



# ForeFlight



Capt. Brian Schiff

*"Luck is what happens when preparation meets opportunity."*

— Lucius Annaeus Seneca

[www.captainschiff.com](http://www.captainschiff.com)

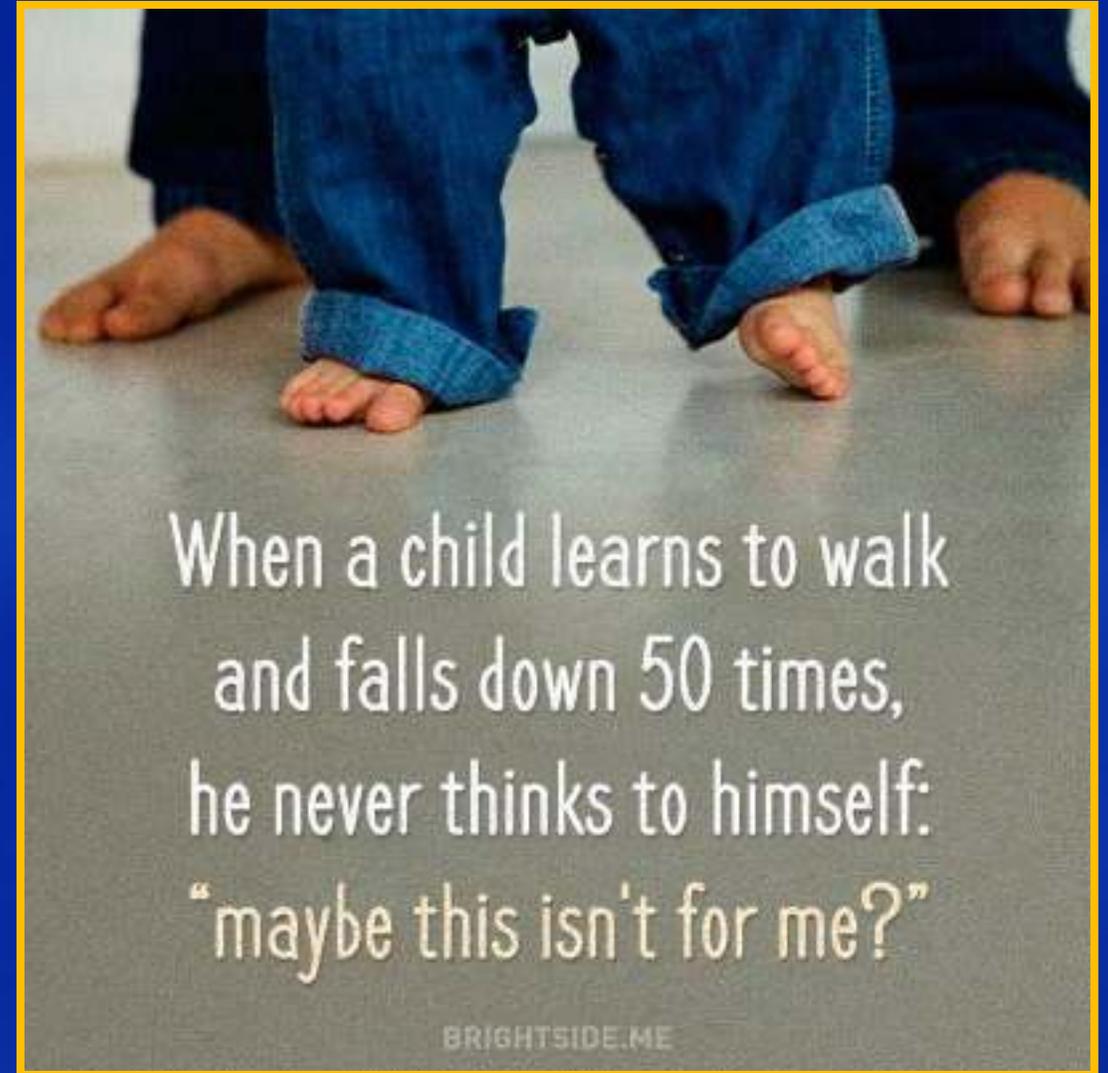
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# New Technology

