-B receiver) - turn *ON* to display a *visual* notification (similar to the Runway Proximity Advisor alert) when traffic is within 1NM and +/- 1,200' GPS altitude of your aircraft's position.
- ❖ **Visual Alerts** (Runway Proximity Advisor)- turn *ON* to display a *visual* notification within ForeFlight when nearing or entering a runway.
- ❖ **Audio Alerts** (Runway Proximity Advisor) - turn this *ON* to receive an *audio* notification via your device speaker or your headset when nearing or entering a runway.
- ❖ **Enable Search and Rescue** - turn *ON* to enable the SAR grid overlays and SAR patterns (see Search and Rescue Supplement, available in **Documents** > **Catalog** > **ForeFlight**. SAR features are accessed via the Procedure Advisor.
- ❖ **SAR Waypoints as Lat/Lon** - turn *ON* to display the waypoint labels in a SAR pattern as Latitude/Longitude, instead of SAR-01, SAR-02, etc...
- ❖ **Download Filed Plans** - turn *ON* to be prompted to download filed flight plans the next time you go to the *File & Brief* view. This setting automatically disables after one use.
- ❖ **New Plan Format** - *Same as Last Filed, ICAO, or FAA/Domestic*: lets you choose the default type of plan that will be created when you tap the New Flight Plan button on the File & Brief page. An individual flight plan type can be changed while creating the flight plan on the File & Brief page.
- ❖ **Allow Device to Sleep** - turn *ON* to allow your device to sleep while running ForeFlight Mobile, including when on Plates view or when downloading data. Turn *OFF* to ensure that the iPad will not enter sleep mode while ForeFlight Mobile is running in the foreground, even if your iPad is set to usually sleep after a certain period of inactivity.
- ❖ **Auto Show Taxi** - turn this *ON* to automatically switch to the current airport's taxi diagram, when available, upon landing.
- ❖ **Automatic Clock Check** - turn this *ON* to automatically verify that your iPad's system time is set correctly. If it is found to be incorrect, you will get an alert. Proper system time is important for many features in the app.
- ❖ **Confirm Before Dial** - iPhone only (not applicable to iPad). When *ON* a pop-up is displayed when you tap on a phone number so you can confirm that you want to call the number.
- ❖ **Enable Ownship** - **ALWAYS**: shows your aircraft position on charts, and with ForeFlight Mobile Pro, on approach plates and airport diagrams; **NEVER**: your

aircraft position is not shown on any chart or plate. This is required for certain operators; ***When speed under 40kts:*** with ForeFlight Mobile Pro, shows your aircraft position on the airport diagram when your speed is under 40 knots. Aircraft position is not shown on any chart or plate when speed is above 40 knots.

❖ **Show Heliports** - turn this *ON* to view heliports in nearby airports lists. You can always search for heliports (and use them in routes) regardless of this setting.

❖ **Show Help Tips** - turn *ON* to view hints when searching or performing other actions. Turn *OFF* to prevent tips from showing.

❖ **Show Private Fields** - turn this *ON* to see private airports in nearby airports lists.

❖ **Start on Last Screen** - turn this *OFF* to start on the *Airports* view on next launch. This can help if one view is causing the application to quit immediately after launch.

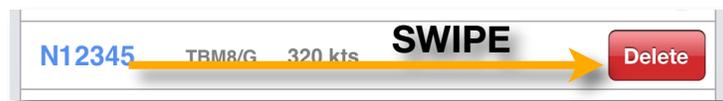
AIRCRAFT

Tap an aircraft's row to set it as the default aircraft. It will then be used to provide flight performance characteristics in route planning when those details are not specified (see *Maps* section of this guide).

Define an aircraft profile by tapping the '+' button at the top left and enter the aircraft details. When finished, tap the Done button at the top right. You can edit an existing aircraft by tapping the blue right-arrow button next to the desired item.

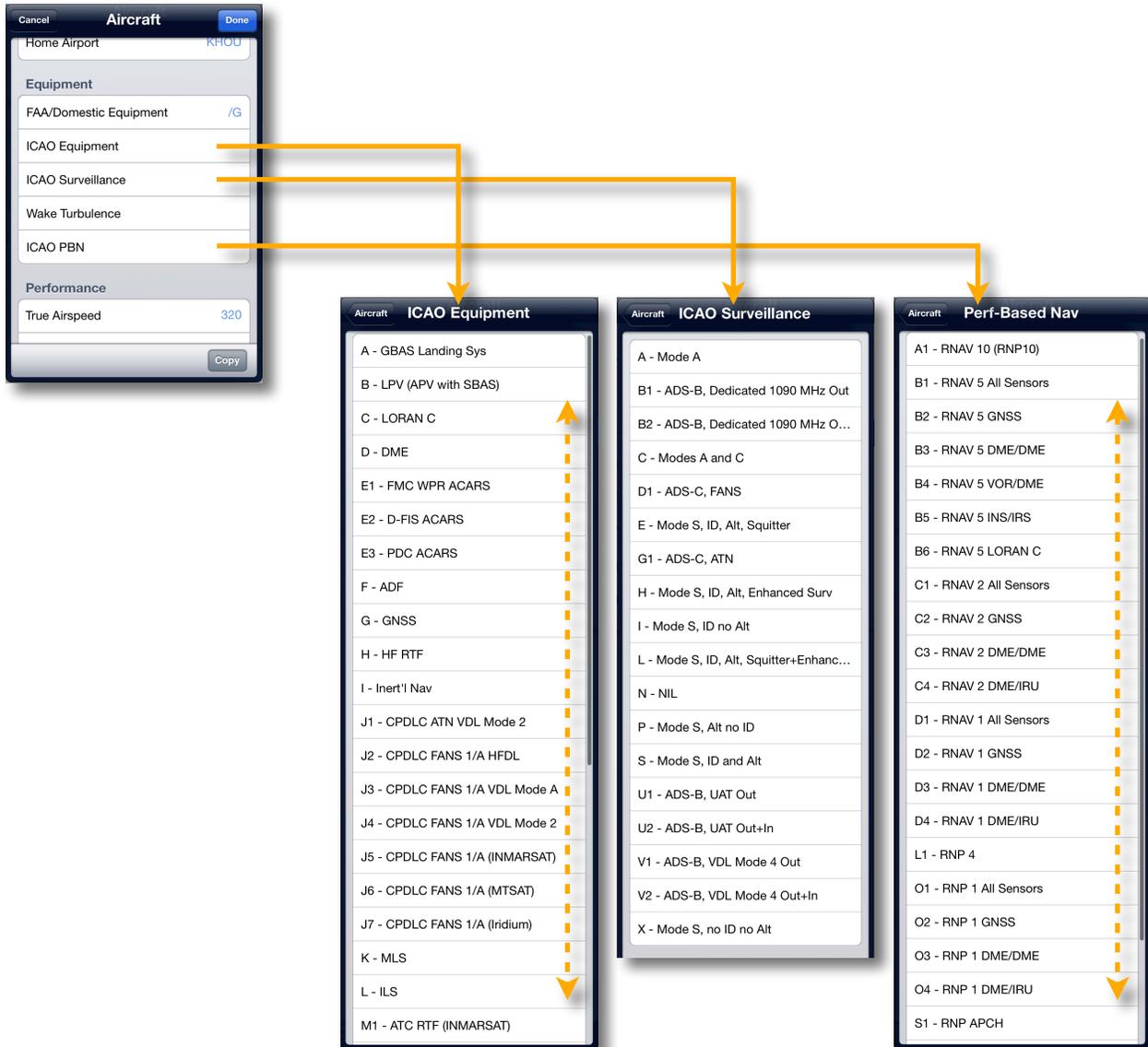
Delete Aircraft Profile

To delete an aircraft profile, swipe your finger over it from left to right, then tap the red Delete button.



AIRCRAFT INFORMATION REQUIRED FOR ICAO FLIGHT PLANS

Before creating or filing an [ICAO flight plan](#), be sure to enter the ICAO specific information for your aircraft, at **More > Aircraft**. Tap on each applicable Equipment category (ICAO Equipment, ICAO Surveillance, Wake Turbulence, and ICAO PBN) and select the options that correspond to your aircraft.



