Pilot's Guide to
ForeFlight Mobile

ForeFlight, LLC

*19th Edition - Covers **ForeFlight Mobile v5.1 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 http://www.apple.com/ipad/guided-tours/ as well as the iPad User Guide at http://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 on iOS5, run the iPad Settings app 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.

Favorites list   Browse   View Maps   Near-me

Recents   Favorite toggle   Search box

Thumbnail diagram   Menu bar
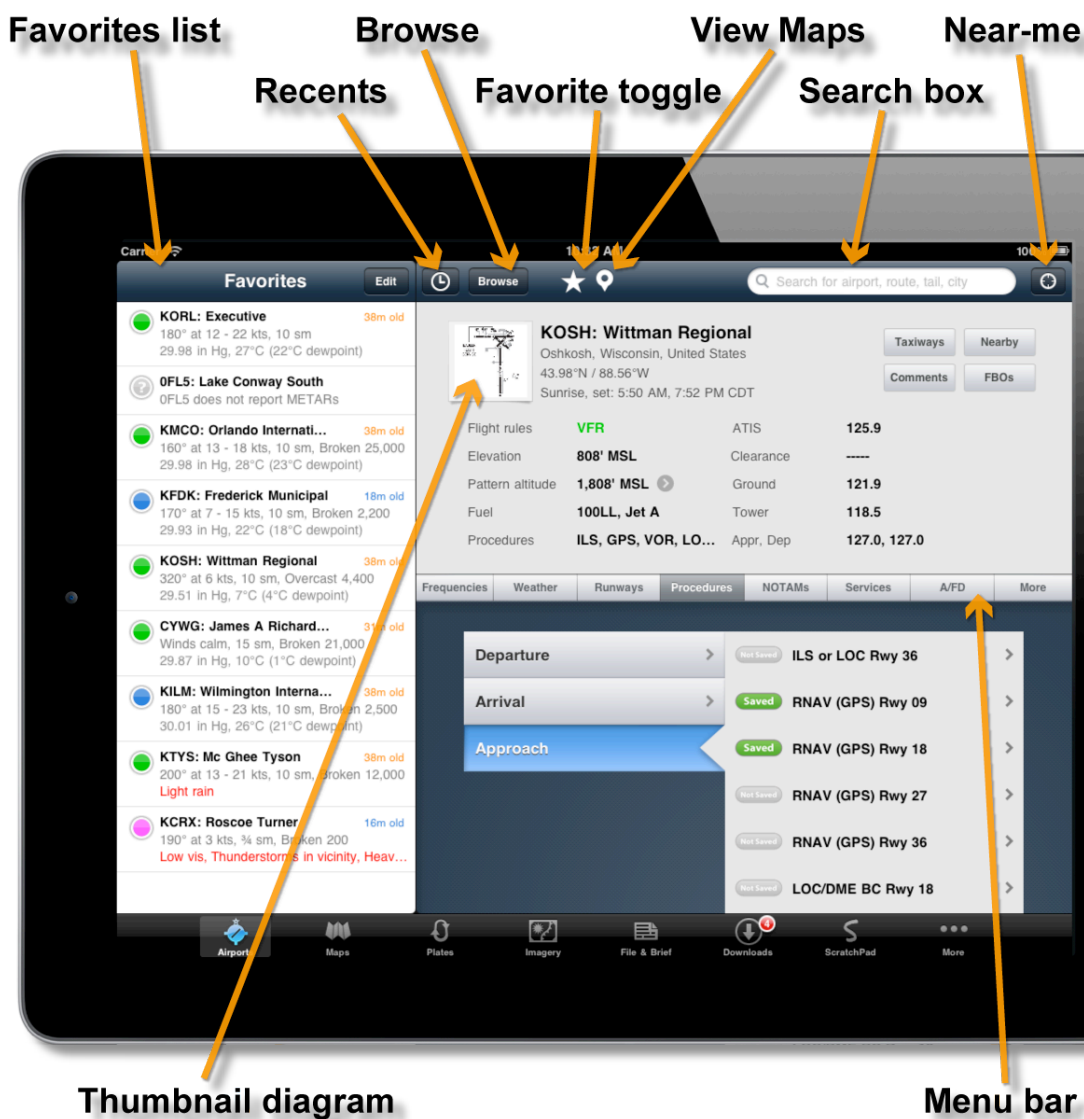
ABOUT THE DESIGN

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.

The most important airport 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 the most frequently used 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.

Q Search for airport, route, tail, city
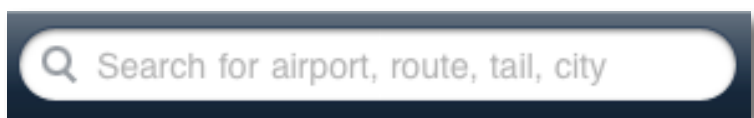
If ForeFlight doesn't find an instant match for the search term used, a list of close matches will appear.

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

✤ **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 Arrivals (STARs), Departures (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:

http://foreflight.com/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* 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.
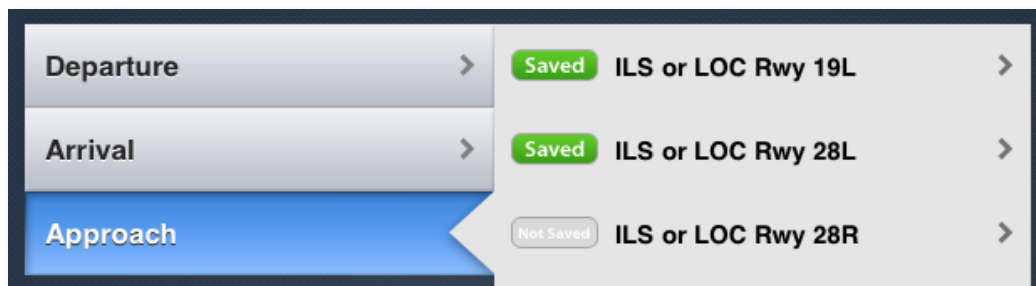
From the **Procedures** tab, touch a procedure's name to display the ForeFlight procedure viewer. The procedure viewer includes buttons for: accessing a list of recently viewed procedures, printing a procedure, adding a procedure to your current Plates binder, and locking the procedure.

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 be sliding pages left or right.

Tap the **Print** button in the upper toolbar to print. An AirPrint capable printer is required. For more information about this requirement, see:

http://support.apple.com/kb/HT4356

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

Note: Procedures are also available from the *Plates* view, discussed later. While the *Plates* view provides a different method of accessing and organizing procedures, the same rules (listed above) about over-the-air vs. downloading apply.

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.

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USING GEO-REFERENCED PROCEDURES

Geo-referencing is an optional feature that requires a ForeFlight Pro subscription. See the *Accounts* view to learn how to purchase or upgrade from "Standard" to "Pro".

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

Only approach plates and taxi diagrams are geo-referenced. When a geo-referenced procedure is displayed, a blue square is drawn around the geo-referenced area. This is the only area in which your aircraft, or "ownship", will be shown. Note that some plates are only drawn to-scale in the center portion - if ownship is shown outside that area it is positioned based on the scale of that center area and must *only* be compared to elements contained within that center area.

Until GPS data senses movement and provides a track over the ground, position is indicated using a small blue dot. Once a track is established,the aircraft icon selected in ForeFlight Mobile settings is shown. Much like the *Maps* view, the aircraft speed, track, etc. is displayed at the bottom of the view. Tap an item in the HUD to change it.

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.

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.

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 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 systems.

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)

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.

Each airport's A/FD entry is available from the A/FD tab - just as you'd see it in the familiar green-covered printed version. If the entry has multiple pages, swipe to the left or right to view each.
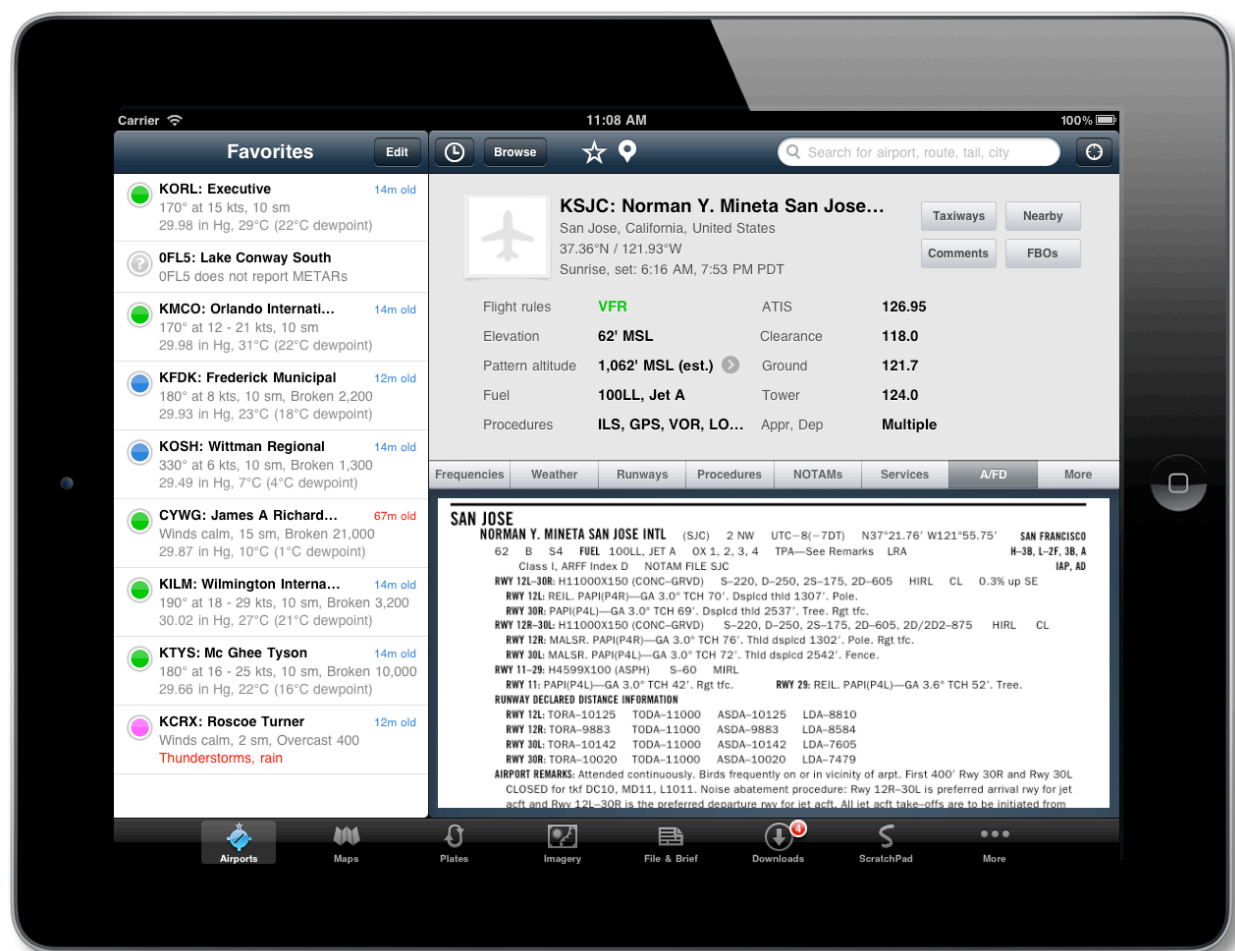
RUNWAY WINDS

Tap on the Runways tab to view the preferred runway based winds reported in the current METAR. 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 current METAR for KPMP reports the Winds are from 020° at 12 knots. This means that the wind on Runway 06 is a headwind from the left: the resulting left crosswind component is 8 knots and the headwind component is 9 knots.