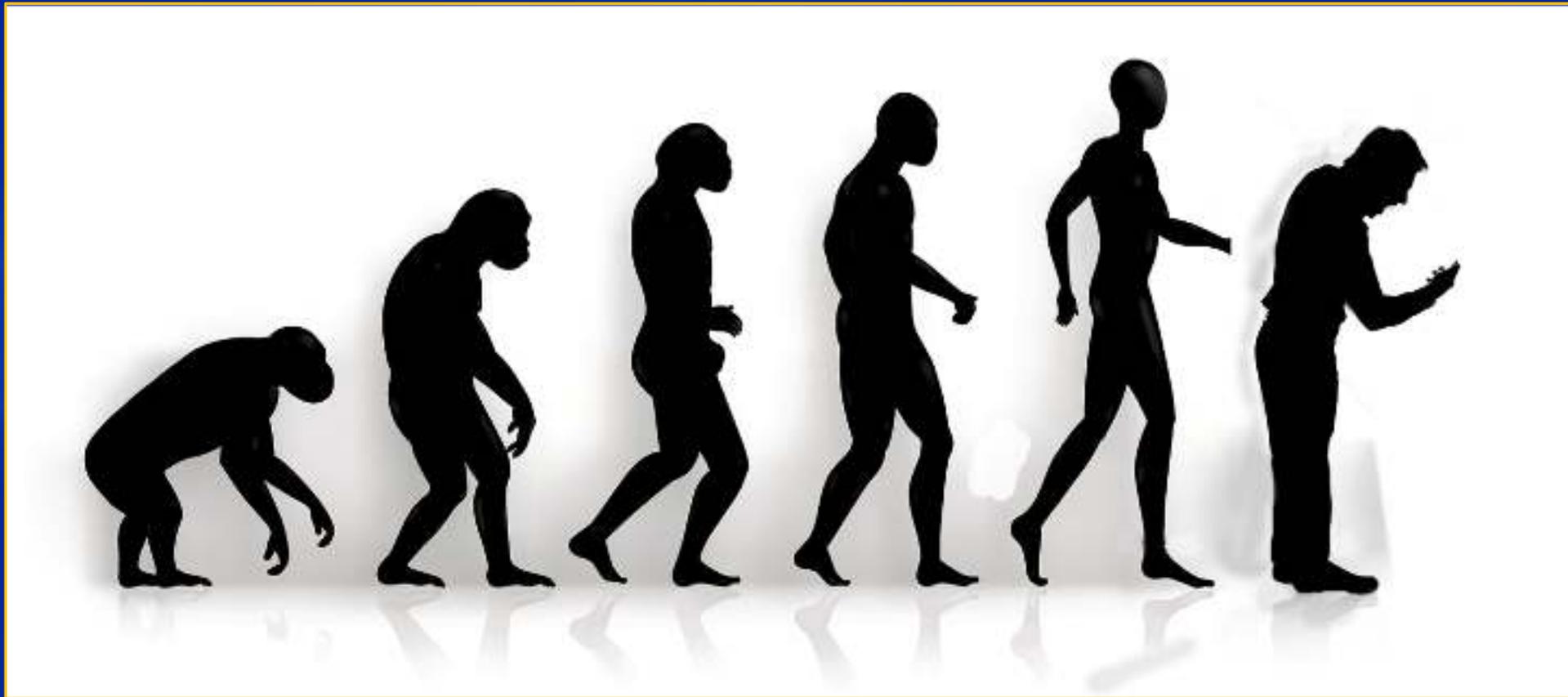


# Today's Objectives

- ✦ iPadology
- ✦ ForeFlight Overview
- ✦ Setup iPad & ForeFlight
- ✦ Flight Planning
- ✦ Tips & Tricks



# First – A Warning!



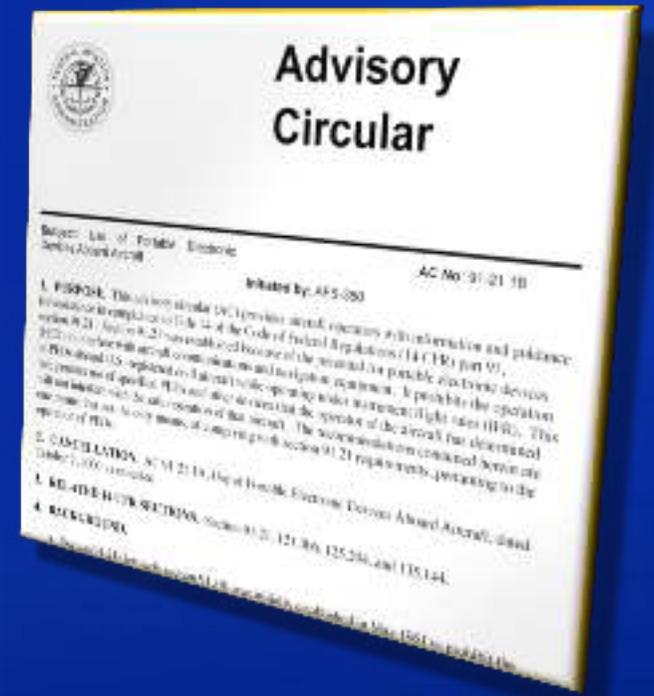


# Supporting Documents

[www.CaptainSchiff.com](http://www.CaptainSchiff.com)