The various options are explained in the following sections.

ICAO Equipment

ICAO Equipment includes the radio communication, navigation and approach aid equipment and capabilities installed in your aircraft. Select the appropriate equipment for your aircraft if it is installed and serviceable, the flight crew is qualified to operate the

equipment, and any applicable authorizations have been received from appropriate authorities.

The options in each category equipment can be confusing at first glance, so a good initial approach is if you don't know what a particular piece of equipment is, don't select it because you probably do not have it in your aircraft.

Radio Communication, Navigation and Approach Aids

Choose N (NIL) if no Comm/Nav/approach aid equipment for the route to be flown is carried, or if the equipment is unserviceable;					
OR choose S (Standard) if the aircraft has VHF RTF, VOR, and ILS within U.S. domestic airspace, and/or choose any other applicable from the list below:					
A	Ground Based Augmentation System (GBAS) landing system	B	Localizer Performance with Vertical guidance: LPV (APV with SBAS)	C	LORAN C
D	DME	F	ADF	G	GNSS
H	HF RTF	I	Inertial Navigation	K	MLS
L	ILS	O	VOR	R	Performance Based Navigation (PBN) Approved. Must also select equipment in aircraft's ICAO PBN section.
T	TACAN	U	UHF RTF	V	VHF RTF
W	RVSM	X	Minimum Navigation Performance Specifications (MNPS) Approved	Y	VHF 88.3 kHz spacing
Z	Other (specify on Flight Plan form, Enroute section, Other Flight Info : NAV and/or COM)				

Controller Pilot Data Link Communication (CPDLC) Equipment

<i>Choose applicable option(s) for your aircraft. If you don't know what one of these is, you should not select it.</i>					
J1	CPDLC ATN VDL Mode 2	J2	CPDLC FANS 1/A HFDL	J3	CPDLC FANS 1/A VDL Mode 4
J4	CPDLC FANS 1/A VDL Mode 2	J5	CPDLC FANS 1/A SATCOM (INMARSAT)	J6	CPDLC FANS 1/A SATCOM (MTSAT)
J7	CPDLC FANS 1/A SATCOM (Iridium)				

Aircraft Communication Addressing and Reporting System (ACARS) & SATCOM Communication Equipment

<i>Choose applicable option(s) for your aircraft. If you don't know what one of these is, you should not select it.</i>			
E1	Flight Management Computer (FMC) Waypoint Reporting ACARS	M1	ATC RTF SATCOM (INMARSAT)
E2	Datalink Flight Information System (D-FIS) ACARS	M2	ATC RTF (MTSAT)
E3	Pre-Departure Clearance (PDC) ACARS	M3	ATC RTF (Iridium)

ICAO Surveillance

ICAO Surveillance includes Transponder and ADS-B and -C equipment.

Transponder

<i>Choose N (NIL) if no operable transponder; OR choose one of the following:</i>					
A	Mode A (ie: no Mode C), 4 digits - 4096 codes	C	Mode A , 4 digits - 4096 codes and Mode C	E	Mode S , including aircraft identification, pressure altitude and Extended Squitter (ADS-B)
H	Mode S , including aircraft identification, pressure altitude, and enhanced surveillance capability*	I	Mode S , including aircraft identification and enhanced surveillance capability*, but no pressure-altitude capability	L	Mode S , including aircraft identification, pressure-altitude, Extended Squitter (ADS-B), and enhanced surveillance capability*
P	Mode S , including pressure-altitude but no aircraft identification capability	S	Mode S , including pressure-altitude and aircraft identification capability	X	Mode S , without pressure-altitude or aircraft identification capability
*: Enhanced surveillance capability is the ability of the aircraft to downlink aircraft derived data via Mode S transponder					

ADS Equipment

If aircraft is equipped with ADS-B or -C, choose one column per applicable row(s):				
B1	ADS-B with dedicated 1090MHz Out only	or	B2	ADS-B with dedicated 1090MHz Out and In
U1	ADS-B with dedicated 978MHz UAT Out only	or	U2	ADS-B with dedicated 978MHz UAT Out and In
V1	ADS-B Out only using VDL Mode 4	or	V2	ADS-B Out and In using VDL Mode 4
And if your aircraft is equipped with Automatic Dependent Surveillance-Contract (ADS-C), also choose one of the following:				
D1	ADS-C with FANS 1/A capability	or	G1	ADS-C with ATN capabilities

For example, if your aircraft is equipped with ADS-B Out on 1090ES only, choose B1. If your aircraft has ADS-B Out & In on 1090ES and 978, choose B2 and U2.

IMPORTANT: an iPad + ADS-B receiver does not “count” for ADS-B In.

ICAO Performance Based Navigation (PBN)

ICAO Performance Based Navigation (PBN) includes Area Navigation (RNAV) and Required Navigation Performance (RNP) capabilities. You can select up to 8 RNAV + RNP options.

Area Navigation (RNAV) Capabilities

<p>Choose applicable option(s) for your aircraft. If you don't know what one of these is, you should not select it. IMPORTANT: Do not select more than 8 RNAV + RNP options.</p>			
A1	RNAV 10 (RNP 10)	C1	RNAV 2 all permitted sensors
B1	RNAV 5 all permitted sensors	C2	RNAV 2 GNSS
B2	RNAV 5 GNSS	C3	RNAV 2 DME/DME
B3	RNAV 5 DME/DME	C4	RNAV 2 DME/DME/IRU
B4	RNAV 5 VOR/DME	D1	RNAV 1 all permitted sensors
B5	RNAV 5 INS or IRS	D2	RNAV 1 GNSS
B6	RNAV 5 LORAN C	D3	RNAV 1 DME/DME
		D4	RNAV 1 DME/DME/IRU

Required Navigation Performance (RNP) Capabilities

<p>Choose applicable option(s) for your aircraft. If you don't know what one of these is, you should not select it. IMPORTANT: Do not select more than 8 RNAV + RNP options.</p>			
L1	RNP 4	S1	RNP APCH
O1	Basic RNP 1 all permitted sensors	S2	RNP APCH with BARO-VNAV
O2	Basic RNP 1 GNSS	T1	RNP AR APCH with RF (special authorization required)
O3	Basic RNP 1 DME/DME	T2	RNP AR APCH without RF (special authorization required)
O4	Basic RNP 1 DME/DME/IRU		

Wake Turbulence

Choose the option based on your aircraft's maximum certificated takeoff weight:

Light	7,000 kg (15,500 lbs.) or less
Medium	7,001 kg up to 135,999 kg (15,501 lbs. to 299,999 lbs.)
Heavy	136,000 kg (300,000 lbs.) or more

DEVICES

The Devices view shows any connected devices explicitly supported by ForeFlight. This includes external GPSs, Stratus ADS-B, data connections, etc. Some devices have further details that can be viewed by tapping the device's box in the Devices view.

Direct Connection: Bad-ELF and DUAL external GPSs

To make a direct connection between ForeFlight Mobile and your Bad Elf or DUAL external GPS (bypassing iOS Location Services), tap **More** > **Devices** > then tap the Bad Elf or DUAL box, then slide the Direct Connection switch ON.



Use this setting if you do not see a GPS position when using your Bad Elf or DUAL external GPS (ie: "No fix" on the Accuracy instrument on the Maps HUD).

IMPORTANT: Using Direct Connection with a DUAL XGPS 150 requires firmware 1.2.6 or later. Contact DUAL to download the firmware (a PC is required to install the firmware):

gps.dualav.com/firmware/xgps150/

USER WAYPOINTS

For more information about User Waypoints see **Managing User Waypoints** in the **Maps** Chapter (pg. 33). Go to **More** > **User Waypoints** to display previously saved user waypoints. To edit a waypoint's details, tap the blue chevron  button. You can create a new user waypoint by using the + button in the upper right. This is the easiest way to create a waypoint if you elect to describe the waypoint using lat/lon (as opposed to selecting the point on a map).

Tap a waypoint's name in the list to view it on the Maps view. Swipe-to-delete can be used to remove a waypoint. The clear button will remove all waypoints.