Runway 24 has a tailwind from the right, as indicated by the red arrow in the first column.

Tap on each runway in turn so you can identify the runway with the best winds, or so you can see the expected headwind and crosswind components for the currently active runway.

NOTE: In this image the wind details for Runway 15/33 and 10/28 are all shown for illustration, but when using ForeFlight you only see the winds for the runway you selected.

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.

Changing Maps

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 a 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. This map can only be used when connected to the Internet.

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

✤ **Radar -** composite radar for the US and Canada.   This can be animated by pressing the "play" button in the lower center 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 -** covers North America. This can be animated by pressing the "play" button in the lower center of the map. The satellite map checks for updates every three 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.*

✤ **Traffic** - When connected to a Stratus 1 or Stratus 2 ADS-B receiver, the Traffic option is shown. When selected, ADS-B traffic received by the Stratus is displayed on the map. *Available on iPad 2 or iPhone 4 (or newer).* **TRAFFIC DISPLAY WILL BE LIMITED UNLESS THE 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 Maps -** a variety of weather fields can be displayed across the map, such as temperature, surface winds, PIREPs, and visibility. The weather maps check for updates every five minutes.

✤ **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 - less expensive prices are in green, average in orange, most expensive in red. Colors are assigned based on the region in which the airport sits in order to avoid marking an inexpensive California price as expensive when compared to Texas.

A **configure** button is provided adjacent to the map selection button in the dark blue tool bar. Tap this button to show:

✤ 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).

✤ Filter Traffic switch to hide traffic beyond 15nm radius and +/- 3,500' from your location/altitude (see ADS-B Traffic section).

✤ Route Label switch to enable/disable labels on the Map route lines.

✤ Extended Centerlines switch to enabled/disable extended runway centerlines for airports in the currently shown route.

✤ Track Vector switch to display a projected track vector ahead of your aircraft icon.

✤ Overlay opacity slider to change how visible the colors are for radar, satellite, and other overlays.

✤ Quick access to external device status info.

The radar, satellite, and weather maps require an Internet, ADS-B, or XM WX 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.

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

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.

❖ **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.
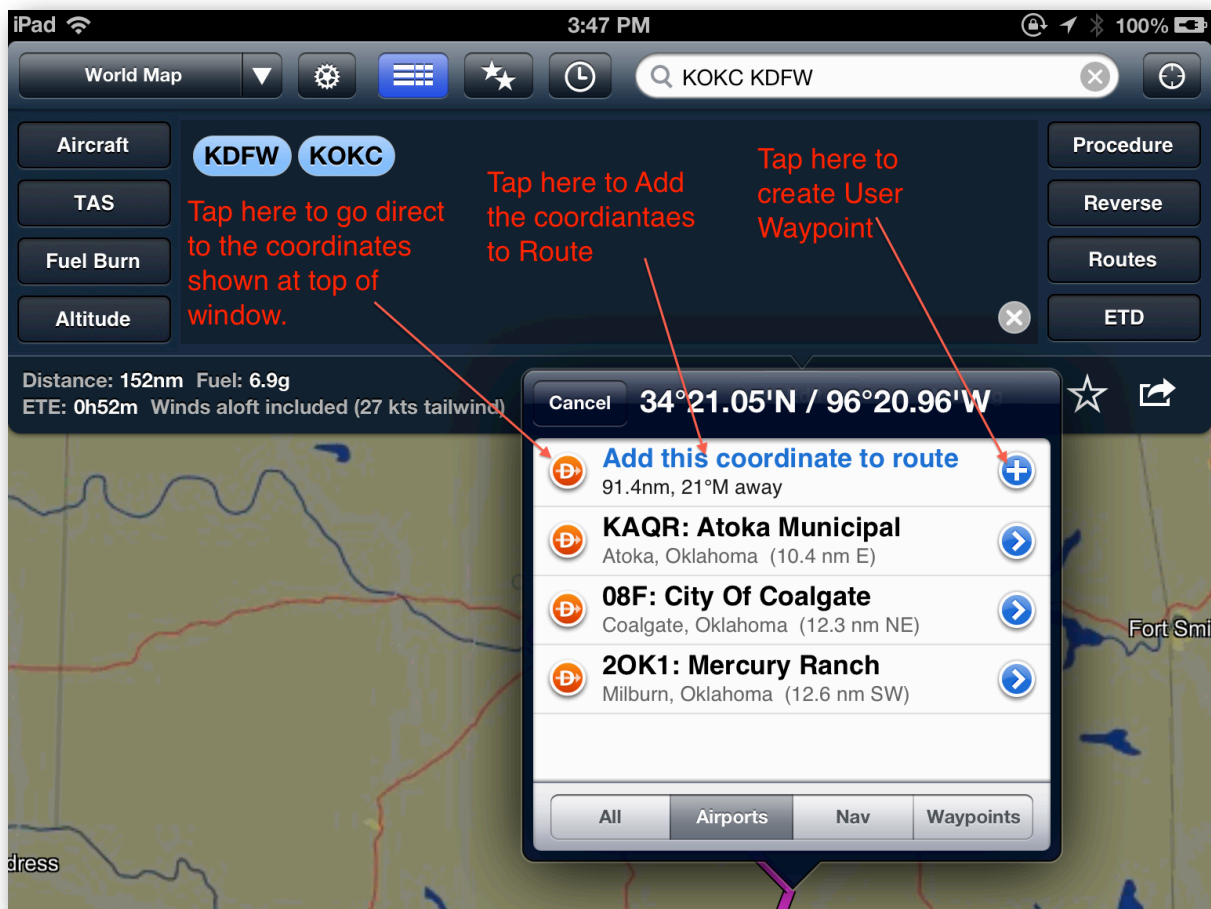
Lastly, you can also indicate a departure time in your route search; ForeFlight will use this time to incorporate the proper winds aloft forecasts into your time and fuel usage calculations. If you don't provide a time, ForeFlight Mobile assumes you are departing ASAP. You can include the departure time 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 X button.
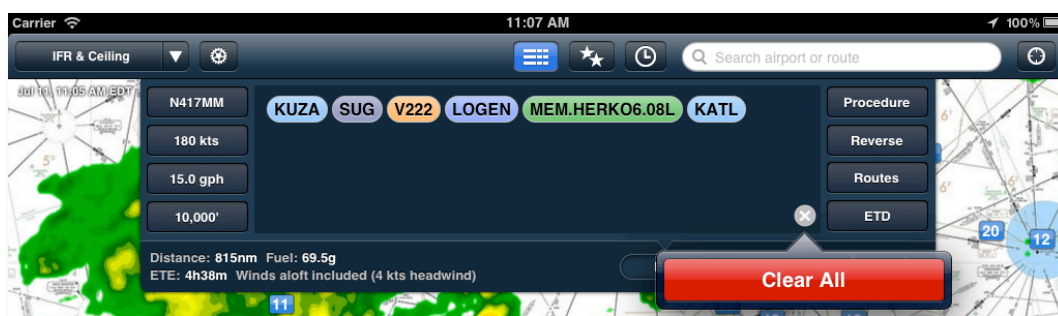
PLANNING A FLIGHT USING TOUCH

You can also create or edit a route using a single finger with ForeFlight Mobile's "Touch Planning". Touch planning is based on tap-and-hold gestures: 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:** Tap-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: Tap-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: Tap-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.

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.

Tap the orange button to the left of a waypoint to make a new route direct-to that waypoint from present position.

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

To learn more about airspaces on the Maps, simply tap and hold on them. The view will pop-up with airspace info shown (only in the *All* filter mode).
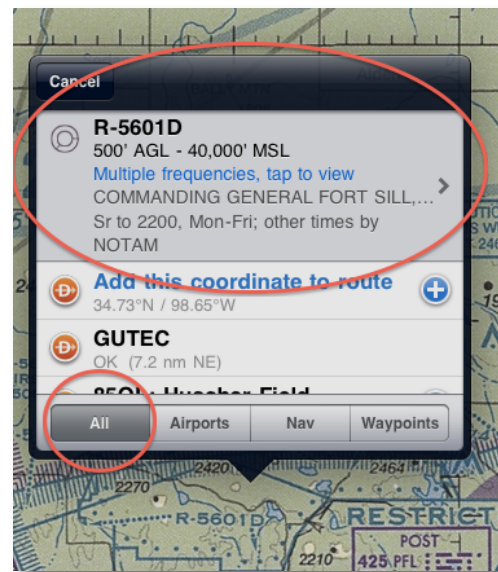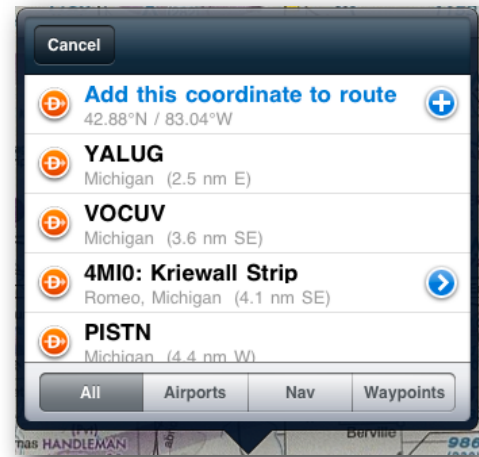
ROUTE LINE

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 nav aid. 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 ⊕ icon to create and name the waypoint, which you'll be able to use in future routes.

User Waypoints may also be added in bulk from KML or CSV files.   See the ForeFlight website for more details.

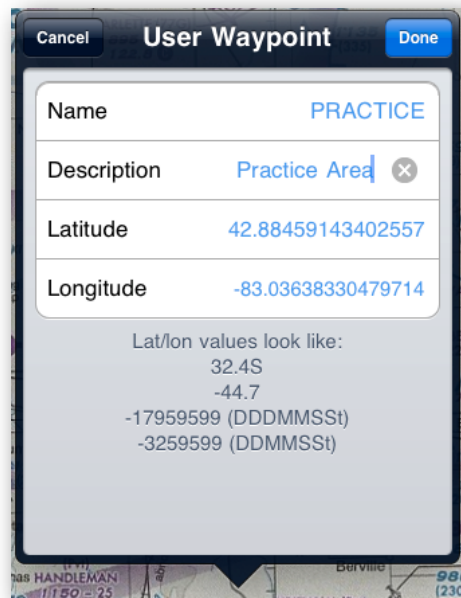✣ **Name:** Create a recognizable name for the waypoint. Names must be one word with no spaces and must contain at least one letter. Once a waypoint has been named, you'll be able to reference it while creating routes just as you would any other waypoint.