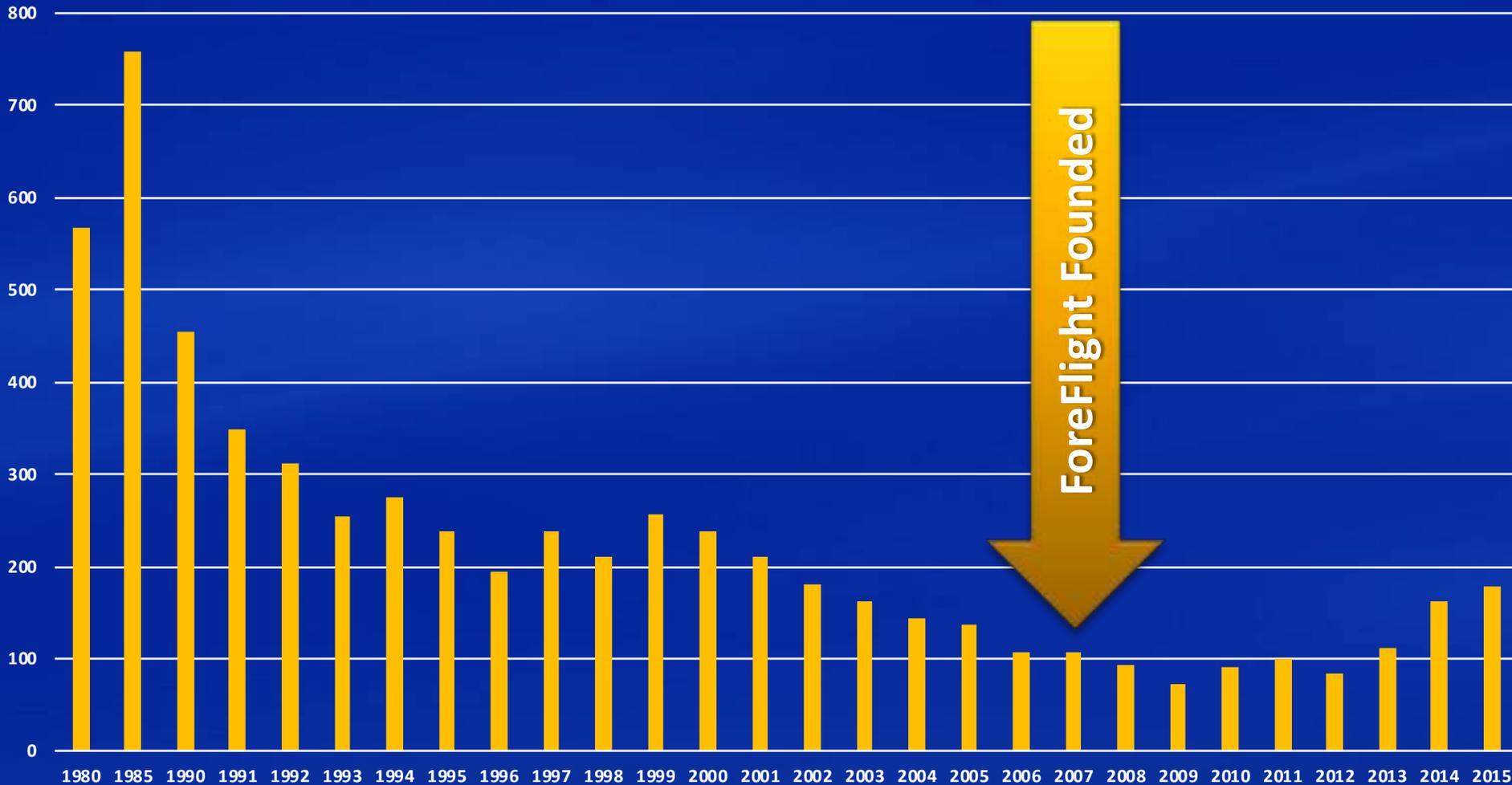
[www.captainschiff.com](http://www.captainschiff.com)



# First – A Warning!



## Total Reported Near Mid-Air Collisions\*



# First – A Warning!

- Be careful of being “Heads-down” too much
- January 16, 2004:
  - Cessna 180 & Beechcraft 440 Collide (Near TSP)



# First – A Warning!



# New Features



## Pilot's Guide to **FOREFLIGHT MOBILE**



 **ForeFlight**  
Intelligent Apps for Pilots™

54th Edition  
Covers ForeFlight Mobile v0.4 on iPad

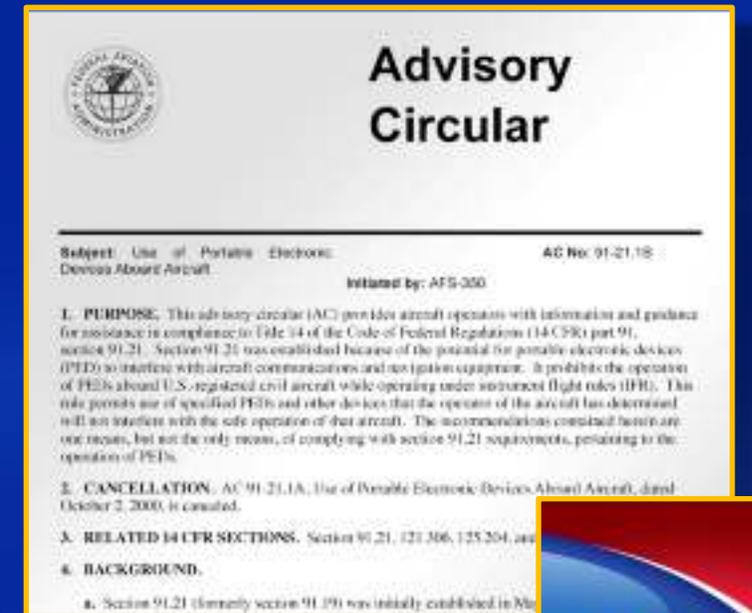
# ForeFlight CAN Replace Paper Charts

- Personal Electronic Devices (PEDs)