Waypoints can also be inserted by tapping on the Maps view. Tap & hold your finger on the Map for a moment then release it. A list of possible waypoints will pop up. Tap the blue + button next to the words "Add this coordinate to route" to view the "User Waypoint" form. Give the waypoint a name and, optionally, a description then press the Done button to save it.

Waypoint names cannot contain any whitespace such as spaces or tabs. Waypoints can be added to a route on the Maps view like any other waypoint - just

type the waypoint name as part of the route. User Waypoints can be added in bulk as well, using a KML or CSV file. See the ForeFlight website for details:

www.foreflight.com/support/user-waypoints.

ABOUT

The *About* view provides more information about ForeFlight, LLC as well as version information (at the top of the view).

ADS-B Weather

OVERVIEW

ForeFlight Mobile supports the Appareo Stratus ADS-B receivers. These devices provide ForeFlight Mobile with the ability to access ADS-B/FIS-B data from the network of ADS-B ground stations. Please consult the Stratus documentation to learn how to setup and connect the device.

Important Note:

ForeFlight Mobile **must** be running for ADS-B data to be saved. Do not “sleep” the app or turn off the screen while using Stratus, as no data will be received.

Connecting multiple copies of ForeFlight Mobile to a Stratus Wi-Fi connection simultaneously is supported. There is no significant practical limit to the number of iOS devices that can be connected to Stratus at once. The iPad 1 is not recommended for ADS-B data due to its limited processor power.

DATA ACCESS IN FOREFLIGHT MOBILE

ForeFlight Mobile will automatically pull data from Stratus when a connection is detected. When connected to Stratus, the application will generally not use an available 3G connection for data or chart gathering. It is recommended that cellular data access be disabled when using Stratus.

These are the supported data items when using Stratus in ForeFlight Mobile:

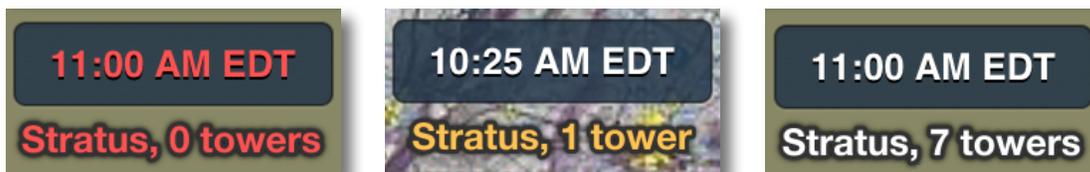
- ❖ Radar - local and CONUS, shown on Maps
- ❖ METARs and METAR-derived data shown on Maps, such as temperature
- ❖ TAFs
- ❖ Winds Aloft
- ❖ TFRs on Maps
- ❖ PIREPs on Maps
- ❖ AIRMETs/SIGMETs on Maps
- ❖ Special Use Airspace status - shown on Maps view when viewing airspace details. Hold finger on airspace to view pop-over. Make sure All is selected at bottom of pop-over to see airspace details.

- ❖ Outage messages - messages about outages in ADS-B system can be viewed in Stratus status view.

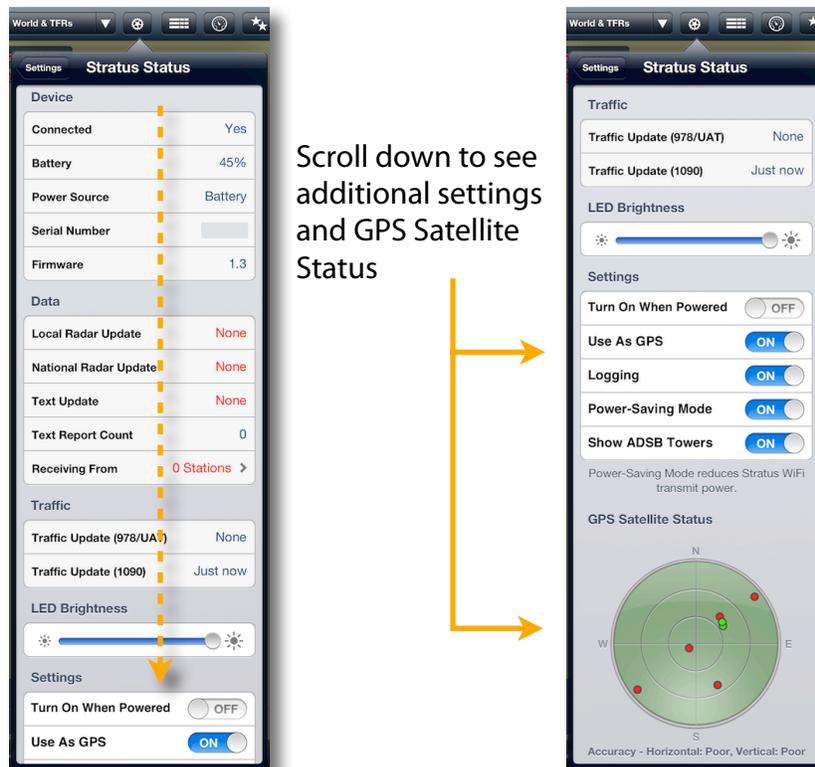
Data is viewed just as it is when on the ground using an Internet connection. There is no user-configuration required beyond ensuring the Wi-Fi connection to the Stratus is properly established.

STATUS INFORMATION

When a Stratus is connected and a Map overlay is selected, the number of Towers being received is shown in the upper-left corner of the Map, underneath the timestamp. When 0 towers are being received, **Stratus, 0 Towers** is shown in Red. When 1 tower is being received, **Stratus, 1 Tower** is shown in Orange, and when more than 1 tower is being received the text is shown in white:



To see more detailed Stratus status information, tap the Map Settings “gear” button, then tap the Stratus entry, or tap on **More > Devices > Stratus > Status**.



The following details an Settings are provided on the Status view:

- ❖ Connected - shows “Yes” if a Stratus is connected via Wi-Fi.
- ❖ Battery - indicates remaining battery life in percent remaining. Not shown when charging Stratus.
- ❖ Power Source - indicates whether Stratus is being charged.
- ❖ Serial Number - Stratus serial number, only needed for technical support concerns.
- ❖ Firmware version - current version of firmware installed on Stratus.
- ❖ General NOTAMs - list of NOTAMs provided by ADS-B that were not assigned to an airport in ForeFlight Mobile.
- ❖ Local/National Update - date of most recent radar data, local data is generally < 5m old, national is generally < 15m old.
- ❖ Text Update - last time a new text report was downloaded (ex. METAR, TAF, Winds Aloft).
- ❖ Text Report Count - number of ADS-B-provided text reports in ForeFlight Mobile.
- ❖ Receiving From - number of ground-based towers currently providing Stratus with data. Number of towers is also shown on the Map below the timestamp.
- ❖ Traffic Update (978/UAT) and (1090) - when traffic data was received on either band (1090 requires Stratus 2).
- ❖ LED Brightness - used to adjust brightness of LEDs on Stratus.
- ❖ Turn On When Powered - when ON the Stratus will turn on when power is provided over the USB cable. It will also turn off when power is removed.
- ❖ Use As GPS - when On, the Maps and other views will use GPS fix info from Stratus.
- ❖ Logging - used only for diagnosing problems, this manages logging of ADS-B data stream received by Stratus. Leave this OFF normally, as it reduces app performance.
- ❖ Power-Saving mode - reduces the WiFi transmit power to increase battery life.
- ❖ Show ADSB Towers - show the location on the Map of the ADS-B Towers currently being received.
- ❖ GPS Satellite Status - shows location and signal lock for GPS satellites currently visible.

ANIMATED ADS-B RADAR

When the Radar overlay is selected, the animation play button is displayed in the lower-left corner of the screen. ForeFlight Mobile will animate (loop) up to 5 frames of NEXRAD data. Regional NEXRAD (within ~250 nm of your position) is updated every 5 minutes, while CONUS radar is updated every 15 minutes.

If you tap the play button before 2 or more frames of radar data have been received, you will see a message that the radar cannot be animated until more data is received.



Tap the Maps Settings (gear) button, then select Stratus > Status to see how many radar frames have been received.



ADS-B TOWER LOCATION ON MAP

When **Show ADSB Towers** is **ON** in the Stratus Status, the location of each ADS-B Tower currently being received is shown on the Map.