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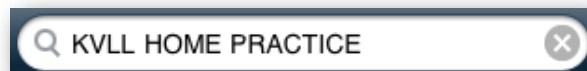
Tap the **Done** button to finish creating the user waypoint. Once the waypoint is created, it functions just as any other waypoint in ForeFlight Mobile.

To **delete** a user waypoint, use the swipe-to-delete gesture.

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 nav aid 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.

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

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.)

❖ "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.

❖ "Clipboard" will copy the flight plan to the iPad internal clipboard to allow "pasting" in another application.

Edit View

The edit view allows for easy creation and editing of routes. 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.
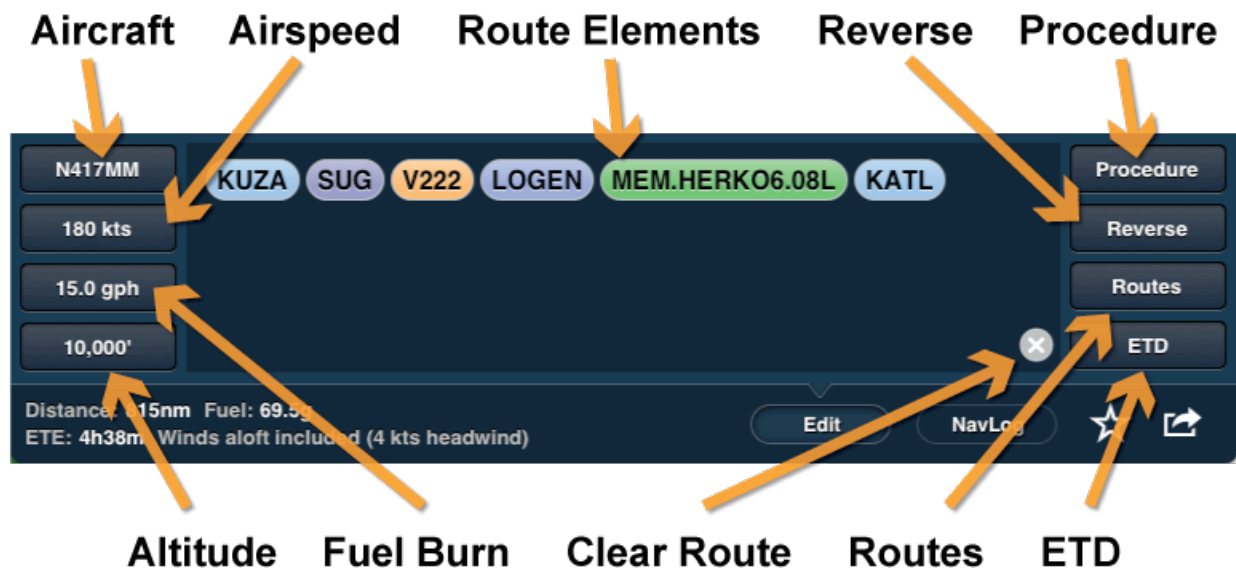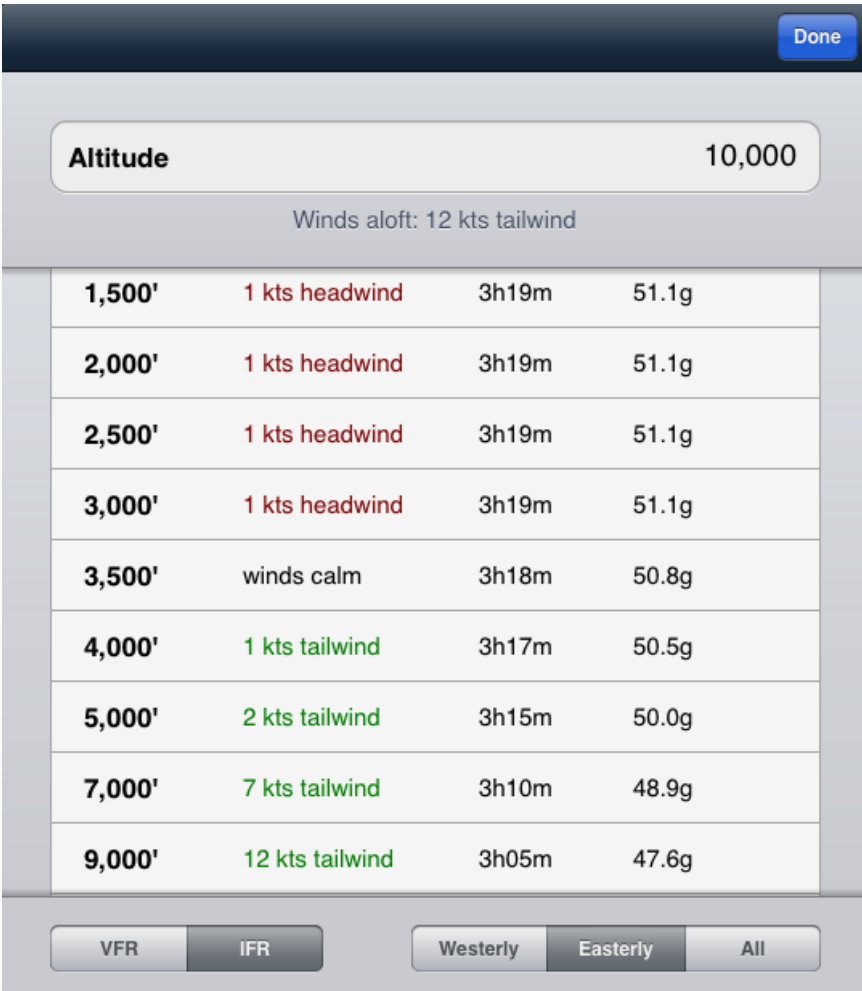
The Route Elements are color-coded for easier identification:

Airport	KIAD	Airway (J or V)	J53	VOR	PSK
SID/STAR	01L.RNLDI2.LDN	Waypoint	DANBI	NDB	TEC
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 will show the Altitude Advisor™ that includes the 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.

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.

VFR traffic patterns are only available 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). After selecting a runway the available pattern entry options are displayed, such as crossing midfield or performing a straight-in. For non-towered airports the entries are filtered 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.

The Reverse button will reverse the current route.

The Routes button will display the Route Advisor™ that 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.
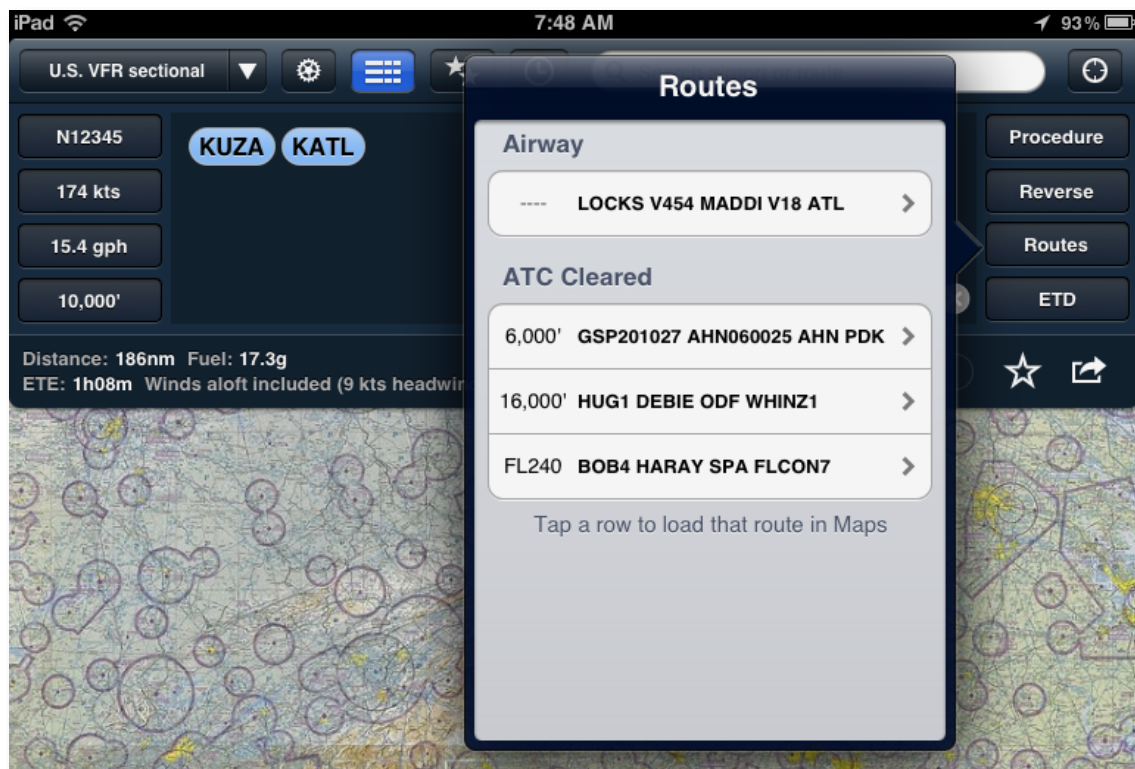
The Clear Route button can be used to remove all route entries. A confirmation button will be shown when the X button is tapped.

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 you 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.
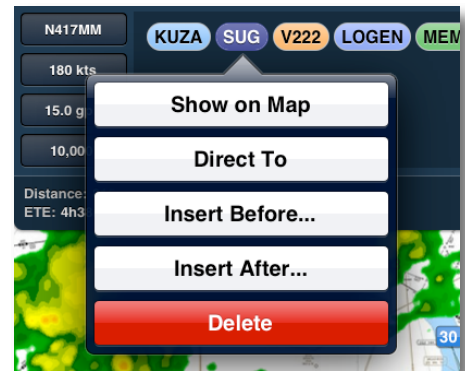
NavLog View

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:

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	→	○ MEM	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 you 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 your 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.

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. Your route will remain active, but the searched-for item will be highlighted on the screen with an animated icon.   You can explore that waypoint (such as viewing an airport's details in a popover view) without affecting your active route, and you can also add it to your route as you would any other location on the map.

ENGAGING THE MOVING MAP

The map view determines your location and displays it on the maps. When you are not in motion, your current location is shown as a blue dot. When you are in motion, your current location is shown as an aircraft. You can select your aircraft icon in the **More > Settings** view. If you have trouble seeing your location on the maps, please review the GPS tips on our web site at http://www.foreflight.com/support/gps

The map can be set to automatically scroll to keep your current location focused 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.
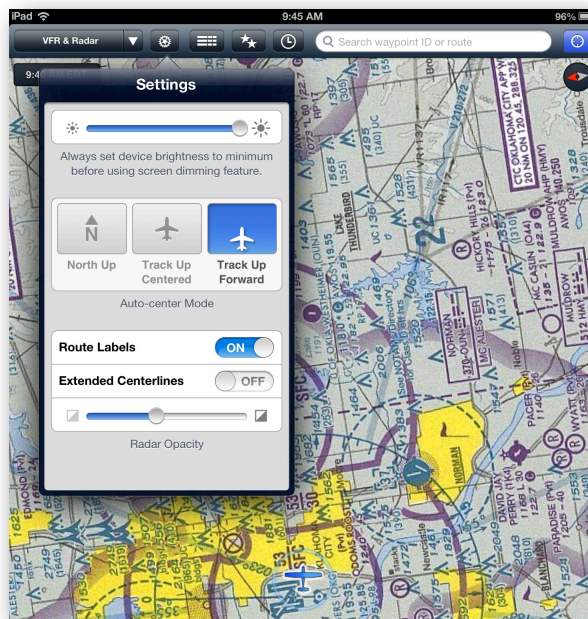
Track Up

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 you select Track-up while stationary, the map will not rotate. Once you start moving, the map will rotate so your 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 use an external GPS receiver (http://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.