- FAR 91.21 & AC 91-21
  - No avionics interference
  - Determined by the PIC

- Electronic Flight Bag (EFB)

- AC 91-78
  - Part 91 VFR and IFR
  - EFBs are legal replacements for paper charts if:
    - *Functional equivalent of the paper material*
    - *Data is current*
    - *Evaluation period recommended prior to eliminating paper*



# ForeFlight CAN Replace Paper Charts

- GPS position capabilities are not a source for primary navigation (IFR)—only for situational awareness.
- Backup is suggested:
  - 2<sup>nd</sup> iPad
  - iPhone can serve as backup
  - Print paper charts

**Not For Navigation**

# Official Weather Briefing



## How do you get an official weather briefing?

Through a flight planning app in my electronic flight bag

Call flight service on the telephone

On Lockheed Martin's website [www.1800wxbrief.com](http://www.1800wxbrief.com)

Other

# iOS Updates – Caution!

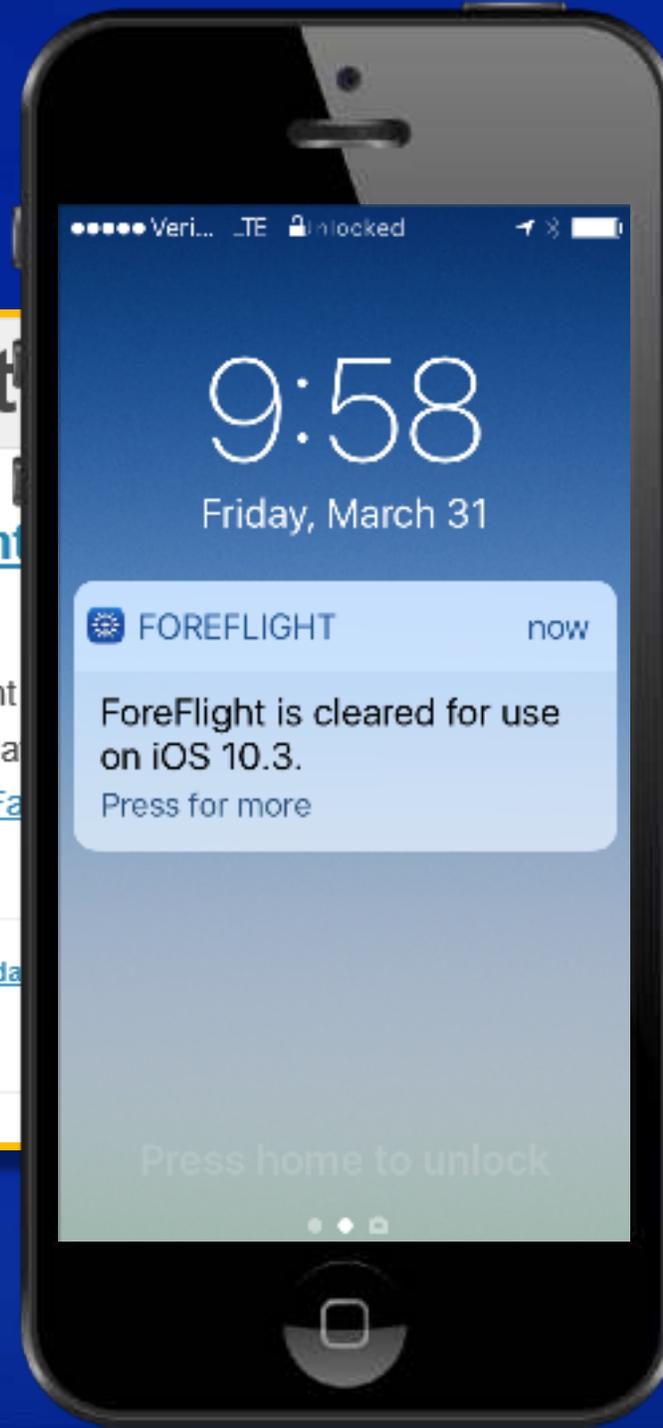
New post on **ForeFlight**



**Apple iOS 10.3 and ForeFlight**  
by [ForeFlight](#)

We are performing compatibility testing between ForeFlight to ensure that everything is working smoothly. We will update when testing is completed. Please also stay tuned to our [Facebook](#) updates.