The lat/long location of each tower is shown under the tower icon, and the signal quality (0-100%) is shown to the right of the tower icon. If quality decreases, the signal quality is shown in yellow or red, and fewer graphical signal quality indicators are shown above the antenna:



As long as you are receiving data from 1 tower you should be receiving timely weather data and radar updates.

ADS-B Traffic

OVERVIEW

ForeFlight Mobile supports the Appareo Stratus ADS-B receivers. These devices provide ForeFlight Mobile with the ability to access ADS-B/TIS-B data from the network of ADS-B ground stations. Please consult the Stratus documentation to learn how to setup and connect the device.

Connecting multiple copies of ForeFlight Mobile to a Stratus Wi-Fi connection simultaneously is supported. There is no significant practical limit to the number of iOS devices that can be connected to Stratus at once. The iPad 1 is not recommended for ADS-B data due to its limited processor power.

IMPORTANT TRAFFIC NOTICE

TRAFFIC DISPLAY FEATURES MAY NOT SHOW ALL AIRCRAFT IN THE AREA AND ARE NOT TO BE USED AS A PRIMARY MEANS OF AIRCRAFT VISIBILITY, DETECTION OR AVOIDANCE. TRAFFIC DISPLAYED WILL VARY DEPENDING ON ADS-B COVERAGE AREAS AND ON THE TYPE AND VERSION OF ADS-B “IN” AND ADS-B “OUT” EQUIPMENT INSTALLED IN YOUR AIRCRAFT AND OTHER AIRCRAFT.

IF YOUR AIRCRAFT IS NOT EQUIPPED WITH ADS-B “OUT”, YOU WILL NOT RECEIVE A COMPLETE PICTURE OF TRAFFIC. YOU MAY EVEN RECEIVE NO TRAFFIC AT ALL. THIS IS DUE TO THE DESIGN AND IMPLEMENTATION OF THE ADS-B/TIS-B SYSTEM BY THE FAA.

TRAFFIC ACCESS IN FOREFLIGHT MOBILE

The Stratus 1 includes a single-band 978 MHz UAT receiver, while the Stratus 2 includes a dual-band 978 MHz UAT + 1090 MHz receiver. ADS-B traffic may be transmitted over one or both bands. Aircraft operating above 18,000' use the 1090ES band, though these aircraft continue to broadcast on 1090ES when descending below 18,000'.

Important Note:

ForeFlight Mobile **must** be running for ADS-B traffic data to be saved. Do not “sleep” the app or turn off the screen while using Stratus, as no data will be received.

To display Traffic, tap the Maps drop-down and select the Traffic overlay. Use the Filter Traffic Settings (later in this section) to hide traffic beyond 15nm or +/- 3,500' from your location.



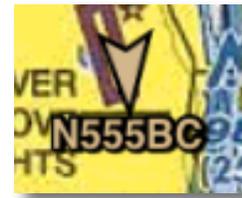
STATUS INFORMATION

To learn the status of the Stratus connection, data availability and more, use the Devices view as described above. When connected, Stratus will be an option shown in the Devices view. Tap it to see full status information. The following Traffic-specific details are provided on the status view:

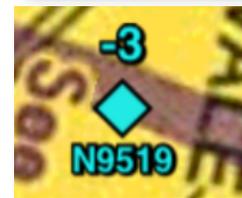
- ❖ Traffic Update (978/UAT): Stratus 1 and 2 - shows the traffic updates received from ADS-B ground stations and aircraft broadcasting on the 978/UAT band.
- ❖ Traffic Update (1090): Stratus 2 only - shows the traffic updates received from aircraft broadcasting on the 1090ES band.

TRAFFIC SYMBOLS

Moving traffic targets are displayed as “arrowheads” pointing in the direction that the target is traveling. Stationary targets, or ones with no direction or speed information, are shown as diamonds. Airborne traffic targets are shown in blue while surface targets are shown in brown.



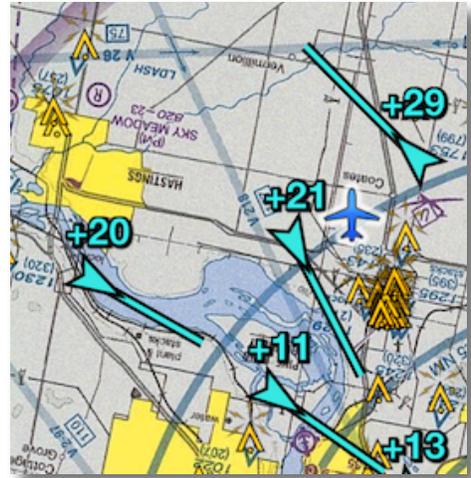
The relative altitude (in 100's of feet) between your current altitude and the target's altitude is shown with a + indicating above and a - indicating below your current altitude. In this example, the stationary target (or one without direction/speed information) is 300' below the aircraft's altitude.



IMPORTANT: Some traffic data is based on pressure altitude. ForeFlight Mobile shows relative altitudes of traffic based on your own-ship's geometric/GPS altitude. This means that some relative altitudes shown may be off by hundreds of feet, especially at higher altitudes, so use appropriate caution when evaluating the relative altitudes shown. Never use data from ForeFlight Mobile for traffic avoidance, always use “See & Avoid” or direct instructions from ATC.

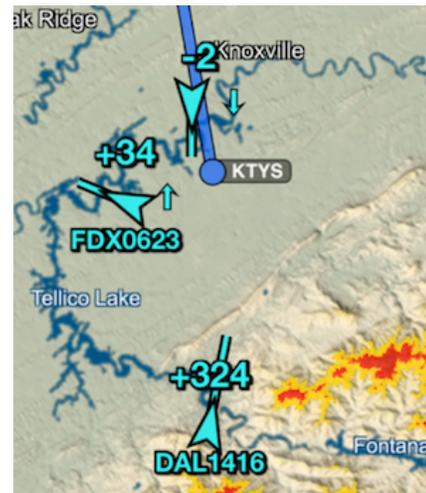
NOTE: Some transmitted traffic data can be incomplete at times, so aircraft flight/tail number, vertical speed and velocity vector may not be available for one or more targets.

The TrafficTrend™ vector is projected out of the front of the arrowhead to indicate the relative speed of the target (longer vector = faster speed). In the example to the right, targets are 2,000', 2,100', 2,900', 1,100' and 1,300' above the aircraft's current GPS altitude.



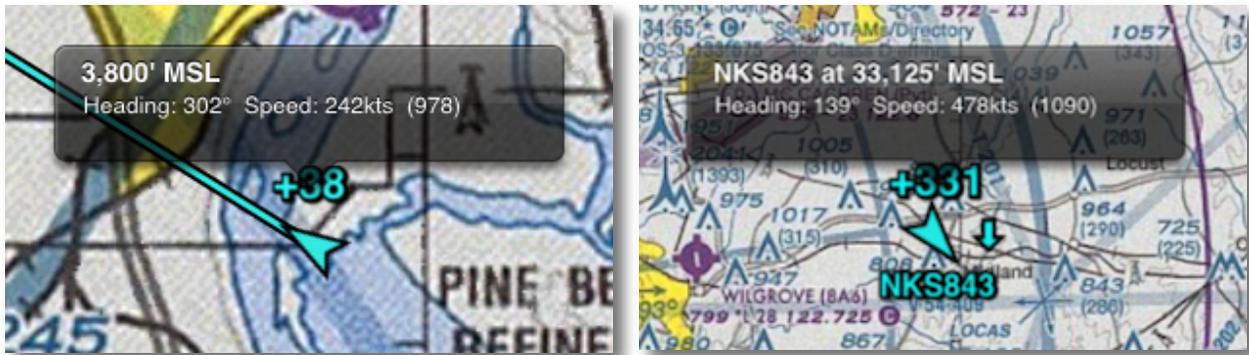
Aircraft equipped with ADS-B “Out” transmit additional data such as their tail or flight number, which is shown below the target symbol. If the target is climbing or descending **at 500 ft/min or greater**, a vertical arrow indicating the climb or descent is shown to the right of the target. NOTE:

When you zoom out, the TrafficTrend™ vector and additional data is hidden.