The track vector bends in the direction of any change in your track.

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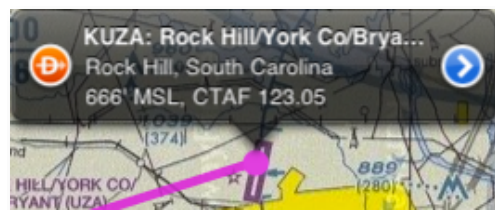
This removes all waypoints in the route prior to the selected waypoint and adds a new direct-to leg from present position to the selected waypoint.

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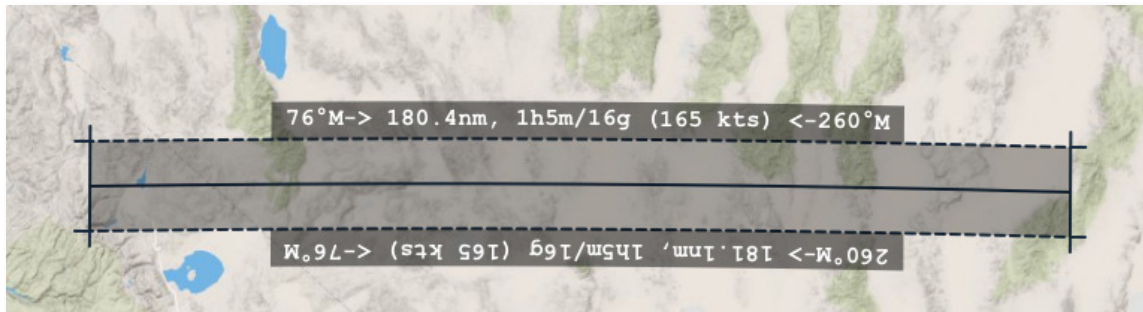
When using the ruler in flight, the current groundspeed will be used to show the time of travel for the distance measured.   When not in flight, the TAS from your current route or default aircraft will be used instead.

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

When a position fix is available, the data fields in the Heads Up Display (HUD) at the bottom of the map updates 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).

Each of the four default instruments displayed on the HUD can be replaced with an instrument of your choice. To replace an instrument, tap an instrument and select 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.

Hide the HUD by tapping the downward arrow button in the center of the HUD. Tap again to restore the HUD.
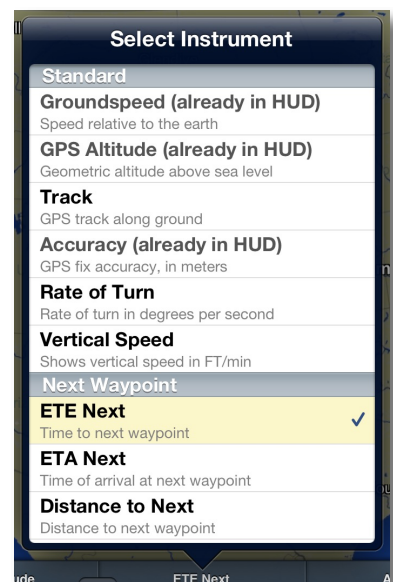
The following instruments are available:

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	Closest Airport		

NOTE: Closest Airport shows the Cardinal position to the closest airport **in the route** that you currently have in the NavLog.

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 gray X button in the Route Entry area bar in the upper overlay view of the *Maps* view.   If the upper overlay view is not showing, tap the 3-bar button to reveal it. That button is shown as bright blue in top-middle of this screenshot:
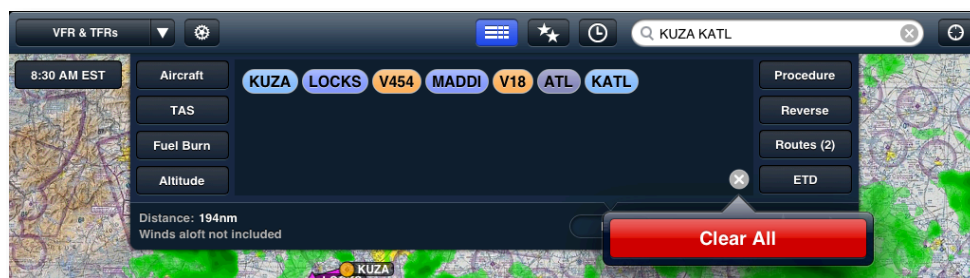
Plates

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.
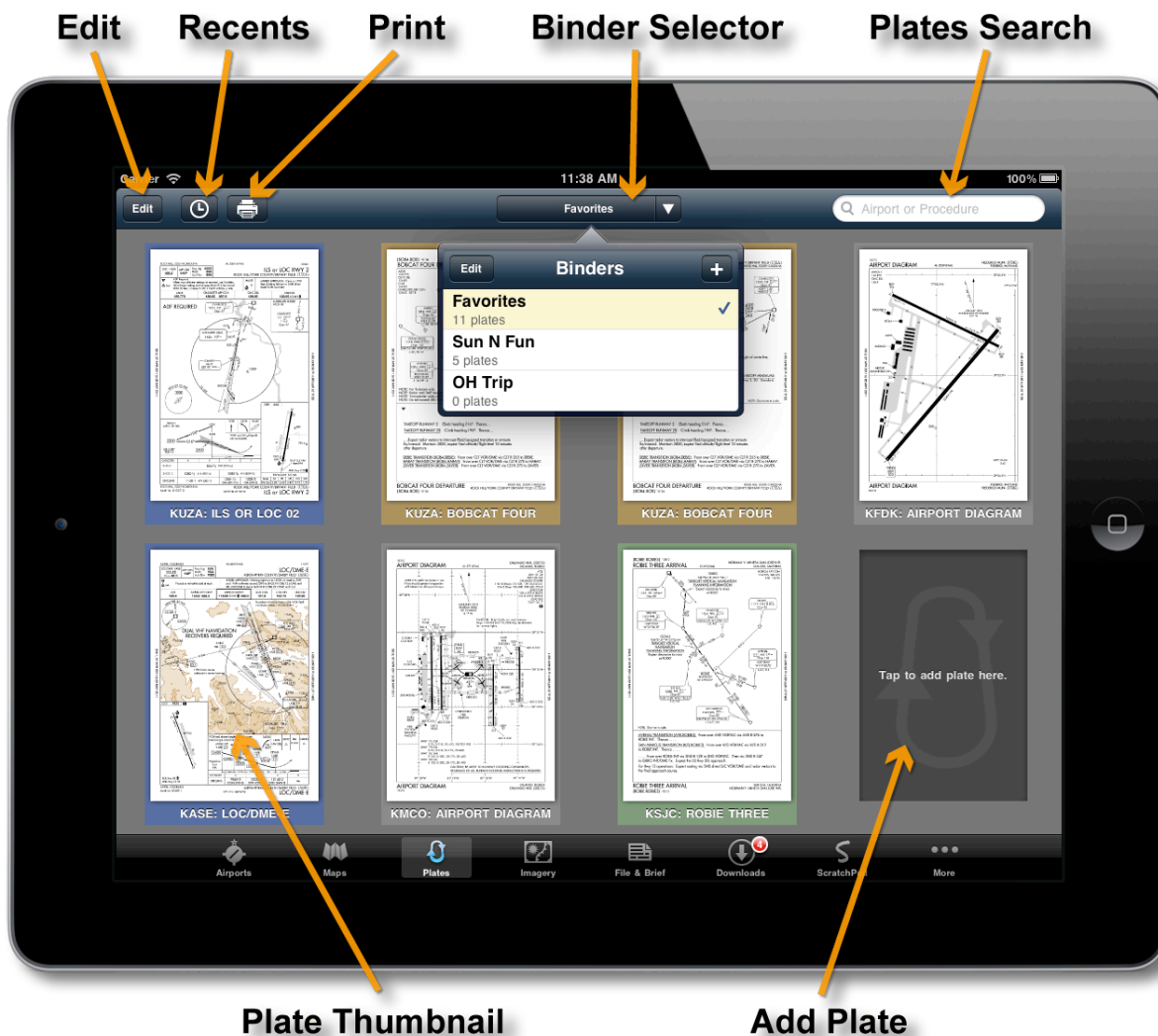
ABOUT PLATE BINDERS

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.
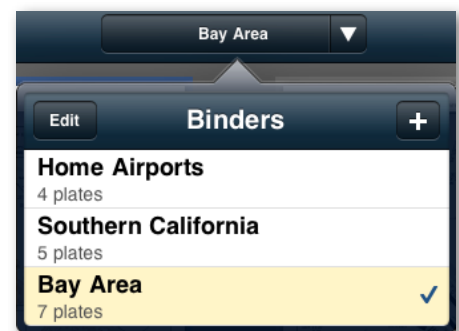
MANAGING PLATES

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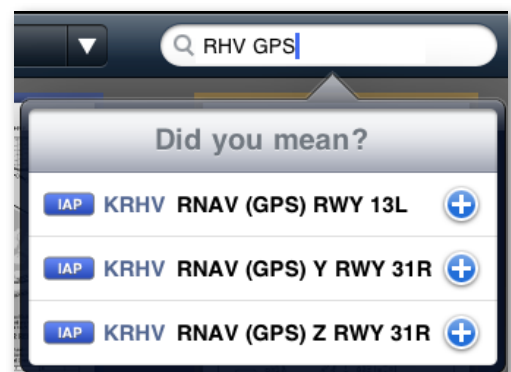
❖ **MDW ILS 13**- Displays the ILS Rwy 13C approach to MDW airport in the procedure viewer.

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 a 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. Tapping the print button while in the procedure viewer sends only the currently displayed plate to the printer.

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

http://www.apple.com/ipad/features/airprint.html

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.

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.
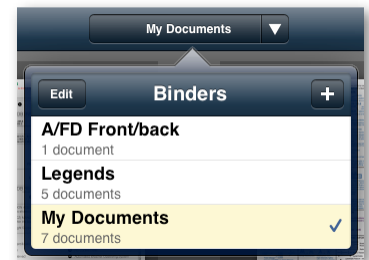
ADDING DOCUMENTS FROM A CATALOG

The Catalog view lets you add documents to your binder from the FAA, NAV CANADA, or ForeFlight catalogs. If you have ForeFlight Mobile Pro, you can also add documents from your Dropbox account after you link it to your ForeFlight account at http://www.foreflight.com/manage. 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.