[ForeFlight](#) | March 27, 2017 at 1:41 pm | Tags: [Apple](#), [ios](#), [software updates](#)  
<http://wp.me/p5zOW-29I>



# Updates

- Updates:
  - IOS
  - Apps
  - App Data



**WARNING:**

**NO updates  
unless you have time  
to check it out before flight!**

# Updates



**ForeFlight**  
Intelligent Apps for Pilots™

FOREFLIGHT CUSTOMER NOTICE



## Customer Notice

Dear Customer,

We are performing compatibility testing between ForeFlight and the newly released iOS **11.2.6** to ensure that everything is working smoothly. We will notify you with an "all-clear" when testing is completed. Please also stay tuned to our [company news](#), [Facebook page](#), or [Twitter feed](#) for updates.

# “iPad-ology”

- The Home button
- Screenshot
- Closing unused apps
- 4-finger swipe
- 3-finger swipe
- Bottom settings tray (Control Center)
- Hard restart

# “iPad-ology”

- Apps folders
- Docking apps to bottom
- Touch-ology:
  - Swiping
  - Tap
  - Touch
  - Touch & Hold



# “iPad-ology”

- Screen orientation
  - Landscape
  - Portrait
- Rotation lock
  - Physical switch (older iPads)
  - Soft switch (Control Center)
- Inverted “night” mode
  - iPad vs. In-app

# “iPad-ology” – Settings

- Settings > Privacy > Location Services
  - On
  - ForeFlight – When Using
- Settings > ForeFlight > Enable Ownship
  - Always
- Settings > ForeFlight > Allow Notifications
  - On
  - Select notification preference

# “iPad-ology”

- Airplane Mode On:
  - In IOS 8.2 and later –
    - Disables wifi, Bluetooth and cellular data
    - Leaves GPS on
    - Note: initial location faster with cellular data on

# “iPad-ology”

- Power & charging
  - Faster charging – “airplane mode”
  - Radio management – unnecessary radios off
  - Backup power options:
    - External batteries
    - Cigarette lighter adapter (CAUTION for 28 Volts!)
    - Built-in USB install



# “iPad-ology”

- Don't use polarized sunglasses!



# Input

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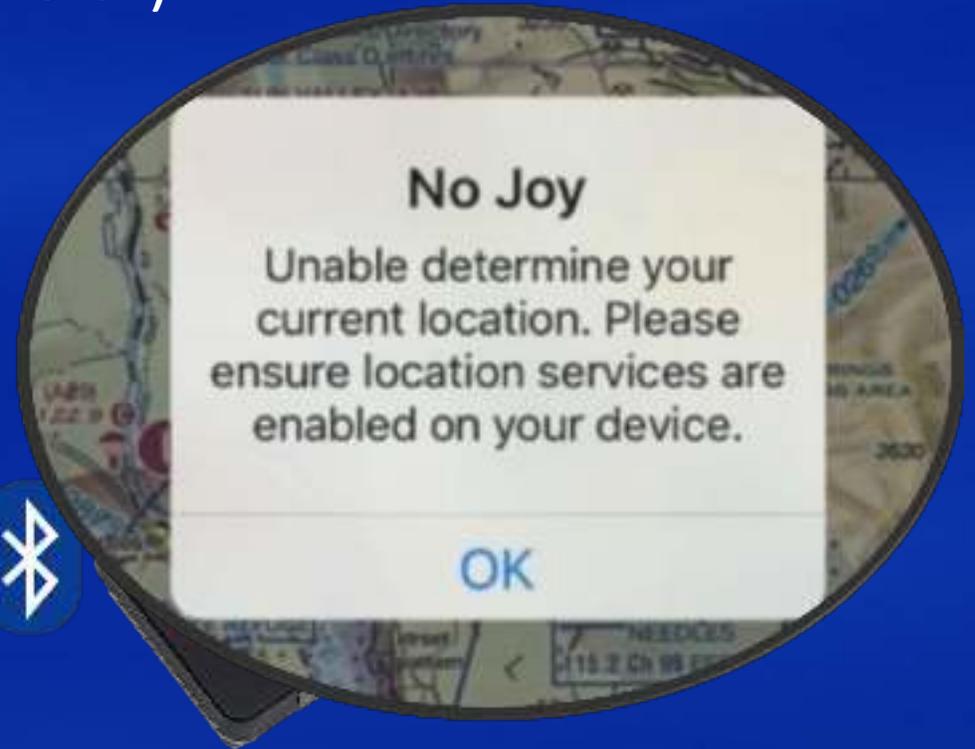
## Radios

- How the iPad receives internet/data:
  -  Wireless network (Wi-Fi)
  -  Bluetooth (close-range device)
  -  Cellular (built-in mobile phone)
  -  Internal GPS (assisted by cellular)
  -  Airplane Mode – turns off all radios
    - Leaves GPS on



# Aircraft Position

- How does ForeFlight obtain aircraft position?
  - Internal GPS (Models with cellular)
  - External GPS
    - Bluetooth
    - Wifi