In the example on the left, UPS218 is 28,500' above the aircraft's current altitude and descending. AAL263 is level 32,500' above the aircraft's current altitude. And N132VU is 800' above the aircraft's current altitude and descending at more than 500 ft/min.

In the example on the right, FDX0623 is 3,400' above the aircraft's current altitude and climbing at more than 500 ft/min. DAL1416 is level 32,400' above the aircraft's current altitude. And an unidentified target is 200' below the aircraft's current altitude and descending at more than 500 ft/min.

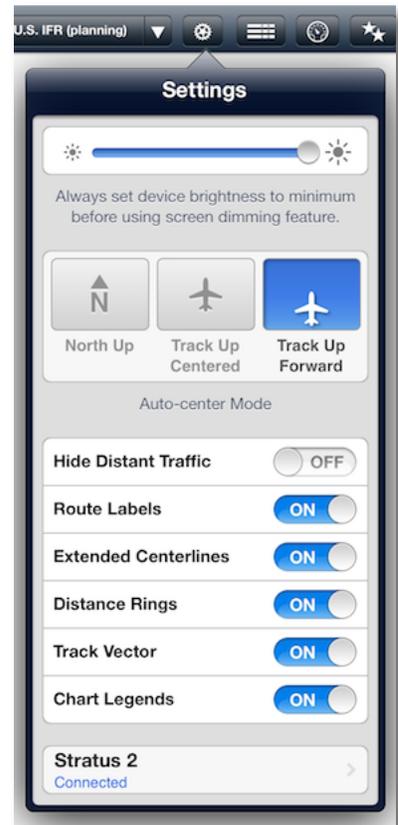


You can tap on any target to display a pop-up with additional information, which can include target tail or flight number, heading, speed and whether the information was broadcast via 978UAT or 1090ES. Tap anywhere on the screen to close the pop-up.

HIDE DISTANT TRAFFIC SETTING

The Hide Distant Traffic setting is accessed via the “Gear” button on the Maps page, or on the More page under Devices - Stratus - Status.

When switched ON, this setting hides traffic that is more than 15NM away from your current GPS location and/or more than 3,500’ above or below your current altitude. This allows you to hide distant traffic targets and may be useful if you are flying in busy airspace or near large airports with lots of commercial traffic.



TRAFFIC ALERTS

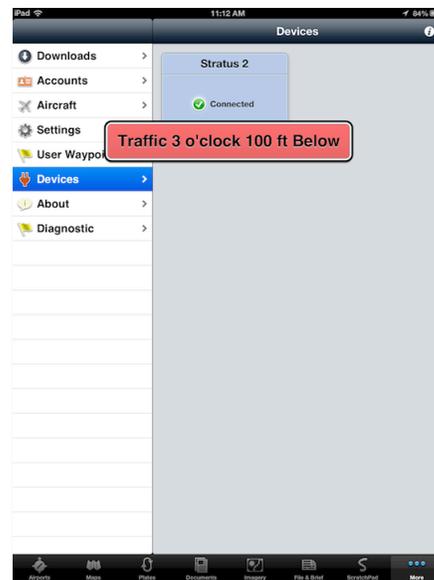
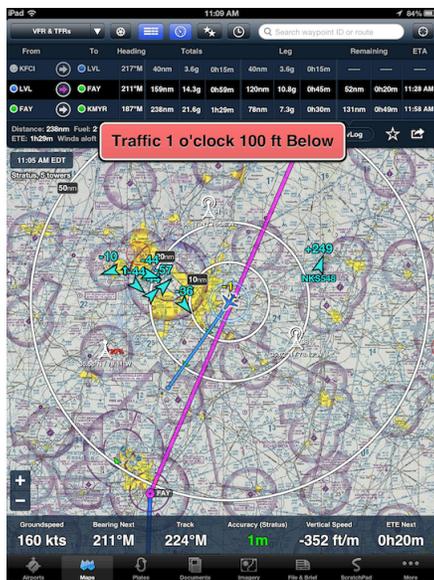
When the **Visual Alerts** setting is ON if your aircraft is moving at over 40kts and an ADS-B traffic target comes within 1NM horizontally and +/- 1,200' of your aircraft's position, a traffic alert pop-up is displayed.

The traffic alert includes "clock" direction and relative altitude information to help you locate the target.

NOTE: Traffic alerts are **ADVISORY** in nature and are **NOT** a replacement for "See & Avoid" or ATC traffic advisories.

IMPORTANT: Some traffic data is based on pressure altitude. ForeFlight Mobile shows relative altitudes of traffic based on your own-ship's geometric/GPS altitude. This means that some relative altitudes shown may be off by hundreds of feet, especially at higher altitudes, so use appropriate caution when evaluating the relative altitudes shown. Never use data from ForeFlight Mobile for traffic avoidance, always use "See & Avoid" or direct instructions from ATC.

If your aircraft is not equipped with ADS-B "Out" but you fly within range of the traffic "puck" around another aircraft that is equipped with ADS-B "Out", you may see a false target representing your aircraft, and a traffic alert may also be displayed.



Like the Runway Proximity Advisor™, the Traffic Alert pop-up will display on any screen in ForeFlight Mobile. However if ForeFlight Mobile is not displayed on the screen (ie: if you are viewing another app, or the iPad or iPhone is sleeping) Traffic Alert pop-ups will not be shown.

Stratus Firmware Update

OVERVIEW

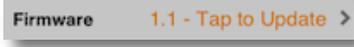
Appareo, the manufacturer of the Stratus ADS-B receivers, periodically releases updated firmware to activate new capabilities or fix issues. This firmware can be installed by ForeFlight Mobile. For more information, please watch this video:

vimeo.com/41860856.

UPDATE STEPS

Before beginning the update process, make sure that your iPad or iPhone AND the Stratus each have enough battery power to run for at least 15 minutes. If you are unsure, plug each device in to an appropriate charger.

Turn the Stratus ON, then open Apple Settings, tap WiFi and connect your iPad or iPhone to the Stratus WiFi network.

Open ForeFlight Mobile, then go to the Devices view and tap the Stratus button. Then tap the “Tap to Update” on the Firmware row:  to begin the update. Once the update is complete, tap the “Close” button to return to ForeFlight Mobile.

IMPORTANT: The Stratus will reboot during the firmware update process. When this happens, if there is a known WiFi network in range your iPad or iPhone will reconnect to the other WiFi network. This will cause an error message at the end of the update process since ForeFlight Mobile is no longer connected to the Stratus WiFi network and cannot verify the firmware update.

If this happens, simply quit ForeFlight Mobile, re-connect your iPad or iPhone to the Stratus WiFi network, re-open ForeFlight Mobile and go to the Devices, Stratus page. Verify that the new Stratus Firmware version is listed.

You can avoid this error message either by doing the update in an area with no other WiFi networks, or by, before starting the update, opening Apple Settings, tapping WiFi and “forgetting” any WiFi networks to which your iPad or iPhone may automatically connect.

XM WX

OVERVIEW

ForeFlight Mobile supports the Baron Services Mobile Link XM WX device. This device provides iOS and other Wi-Fi-enabled devices the ability to access XM WX data from a Baron XM WX receiver. Please consult the Mobile Link documentation to learn how to setup and connect the device.

The Mobile Link firmware 2.0 or higher allows data access to up to 4 devices at a time. ForeFlight Mobile attempts to get data access whenever it is launched and again any time data is requested by the user. ForeFlight Mobile will release its access when the app is closed via the physical home button.

If a device has gained access to the data and does not release it properly, the Mobile Link will automatically release the access for that device after 60 seconds.

The Mobile Link status view in ForeFlight Mobile will state whether data access has been obtained, see the "Status information" section below for more information.

Connecting multiple copies of ForeFlight Mobile to a Mobile Link Wi-Fi connection simultaneously should be avoided as they will fight for access.

DATA ACCESS IN FOREFLIGHT MOBILE

ForeFlight Mobile will automatically pull data from the Mobile Link when a connection is detected. When connected to the Mobile Link, the application will generally not use an available 3G connection for data or chart gathering.