IMPORTING YOUR DOCUMENTS INTO A BINDER

You can import PDF, JPG, TIF, PNG, and GIF files into your document binders using a linked Dropbox account (requires ForeFlight Mobile Pro subscription) or iTunes.

❖ **Importing from linked Dropbox account** - once you have linked your ForeFlight account to your Dropbox account by signing in at http://www.foreflight.com/manage and clicking on Documents, any files that you place in the /Dropbox/Apps/ForeFlight folder on your computer are made available for download in the Documents Catalog under the category title you set when you linked your accounts.

❖ **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, view the document then tap the arrow-in-the-square button ⬆️ in the upper-right corner.

If you don't see "Open in ForeFlight", swipe to the 2nd page of icons, then tap on ForeFlight. This will launch ForeFlight Mobile, add the document to the end of your current binder, and open the document for viewing.

The process is similar for Safari or Dropbox: open the PDF document, then tap the arrow-in-the-square button (top right), and select "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 to change pages.

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 and these overlays will disappear.

	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.
	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.
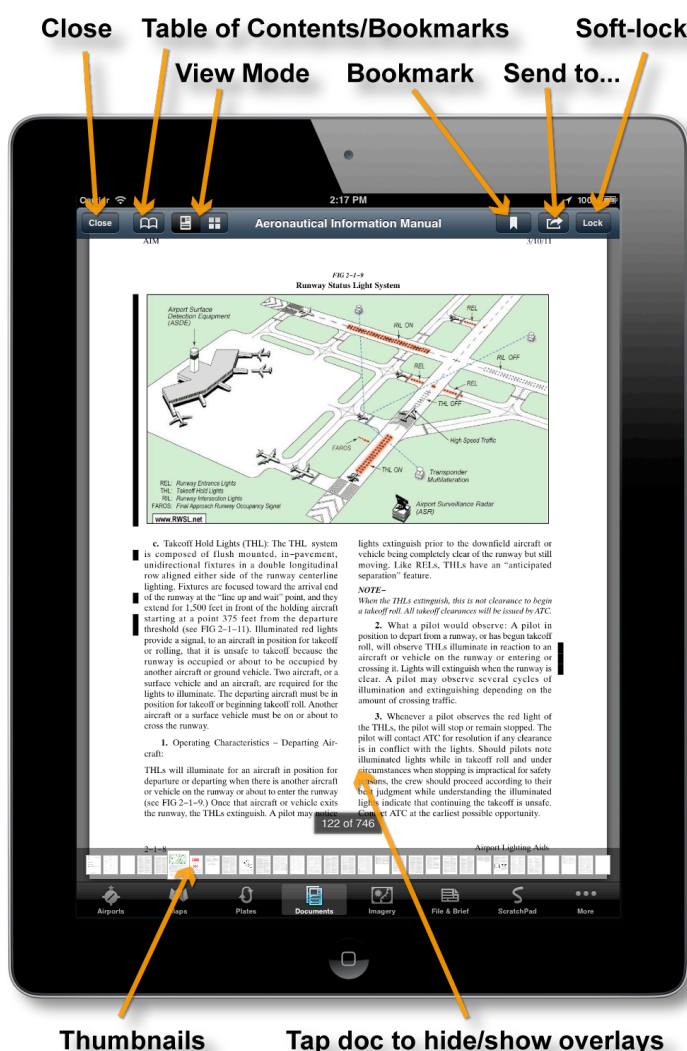
MANAGING DOCUMENTS IN A BINDER

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. Note that removing a document from a binder does not delete it from your iPad (see below for information on how to permanently delete a document).

DELETING DOCUMENTS FROM YOUR IPAD

To permanently delete a document from your iPad, including from the Download list, the document **must** be in a binder on the Documents page. If the document is in the Download list but not in a binder, you must first open the Catalog, find the document and tap on it to save it to the binder.

To delete a document, open up the Catalog view and locate the document you wish to delete.

Swipe your finger from left-to-right on the name of the document and a red **Delete** button will appear on the right.

Tap the **Delete** button to delete the document. This will delete the document from all binders, remove the file from your iPad and will also remove the document from the Downloads list, so you will not receive any updates to that Document unless you download it again.
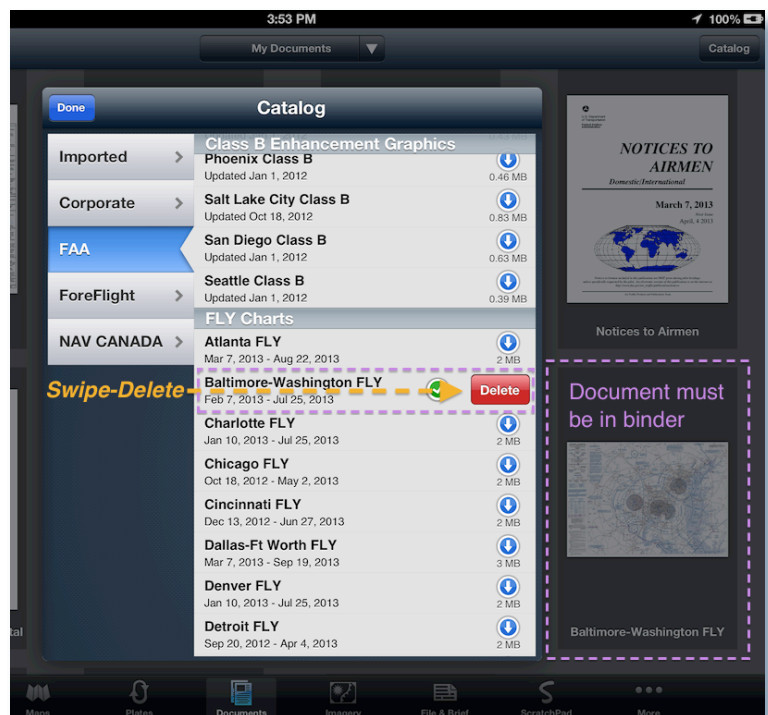
ENSURING YOUR DOCUMENTS DON'T EXPIRE

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.

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.

Collections list   **Favorites button**   **Thumbnails**

Collection type selector
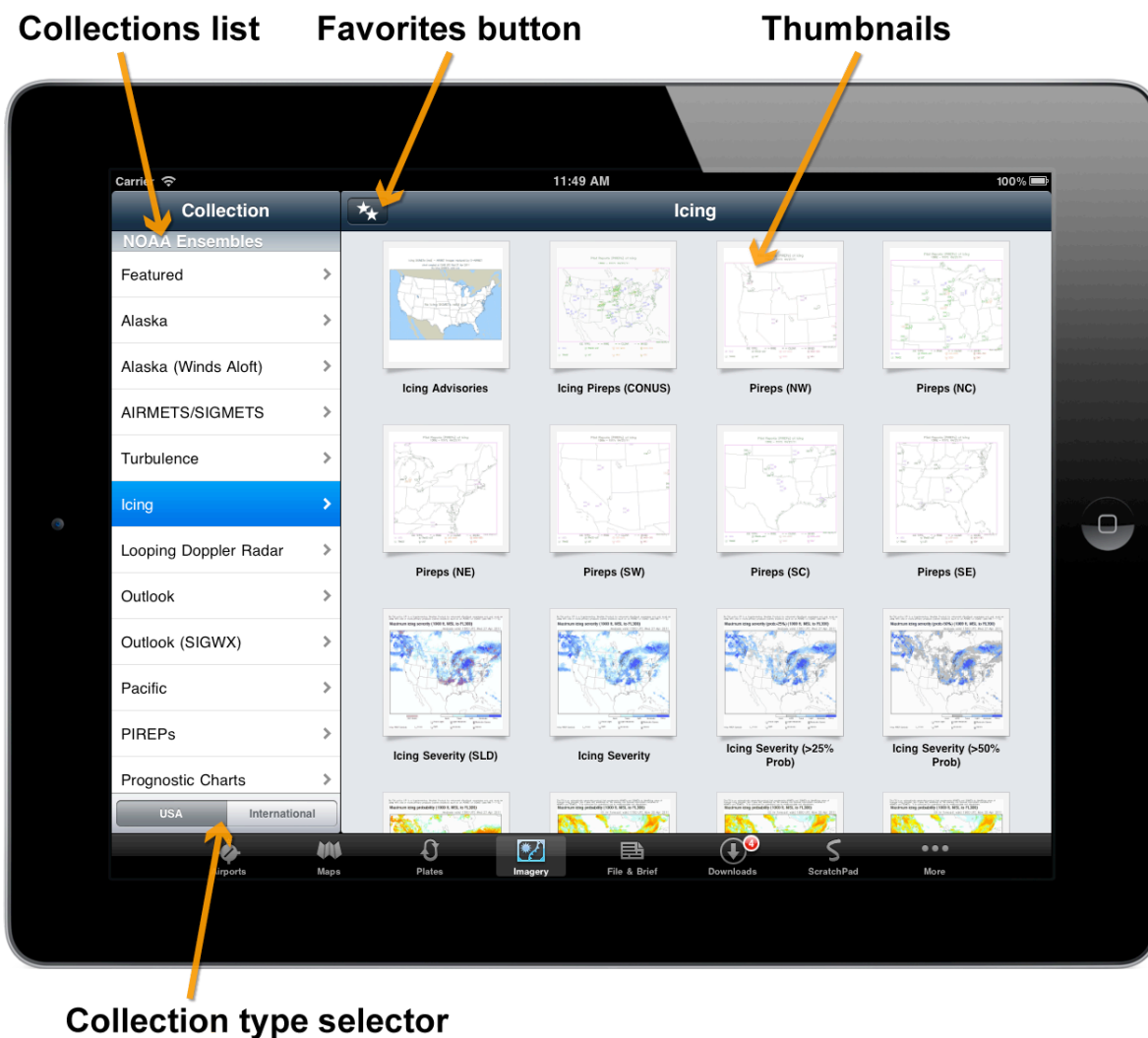
SELECTING A COLLECTION

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.

Flight plans list   **Aircraft selector**   **New Flight Plan**

Sort selector   **Copy**   **Maps**   **Brief**   **File**

CREATING A NEW FLIGHT PLAN

Flight plans can be created in three ways: New, Copy, or from a route created in the *Maps* view.

New: To create a new flight plan form from scratch, tap the New Flight Plan button at the top right. 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 fill in all details based on the selected plan with an updated departure time; any fields can be changed as needed.

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 **File & Brief** button on the Navigation Log. The flight plan form will be filled in according to the route details and last-filed values as in a new plan.

FILLING OUT A 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.

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 *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.
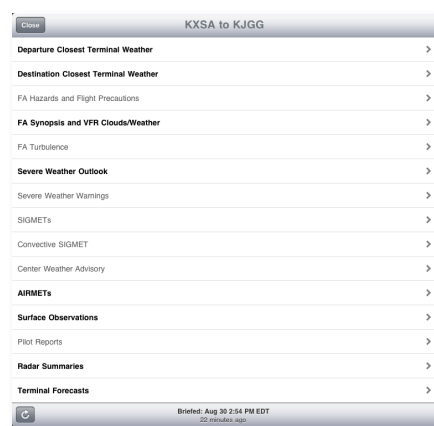
Filing your Flight Plan

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, ForeFlight will file for you using ours. 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.