# ForeFlight Mobile Overview

*A look at the tabs—the core features of the app.*



# Errata

- Old



- New



# ForeFlight Directory



## 8 Core Tabs

- Always visible
- Show the core features of ForeFlight

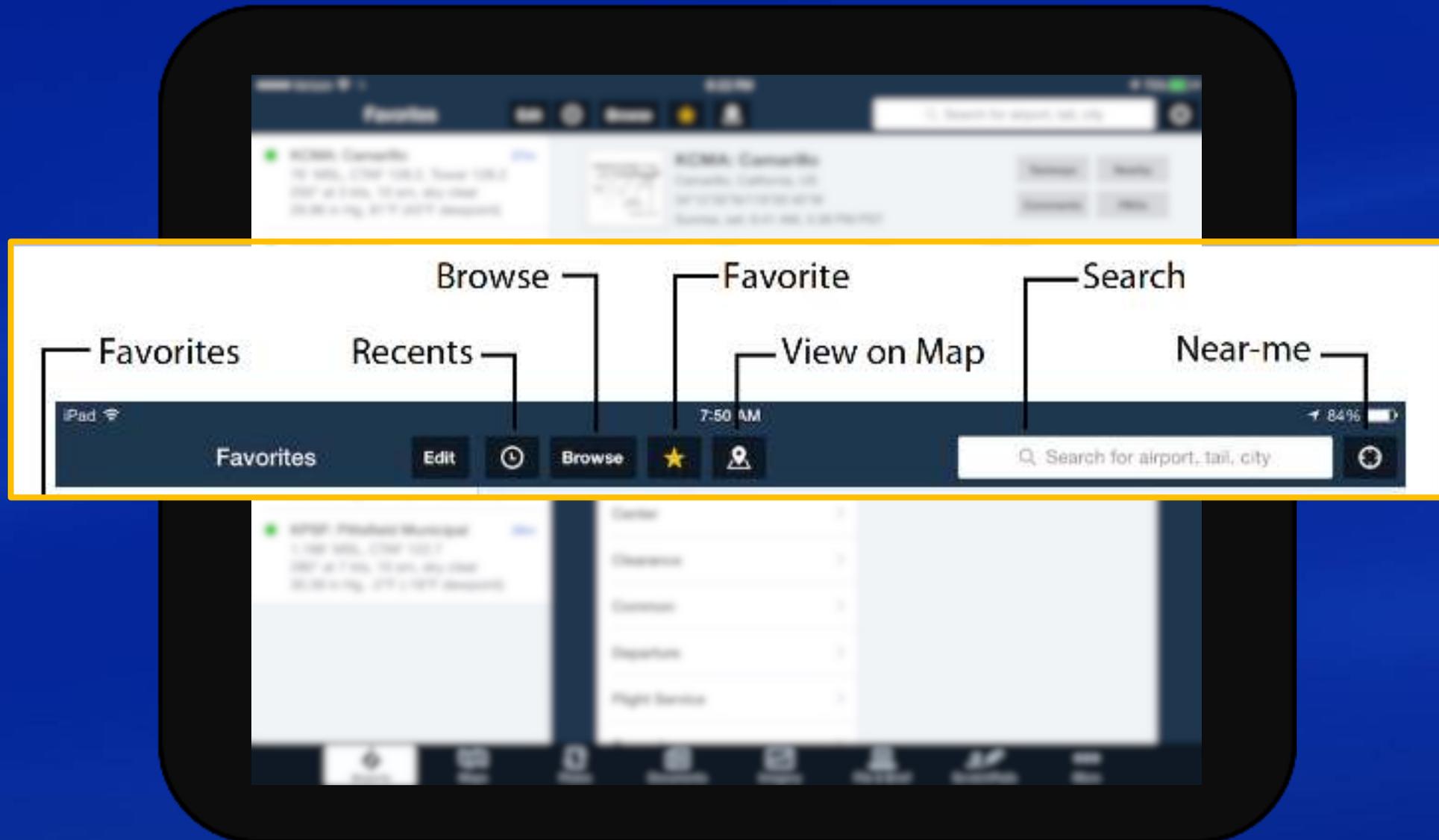
# ForeFlight Directory

AIRPORTS	MAPS	PLATES	DOCS	IMAGERY	FLIGHTS	SCRATCH PADS	MORE
Frequencies	VFR Sectionals	Airport Diag.	FARs	Weather Maps	Create Flt. Plan	Copy Clearance	Downloads
Weather	IFR Charts	Approaches	AIM		File Flt. Plan	Copy ATIS	Accounts
Runways	Nav. Log	Arrivals	Chart Legends		Full Briefing	Take Notes	Aircraft
Procedures	Route Editor	Departures	VFR Routes				Logbook
NOTAMs	Attitude Ind.	Smart Search	Handbooks				Weight & Balance
Services	GS, HDG, ALT		Personal Docs				Settings
Taxi Diagrams	Time		More				User Waypoints
FBOs	ADS-B Traffic						Track Logs
AF/D	Altitude Advisor						Devices
N# Search	Route Advisor						About ForeFlight
More	Procedures						
	Profile Advisor						
	Weather Overlay						
	Fuel Prices						
	Smart Search						