These are the supported data items when using XM WX in ForeFlight Mobile:

- ❖ Radar - for any subscribed region, shown on Maps
- ❖ Satellite - for any subscribed region, shown on Maps
- ❖ METARs and METAR-derived data shown on Maps, such as temperature
- ❖ TAFs
- ❖ Winds Aloft
- ❖ TFRs on Maps
- ❖ PIREPs on Maps
- ❖ AIRMETs/SIGMETs on Maps

- ❖ Lightning on Maps (requires Mobile Link firmware version 2.0 or higher)

Data is accessed just as it is when on the ground using an Internet connection. There is no user-configuration required beyond ensuring the Wi-Fi connection to the Mobile Link is properly established.

STATUS INFORMATION

To learn the status of the Mobile Link connection, subscription, data availability and more, please use the Devices view as described above. When connected to the Mobile Link Wi-Fi access point, Mobile Link will be an option shown in the Devices view. Tap it to see full status information. This info is extremely helpful if problems appear.

Runway Proximity Advisor

ForeFlight Mobile has a visual and audio alert system that triggers when you taxi near or onto a runway. This system uses GPS and geographic runway safety areas to alert pilots as they approach or enter a runway environment. This feature does *not* require a Pro subscription - the standard plan includes this advisor.

The system runs automatically in the background, regardless of which part of the app is currently visible. ForeFlight Mobile must be running and visible on the iPad screen for the system to function. Essentially all airports in the USA are supported.

As you near the runway the system will provide an "Approaching" alert. Upon entering the runway itself, the system will provide an "Entered" alert. The system will speak the name of the runway for each alert. If the aircraft is not clearly at one particular end of the runway, the system will alert with both runway end names. For instance, it will say "02-20" instead of just "02".

To receive audio alerts in your headset, use a bluetooth-capable headset and connect it to the iPad. Ensure that the iPad volume is set to an appropriate and safe level.

If you are using a vibration-capable device, like the iPhone, the device will vibrate when audio alerts are given.

See Settings to disable the runway proximity advisor. Alerts are automatically disabled when the aircraft is stopped or traveling faster than 40kts. Note that you may receive an alert on take-off if you cross a different runway early in the take-off roll. Similarly, on landing, you may receive an alert if you cross another runway while rolling out. You will not be alerted about entering your landing runway when landing - you have to *taxi* onto or near a runway to get an alert.



LogTen Integration

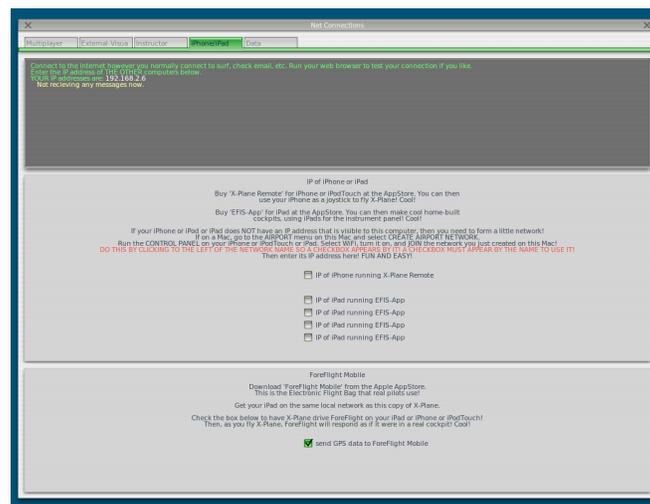
ForeFlight Mobile can export routes or flight plans to the LogTen app, when LogTen is installed. To create a new logbook entry in LogTen based on a route, create the route on the Maps view and tap the Send To... button in the Navigation Log. This will show LogTen as one option. Tap that to open LogTen and create a new log entry.

Logbook entries can also be created from the File & Brief view, once LogTen is installed on the iPad. Run ForeFlight Mobile, go to File & Brief and select the plan to export. Tap the blue LogTen button below the flight plan details list on the right to open LogTen with a new logbook entry.

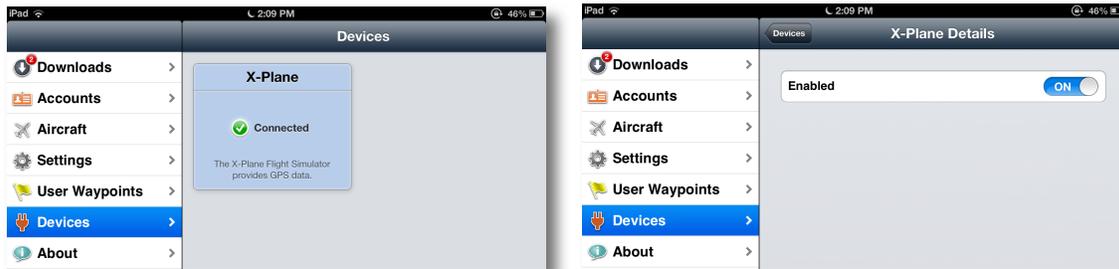
Flight Simulator Integration

X-PLANE

ForeFlight Mobile can receive GPS input from the X-Plane flight simulator over a WiFi network. This requires X-Plane v10.11 or newer on any supported platform. To enable this feature in X-Plane, bring up the **Settings > Net Connections** menu. Change to the iPhone/iPad tab and check the box in the ForeFlight Mobile section.



To enable this feature in ForeFlight Mobile, first make sure both your iPad and X-Plane machine are connected to the same local network. Then, run X-Plane and enable support for ForeFlight Mobile in X-Plane. Run ForeFlight Mobile on the iPad and go to the **More > Devices** view. Tap X-Plane and set the Enabled option to *ON*.



PREPAR3D/FLIGHT SIMULATOR X

ForeFlight Mobile can receive GPS input from the Prepar3D or Flight Simulator X flight simulators over a WiFi network when the FSXFlight plug-in is installed on the flight simulator computer. For more information and instructions visit www.fsxfight.com.

Pilots who prefer a wired option can use the Cygnus Home Direct. For more information, visit www.kingschools.com/pilot-supplies/flight-simulator/iPad-connection-wired

REDBIRD

ForeFlight Mobile can receive GPS input from a Redbird simulator via the Cygnus Pro Wireless connection. For more information visit www.kingschools.com/pilot-supplies/flight-simulator/iPad-connection-bluetooth

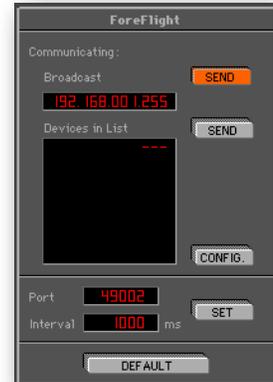
ELITE

ELITE 8.6 (Core, Premium, PCATD, BATD or AATD) can send GPS input to ForeFlight Mobile using the ELITE “Sim to App” iPad Connection Software, available for purchase at www.flyelite.com/shop/sim-to-app-2/

After installing the add-in, follow the included instructions to activate the connectivity with ForeFlight Mobile. NOTE: on the ELITE iPad Configuration screen in the ForeFlight box, press the “SEND” button corresponding either with Broadcast (to all iPads on your network) or to specific devices based on IP address.

After activating the ELITE GPS broadcast, open ForeFlight Mobile, go to the **More > Devices** view, tap on the ELITE box and set the Enabled option to ON.

Verify that the iPad or iPhone is receiving GPS data from the ELITE simulator by displaying the Accuracy instrument on the HUD on the Maps page:



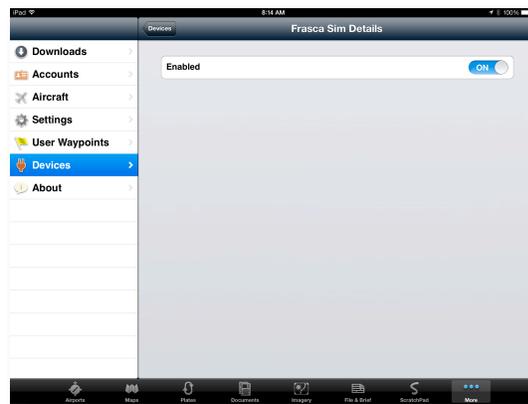
FRASCA

Frasca simulators (www.frasca.com) can provide location information to ForeFlight Mobile using the Frasca Upgrade kit, which includes both WiFi and Bluetooth interfaces, as well as the Frasca NorthStar software that provides the simulated GPS position.