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.

Note: Once a flight plan has been filed, it cannot be cancelled or closed using ForeFlight Mobile. However, if you have entered your own DUATS sign-in credentials in ForeFlight Mobile AND the flight departs in more than 2 hours, you can cancel the flight plan at the DUATS website http://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.

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.

Notes area   **Mode selector**   **Clear** **Settings**
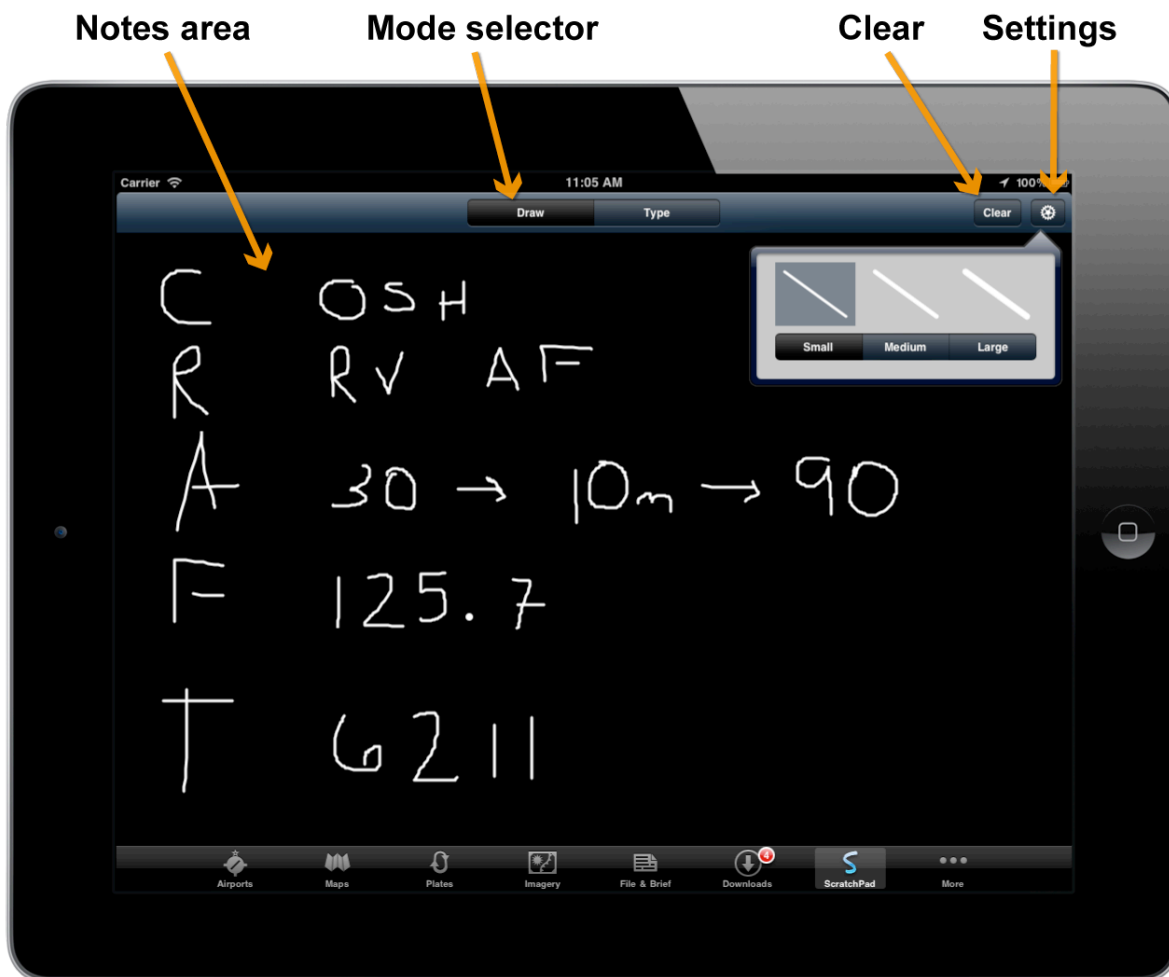
MAKING NOTES

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.

Settings   Downloaded data

Downloads list   Command buttons   Pending download
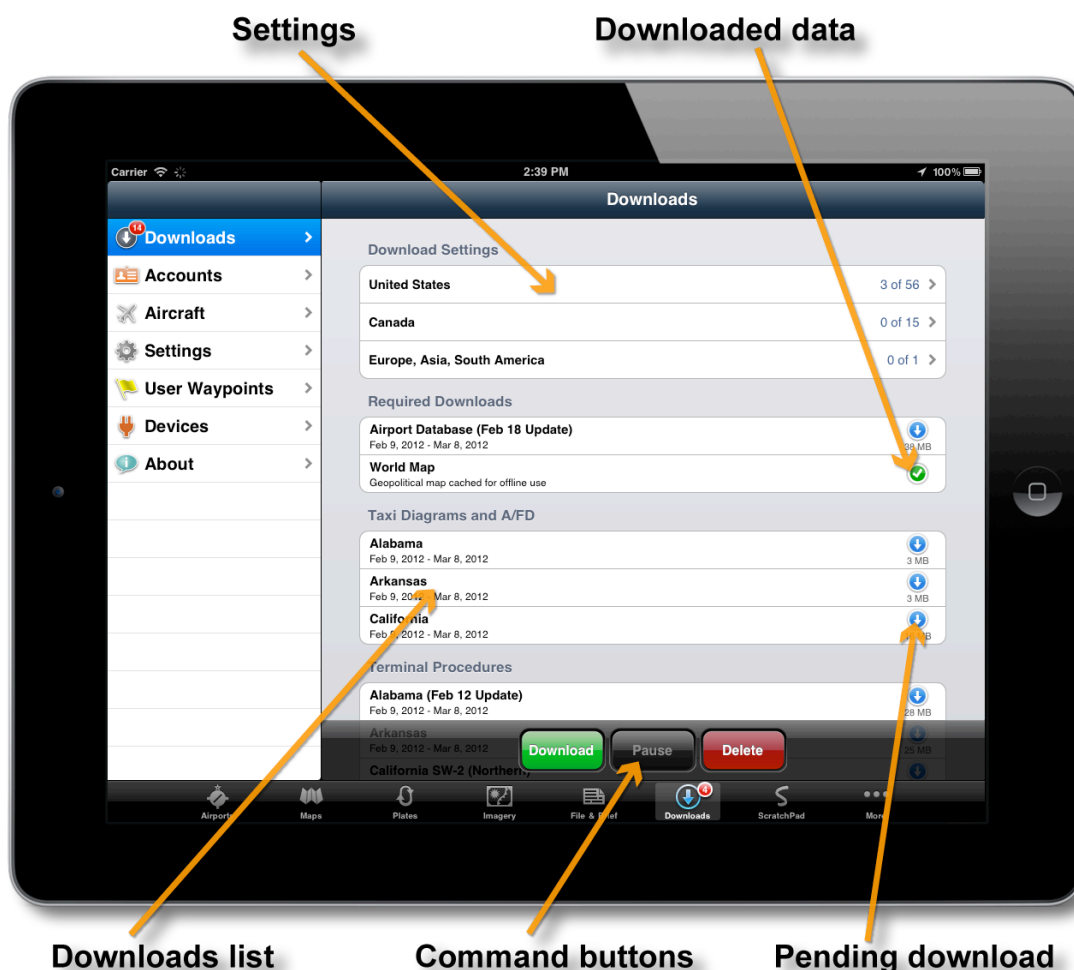
A Quick Tour of the Data Available for Download

✤ **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*.

✤ **IFR High, and IFR Low Charts** (Canada) contains Nav Canada seamless enroute charts of Canada and the Atlantic ocean.

✤ **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.
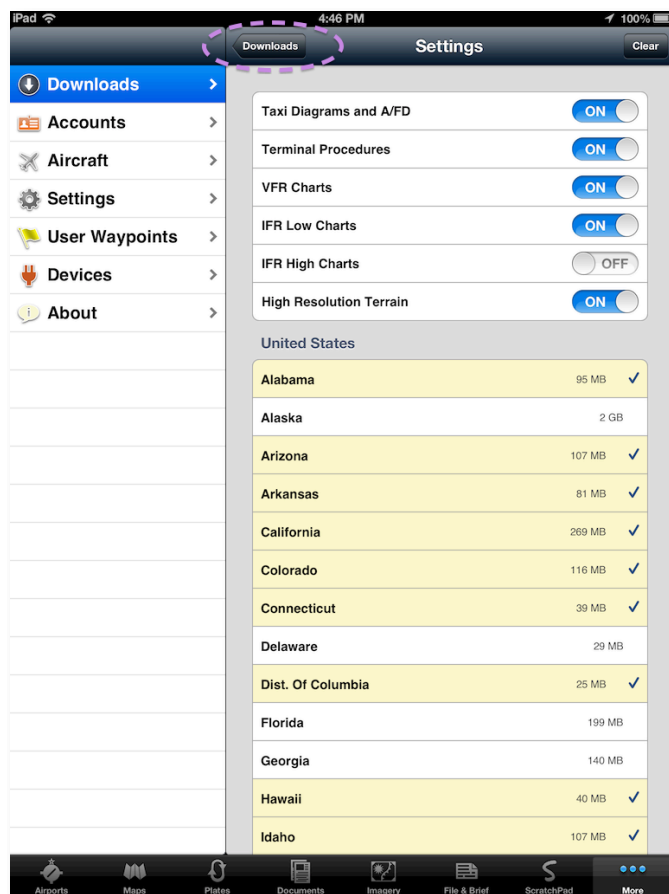
Downloading Data

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!
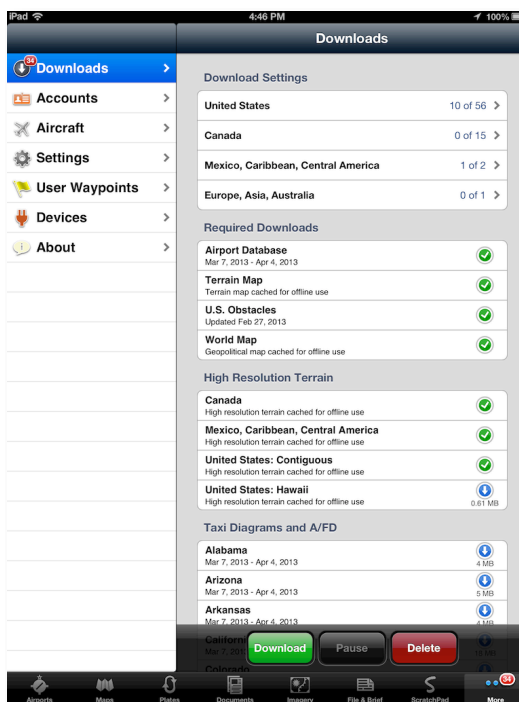
Green check mark = already downloaded

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 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.
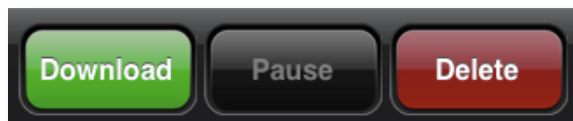
To delete an individual download, for example if a region has been downloaded that is no longer needed, swipe-to-delete the data row. Slide your finger from left to right over the entry you wish to remove and a red **Delete** button pops up. Tap on the button to remove the download. If you never want 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.