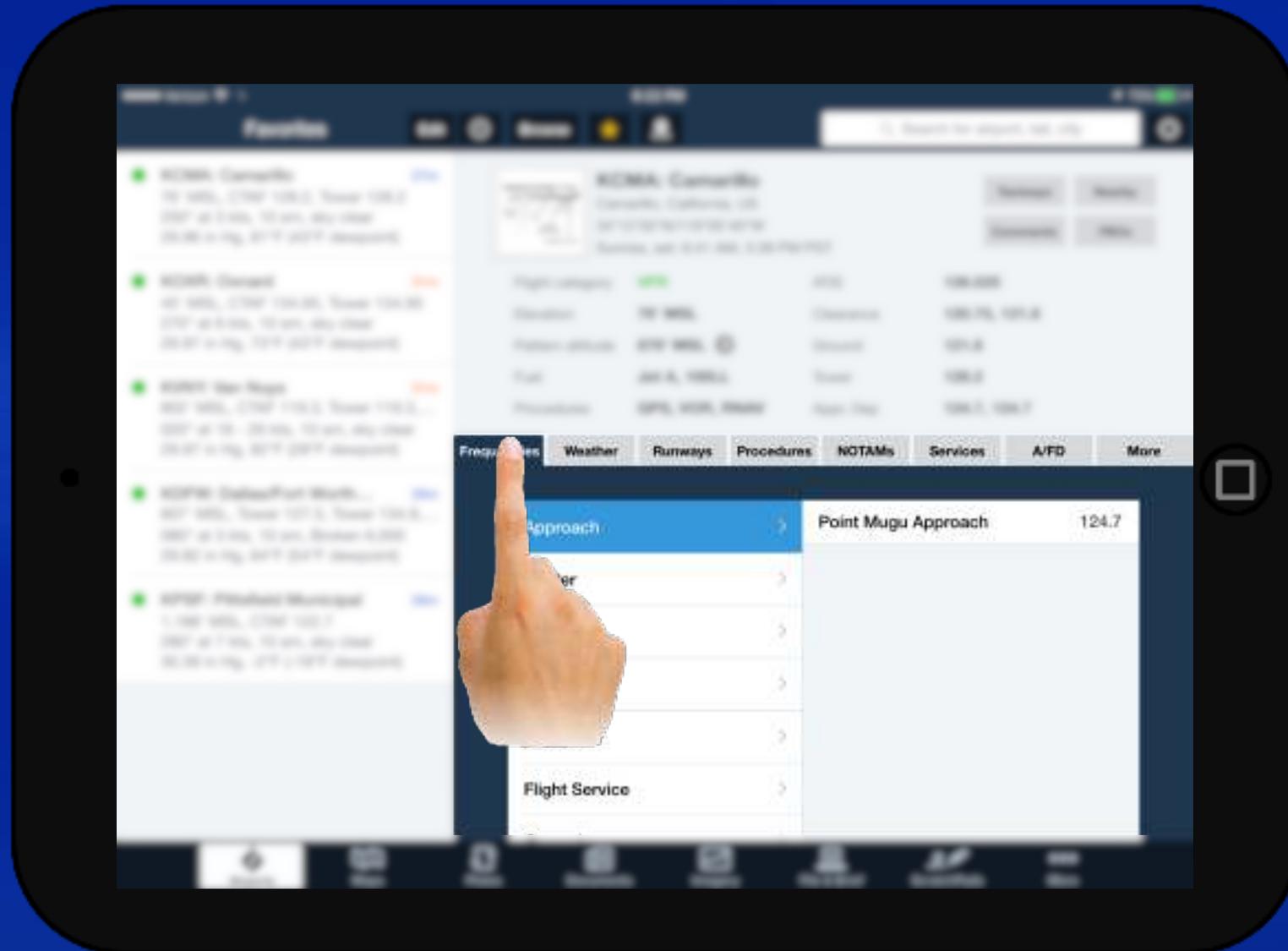
# Tabs: Airports



# Tabs: Airports: Menu Bar