The WiFi interface is provided via a wireless router connected to the Frasca FSTD PC, and the Bluetooth interface is provided by a DUAL XGPS160 connected to the FSTD PC by USB cable.

After activating the desired interface and NorthStar software, open ForeFlight Mobile, go to the **More** > **Devices** view, tap on the **Frasca Sim** box and set the Enabled option to **ON**.



For information about purchase and installation of the upgrade kit in a Frasca simulator, please contact Frasca's Customer Service Department at (217) 344-9200 or support@frasca.com.



Sharing Flights

To share a flight on Twitter or via Email, create a route in Maps. Bring up the Nav Log, if it is not already showing, and tap the Send to... button. Then tap either "Twitter" or "Email". Note that Twitter will not be an available option until you configure your twitter account in the main iPad Settings app. Twitter is also only available on iOS 5 and higher.

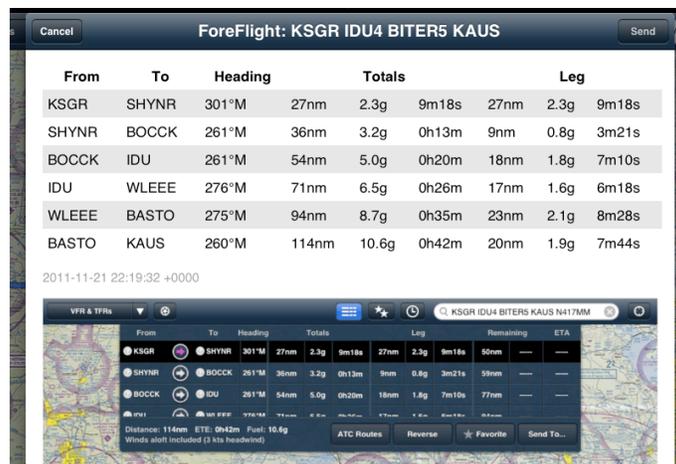
TWITTER

Tapping the Twitter option will present a window similar to that shown below. Edit the text as desired and press Send to create the tweet.



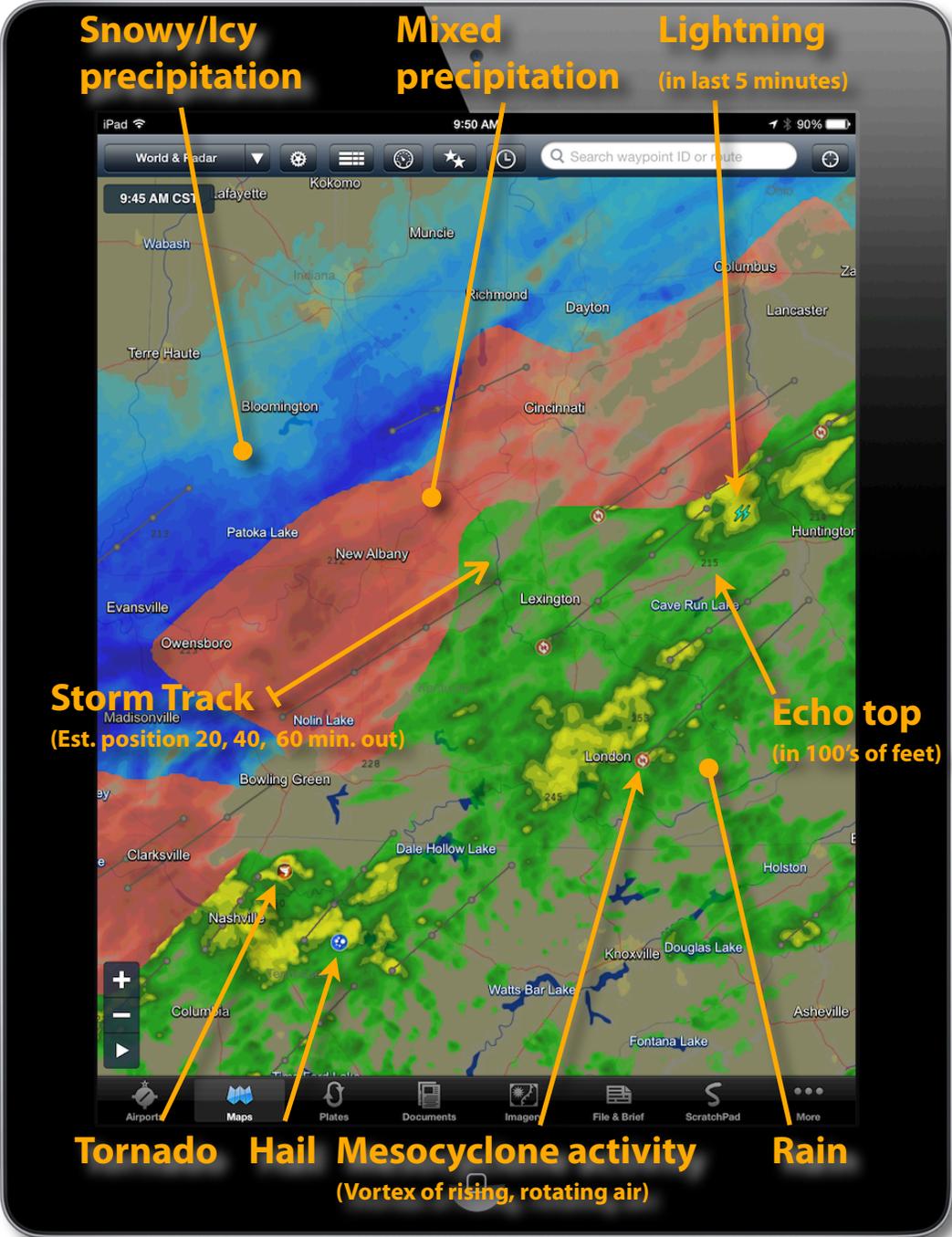
EMAIL

Tapping the email option will show a view like that seen below. Provide the email address of the recipient and tap Send. Note that the email will include a link that other ForeFlight Customers can tap to open the route on their own iPad or iPhone.



Miscellany

RADAR LEGENDS (WHEN FROM INTERNET)



Radar symbol legend

	Icing PIREP
	Turbulence PIREP
	General PIREP

PIREP legend

Learning More

To learn even more about ForeFlight Mobile, please visit our website for frequently asked questions (FAQs) and video tutorials.

FAQs: www.foreflight.com/support

Videos: vimeo.com/foreflight/videos

To help us at ForeFlight learn more about how you fly, please send any and all feedback on our applications to team@foreflight.com - we read and respond to each note we receive. We also get a kick out of hearing your flying stories, so please do share!

Pilot's Guide Change History

For v5.6. NOTE: REQUIRES iOS 6 or LATER

- ❖ Added the option of [filing an ICAO flight plan](#); the option of filing a US Domestic flight plan using the FAA form is still available.
- ❖ Updated [Aircraft configuration](#) to include information required to file an ICAO flight plan.
- ❖ [New Plan Format](#) setting allows you to choose the default flight plan type: FAA/Domestic, ICAO, and "Same as Last Filed." Flight plan type can be changed on File & Brief while you are creating the plan.
- ❖ Changed "Disable Ownship" to "[Enable Ownship](#)" and added an option for Ownship location to automatically be shown on the airport diagram when traveling at 40 knots or slower.
- ❖ Updated [PDF document importing](#) instructions to reflect iOS 7.

For v5.5.2

- ❖ [Animated ADS-B Radar](#). When using a Stratus 1 or 2 ADS-B receiver and displaying Radar, tap the "Play" button to animate the radar image. As soon as more than 1 frame has been received, the radar will be able to animate.
- ❖ Added [Zoom to Route](#) button to Maps page; tap this button to automatically zoom out or in to show the entire route on the screen.