❖ **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

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.

Current plan   **Available plans**   **Plan purchase buttons**

ForeFlight account   **DUATS account**
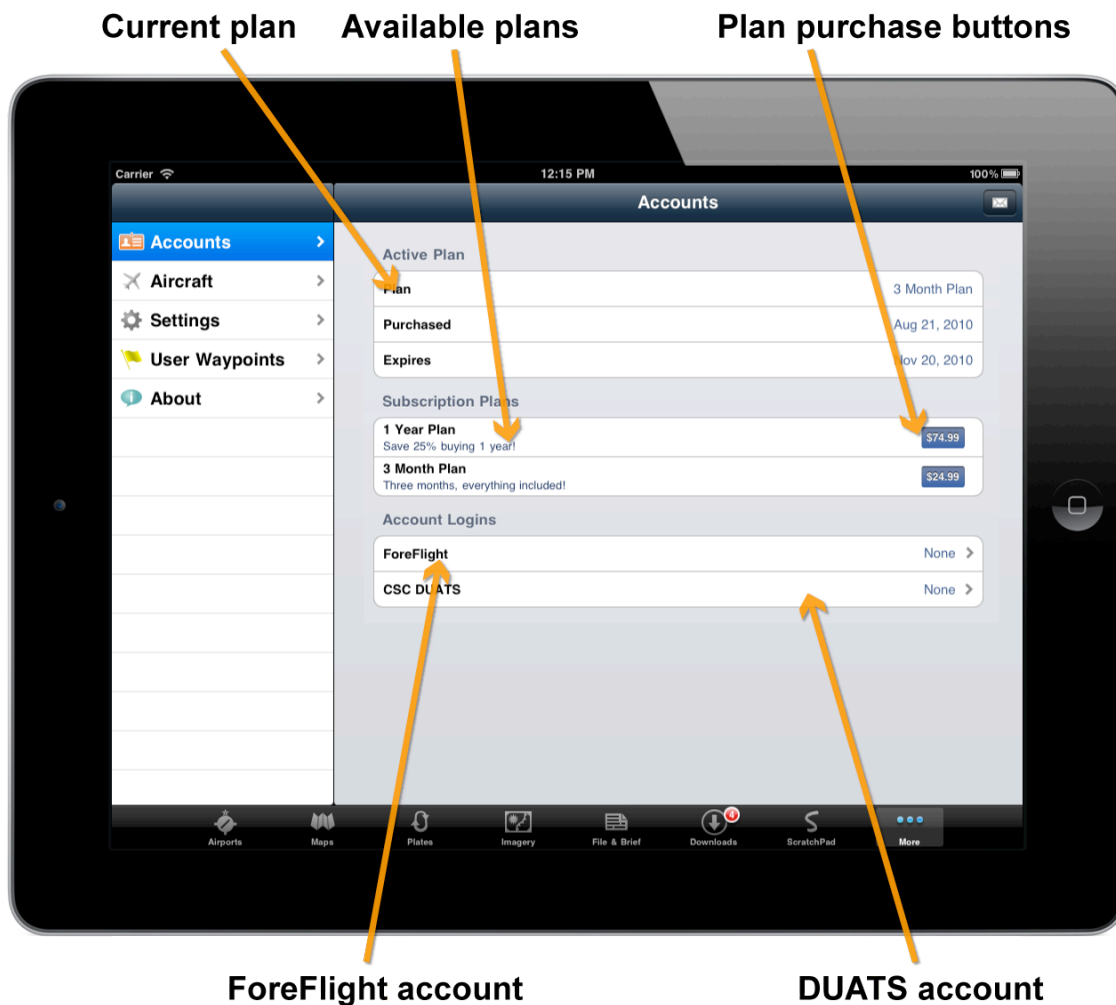
Viewing your Active Subscription

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 http://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:

❖ Full access to ForeFlight Mobile on **2 iPads and 1 iPhone.**

❖ *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. 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 http://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 http://www.foreflight.com/store/canada.php

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 http://www.foreflight.com/buy

If you'd like to place an order for multiple iPads, please visit http://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 (1 year)**

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

✤ Full access to ForeFlight Mobile on **2 iPads and 1 iPhone.**

✤ *Monthly data updates* to download terminal procedures from the Canada Air Pilot (CAP), Canadian IFR low enroute charts, and Canadian IFR high enroute charts.

✤ 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 http://www.foreflight.com/store/canada.php

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 Accoun*t

✤ 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 <u>team@foreflight.com</u> 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: <u>http://www.foreflight.com/manage</u>

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.

✤ **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.

❖ **Show Map Features** - select your preferred method for viewing waypoints for a given Map location. When *by Tap-Hold* is selected, only tapping and holding down in one spot on the Maps view will bring up the waypoint list for that location. Select *by Single-Tap or Tap-hold* to allow a quick tap on the Maps to bring up the list as well.

❖ **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.

❖ **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 every 12 hours automatically.

❖ **Filter Traffic** - 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) - feature not enabled.

❖ **Visual Alerts** (Runway Proximity Advisor)- turn this *ON* to receive 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.

❖ **Allow Device to Sleep** - turn *ON* to allow your device to sleep while running ForeFlight Mobile. 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 aver a certain period of inactivity. Even when *ON*, the device will not sleep when downloading in the *Downloads* view or while viewing an Instrument Procedure.

❖ **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** - Not applicable to iPad, iPhone only. 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.

❖ **Disable Ownship** - turn this *ON* to prevent your aircraft position from being displayed on charts, approach plates, or airport diagrams. This is required for certain operators.

❖ **Download Filed Flight 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.

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

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.

USER WAYPOINTS

This section displays your 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.

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. iPad 1 is not supported 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

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 details are provided on the status view:

✤ Connected - shows "Yes" if Stratus Wi-Fi connection found.

✤ 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.

✤ LED Brightness - used to adjust brightness of LEDs on Stratus.
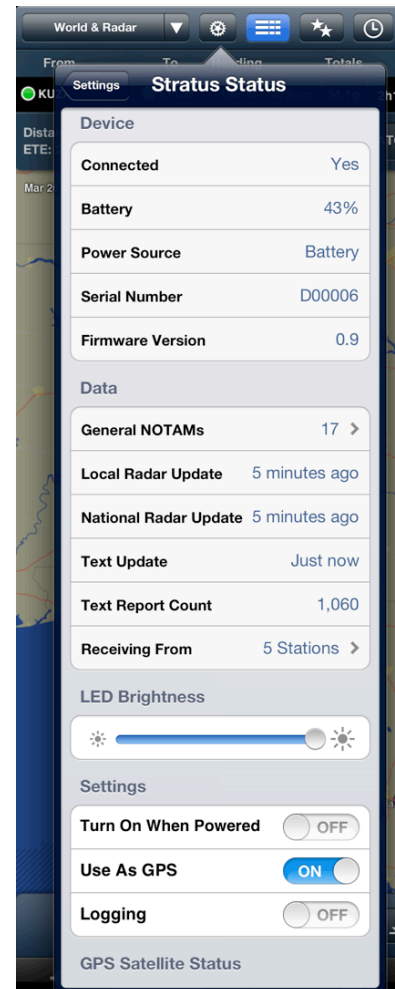
❖ Turn On When Powered - when ON the Stratus will turn on when power is provided over the USB cable. It will also turn off when power is removed.

❖ 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 data stream provided by towers.   Leave this off normally, as it reduces app performance.

❖ Power-Saving mode - reduces the WiFi transmit power to increase battery life.

❖ GPS Satellite Status - shows location and signal lock for GPS satellites currently visible.

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. iPad 1 is not supported 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.

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.
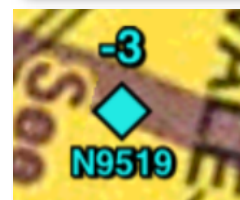
IMPORTANT: Some traffic data is based on pressure altitude. ForeFlight Mobile shows relative altitudes of traffic based on your own-ship's geometric/GPS altitude. This means that some relative altitudes shown may be off by hundreds of feet, especially at higher altitudes, so use appropriate caution when 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.

A velocity 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 velocity vector and additional data is hidden.
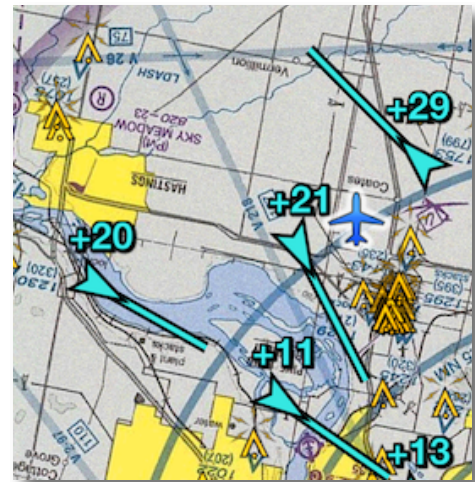
In the example on the left, UPS218 is 28,500' above the aircraft's current altitude and descending. AAL263 is level 32,500' above the aircraft's current altitude. And N132VU is 800' above the aircraft's current altitude and descending at more than 500 ft/min.
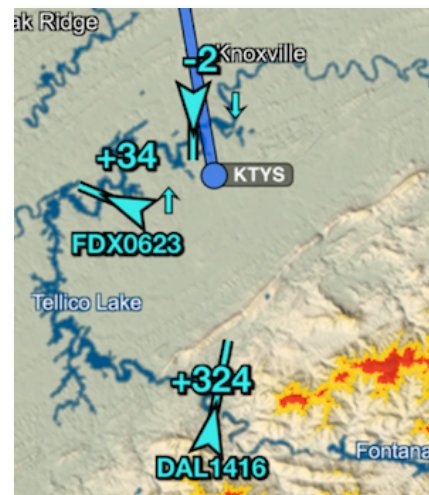
In the example on the right, FDX0623 is 3,400' above the aircraft's current altitude and climbing at more than 500 ft/min. DAL1416 is level 32,400' above the aircraft's current altitude. And an unidentified target is 200' below the aircraft's current altitude and descending at more than 500 ft/min.
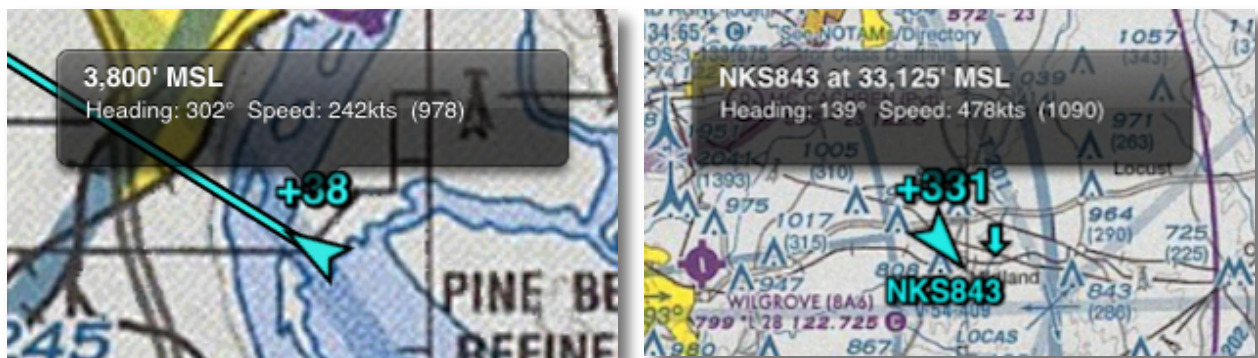
You can tap on any target to display a pop-up with additional information, which can include target tail or flight number, heading, speed and whether the information was broadcast via 978UAT or 1090ES. Tap anywhere on the screen to close the pop-up.