For v5.5

- ❖ Added [Mexico and Caribbean IFR Low and High FAA charts](#). These charts are [Flight Bag Tiles](#)-enabled, so Chart Legends and edges can be displayed, and tapping on the chart brings the "behind" layer forward.
- ❖ Added [US IFR Planning](#) charts (covering contiguous 48 states), as well as [US IFR Ocean](#) charts (covering the East coast + Atlantic and West coast + Pacific ocean areas). These charts are [Flight Bag Tiles](#)-enabled, so Chart Legends and edges can be displayed, and tapping on the chart brings the "behind" layer forward.
- ❖ Added explanation of the colors shown on Map [weather overlays](#).
- ❖ Updated Dropbox [document syncing](#) by adding [Smart Binder](#) (requires Pro subscription). The Smart Binder automatically synchronizes

document files saved in the /Apps/ForeFlight folder in a connected Dropbox account to a Document binder in ForeFlight Mobile.

- ❖ Clarified meaning of “Filter Traffic” setting by changing the name to “[Hide Distant Traffic](#)”. Also discussed in the [ADS-B Traffic](#) section.
- ❖ Updated [Radar Legends](#) to show current reddish color of Mixed (rain/snow) precipitation.

For v5.4.2

- ❖ [Cockpit Sharing](#) allows you to share a route with another iPad or iPhone running ForeFlight Mobile on the same WiFi network, such as when both devices are connected to a Stratus ADS-B receiver.
- ❖ [Improved user interface](#) in the NavLog Edit mode when tapping on a colored waypoint oval.
- ❖ The [number of ADS-B towers](#) being received via a Stratus ADS-B receiver are now shown on the Maps page, and you can also [display the location of the ADS-B towers](#) on the map.
- ❖ Added a visual [traffic alert](#) pop-up which displays when traffic is detected close-by while using a Stratus ADS-B receiver. Traffic alerts are **ADVISORY** in nature and are **NOT** a replacement for “See & Avoid” or ATC traffic advisories.
- ❖ [Delete Documents](#) from memory and the Download list by tapping “Edit”, then the “X” button next to the document. You can also still swipe-delete the document title from the Catalog to remove it from all binders and the Download list.
- ❖ Wind information is now shown in [Traffic Pattern Advisor](#) (under the Procedures button on the Maps page) and in the [Runway Wind Advisor](#) on the Airports page.
- ❖ Added [Nearest Navaid](#) instrument to HUD.
- ❖ Added [airport flight tracking](#) on the Airports page under the More tab.
- ❖ Detailed how to select the [transparent background fill color](#) for Plate or PDF Annotations.
- ❖ Added information about receiving simulated location information from [Frasca flight simulators](#).

For v5.4.1

- ❖ Plate and PDF document [Annotations](#) allow you to draw on or otherwise annotate approach plates, SIDs, STARs, Airport diagrams and PDF documents.
- ❖ Updated geo-referenced plate and taxiway diagram [images](#).
- ❖ New “Clear” button (instead of “X”) [to clear route](#) in the [NavLog](#).
- ❖ Improved user-interface in the [touch-planning](#) and Airports/Airspace pop-up windows on the Maps page.
- ❖ Updated user-interface in the [Plate on Maps pop-up menu](#) to allow adjusting of plate transparency and hiding/showing plate annotations.
- ❖ Updated image of PDF Document view to show [Annotation button](#).
- ❖ Added details about how to [display Traffic](#) when using a Stratus 1 or Stratus 2 ADS-B receiver.
- ❖ Added [Search and Rescue](#) (SAR) [map grid overlays](#), [search patterns](#) and direct searching for CAP, GARS and MGRS [Grid waypoints](#), either stand-alone or as part of a route. For more details, see the Search and Rescue Supplement in **Documents > Catalog > ForeFlight**.
- ❖ Added instructions for unhooking old/duplicate devices if you receive a “[Device Limit Exceeded](#)” message when trying to sign-in inside ForeFlight Mobile.

For v5.4

- ❖ Plate and PDF document [Annotations](#) allow you to draw on or otherwise annotate approach plates, SIDs, STARs, Airport diagrams and PDF documents.
- ❖ Updated geo-referenced plate and taxiway diagram [images](#).
- ❖ New “Clear” button (instead of “X”) [to clear route](#) in the [NavLog](#).
- ❖ Improved user-interface in the [touch-planning](#) and Airports/Airspace pop-up windows on the Maps page.
- ❖ Updated user-interface in the [Plate on Maps pop-up menu](#) to allow adjusting of plate transparency and hiding/showing plate annotations.
- ❖ Updated image of PDF Document view to show [Annotation button](#).
- ❖ Added details about how to [display Traffic](#) when using a Stratus 1 or Stratus 2 ADS-B receiver.
- ❖ Added [Search and Rescue](#) (SAR) [map grid overlays](#), [search patterns](#) and direct searching for CAP, GARS and MGRS [Grid waypoints](#), either stand-

alone or as part of a route. For more details, see the Search and Rescue Supplement in **Documents > Catalog > ForeFlight**.

- ❖ Added instructions for unhooking old/duplicate devices if you receive a “[Device Limit Exceeded](#)” message when trying to sign-in inside ForeFlight Mobile.

For v5.3

- ❖ Updated Procedures Save/Unsaved [view](#).
- ❖ Updated [Maps](#) example image.
- ❖ New [Aerial Map](#) showing satellite photo view (requires active internet connection).
- ❖ On the iPad, [NavLog](#) can be set to display Leg, Totals or both.
- ❖ Additional image showing how to quickly access [Distance Rings](#).
- ❖ Added information about [Canada Flight Supplement \(CFS\)](#).
- ❖ Use [Plates and Taxi Diagrams on a Map](#) to display US approach plates or Airport diagrams on the Maps page - requires ForeFlight Mobile Pro subscription.
- ❖ Updates to [HUD Instruments](#): on the iPad the Hide/show button has been relocated to the menu at the top of the screen; iPad HUD now displays 6 instruments in portrait orientation, 8 instruments in landscape (iPhone shows 4 in landscape and 6 in portrait).
- ❖ Added details about [Flight Alerts](#), which send you ATC-issued expected routes for IFR flight plans you file with ForeFlight Mobile.
- ❖ Added [Direct Connection](#) for DUAL XGPS 150 external GPS to get around iOS 6 external GPS issues.

For v5.2

- ❖ Noted “Allow device to sleep” setting logic has changed. Device will now auto-sleep when on Plates view or when downloading data if setting is set to ON (default is OFF)
- ❖ Option for Direct connection of Bad-Elf GPSs to address “No-fix” errors
- ❖ Show how to view Airspace, Restricted area and MOA information on Maps page
- ❖ Search in Documents, create Document Bookmarks with user-defined names

- ❖ Added details about Canadian VNC (and VTA) charts on the Maps page
- ❖ Added details about US Helicopter charts, US Gulf Helicopter VFR and IFR charts on the Maps page
- ❖ Description of new Flight Bag (FB) Tiles feature currently available on Canadian VNCs and US Heli charts
- ❖ Details about the Distance Rings feature on the Maps page
- ❖ New Map Configuration section
- ❖ Screenshots of the Traffic Pattern Advisor, found under the Procedure button on the NavLog Edit view
- ❖ NavLog column display settings
- ❖ Overview of Stratus ADS-B receiver firmware update process
- ❖ Updated Settings list and descriptions
- ❖ Add flight simulator connection information for ELITE

For v5.1

- ❖ Added explanation that when select Track Up, you must be moving for the map to rotate so the track is at the top of the map
- ❖ Plate rotation button and Swipe to change plates (iPad only)
- ❖ Added Runway Winds section
- ❖ New graphic showing Traffic selection in Maps drop-down
- ❖ Track Vector setting and example
- ❖ Route Element color-coding
- ❖ Added details about importing Documents from linked Dropbox account, or from other apps
- ❖ ADS-B Traffic section with examples and settings

For v5.0

- ❖ Updated Map menu section to describe new layers
- ❖ Updated Map configuration to describe new map settings for extended runway centerlines
- ❖ Updated Procedure button section to reflect new ability to add/replace VFR traffic patterns for the destination airport in the route
- ❖ Updated Settings list to include extended centerlines, Hazard Advisor, and auto-show taxi diagram

- ❖ Additional information about deleting documents
- ❖ Additional details about selecting states & charts for download
- ❖ Updated flight simulator connection information for Prepar3D/FS-X and Redbird