FILTER TRAFFIC SETTING

The Filter 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.
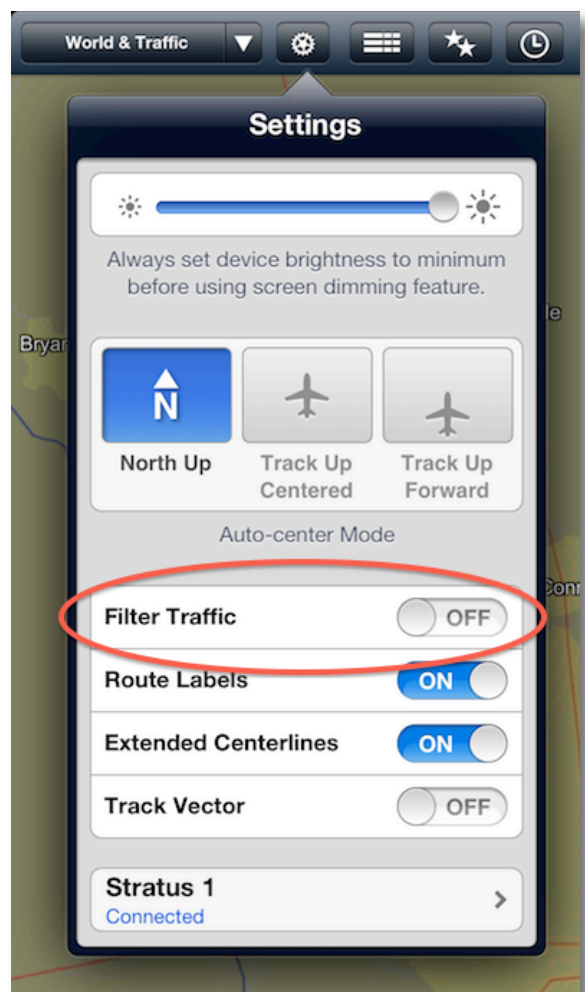
XM WX

OVERVIEW

ForeFlight Mobile supports the Baron Services Mobile Link XM WX device. This devices 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 will only allow data access to one device 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.
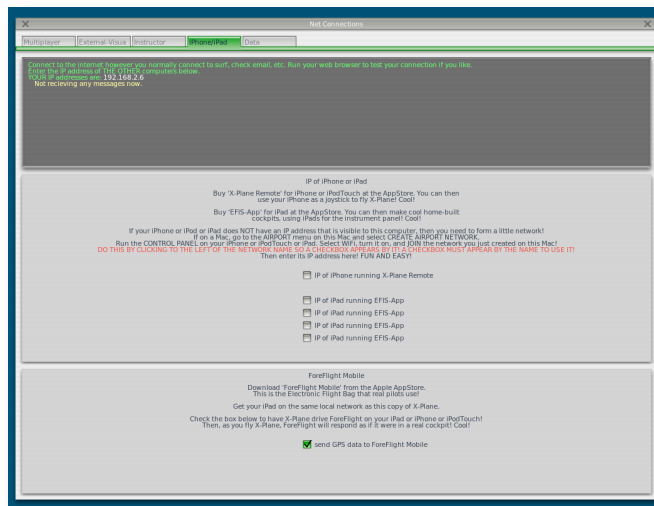
To enable this feature in ForeFlight Mobile, first make sure both your iPad and X-Plane machine are connected to the same local network. Then, run X-Plane and enable support for ForeFlight Mobile in X-Plane. Run ForeFlight Mobile on the iPad and go to the More->Devices view. Tap X-Plane and set the Enabled option to *ON*.
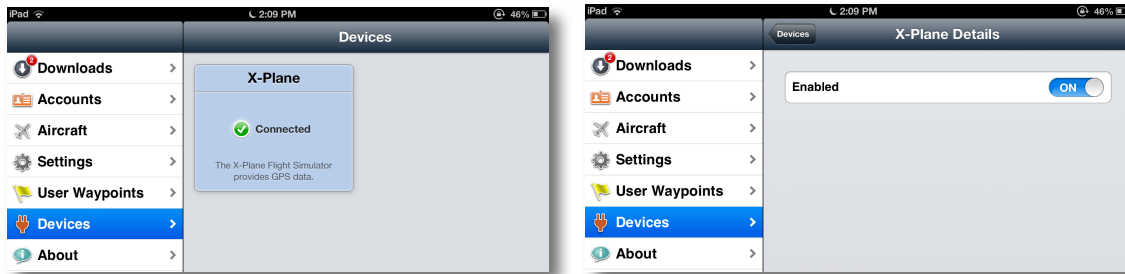
PREPAR3D/FLIGHT SIMULATOR X

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
http://www.fsxflight.com.

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

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.
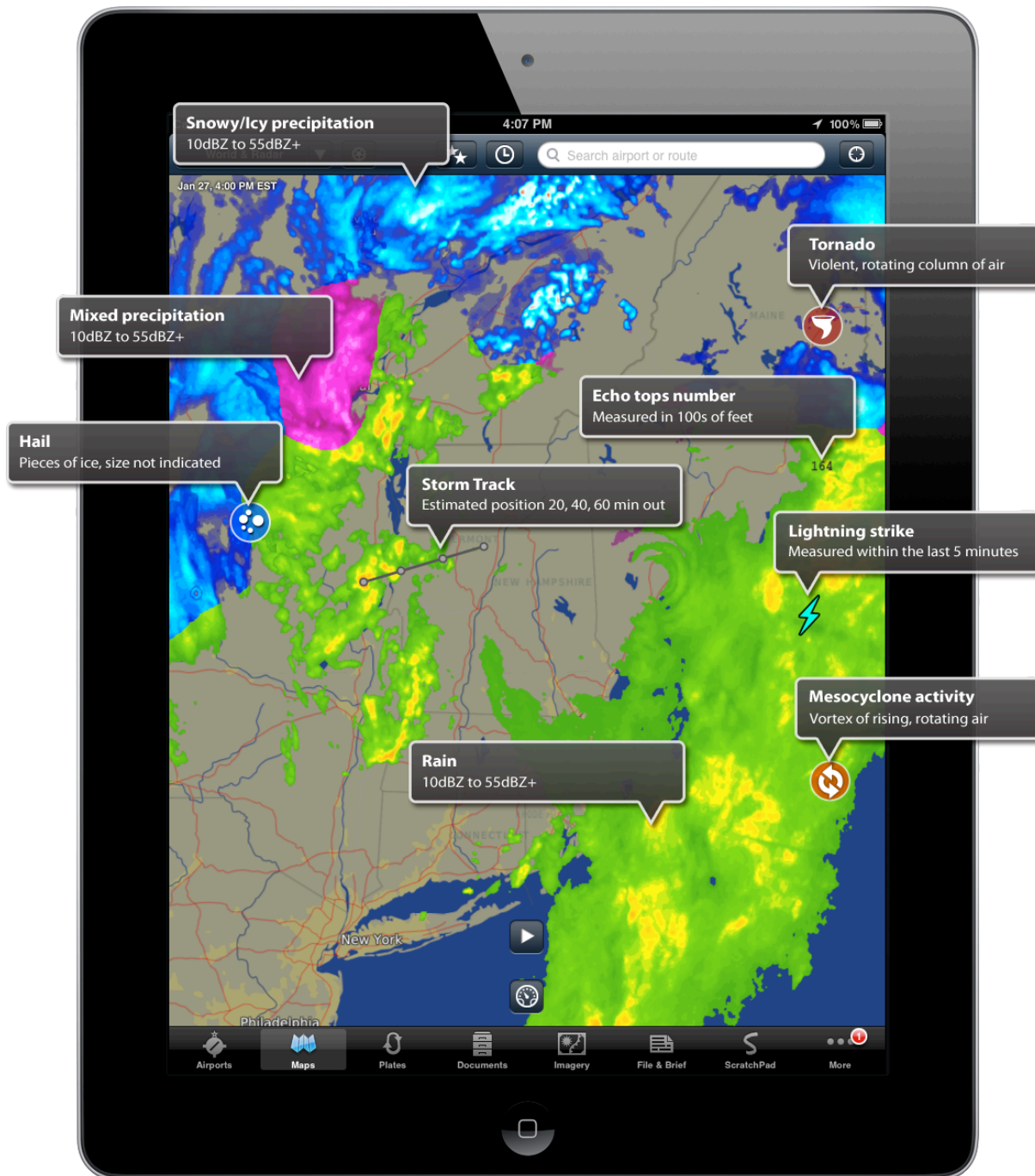

EMAIL

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 use to view the flight on their own iPad or iPhone.
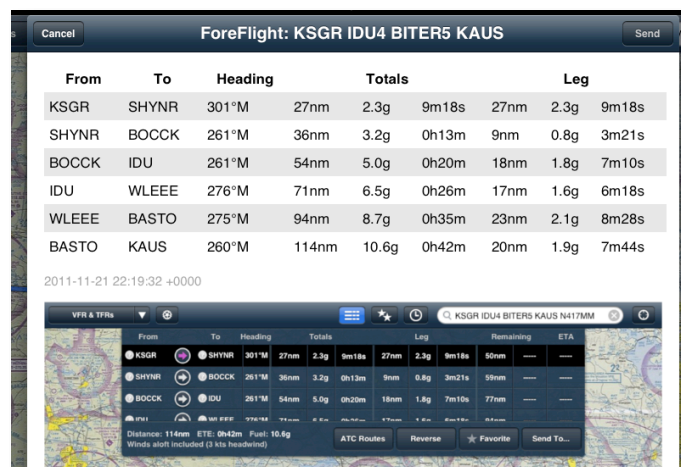
Miscellany

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: http://foreflight.com/support.php

Videos: http://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 v4.7

✣   Updated ScratchPad section to reflect new pen size option

✣   Added new section about runway proximity advisors

✣   Updated Settings list to include new runway proximity switches

✣   Added new section about X-Plane Flight Sim integration

For v4.7.1

✣   Updated Settings list to include new distance units option and auto clock check

For v4.8

✣   Added section on Background Downloads

For v4.9

✣   Updated Map menu section to describe new layers

✣   Updated Map configuration to describe new map settings for track up and route labels

✣   Updated Map auto center mode information to reflect new capabilities

✣   Updated Settings section to describe new Maps 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

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