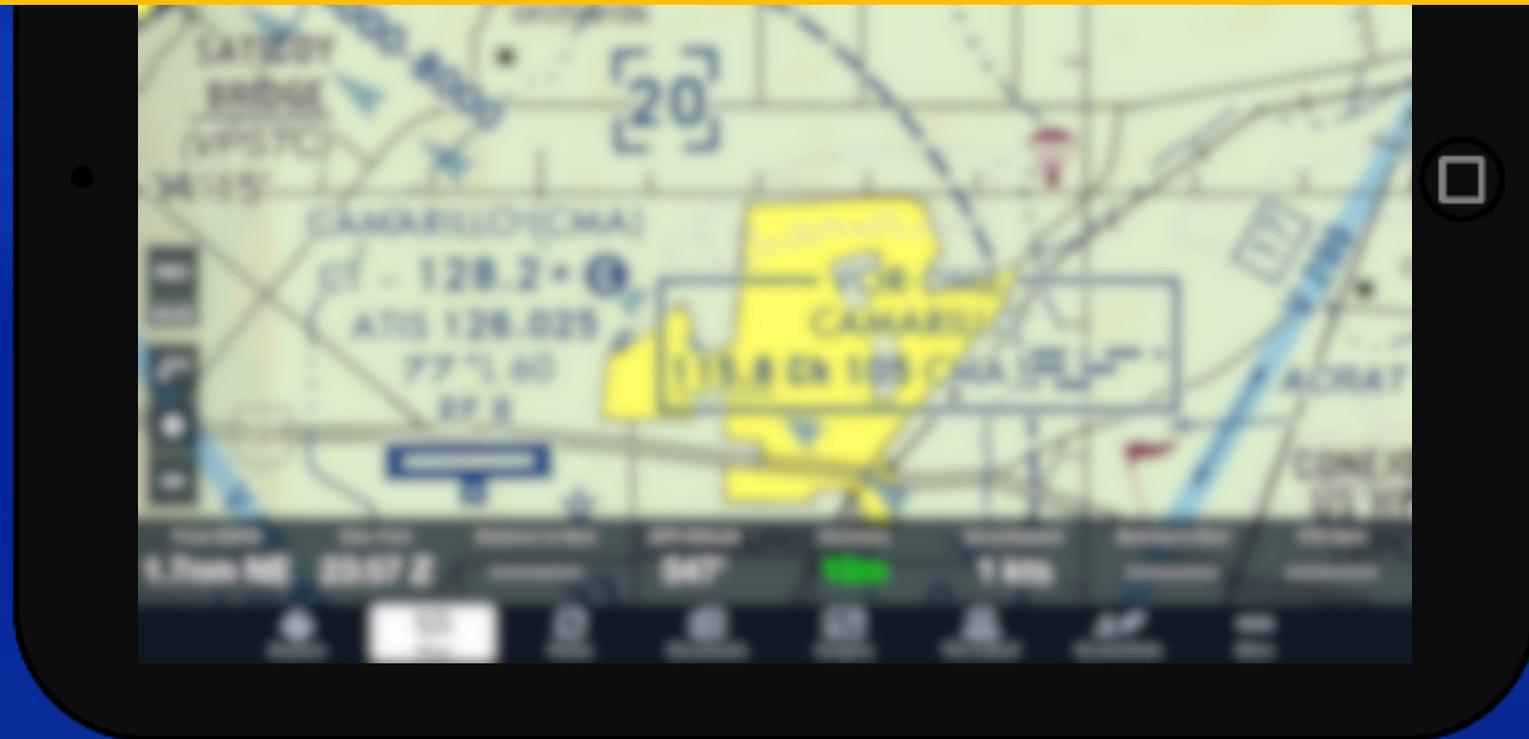
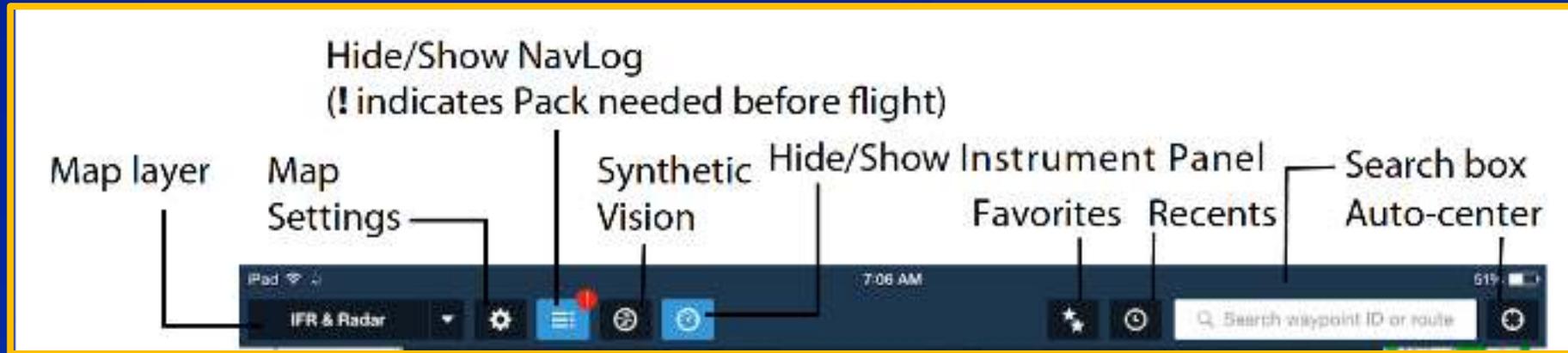
# Tabs: Airports



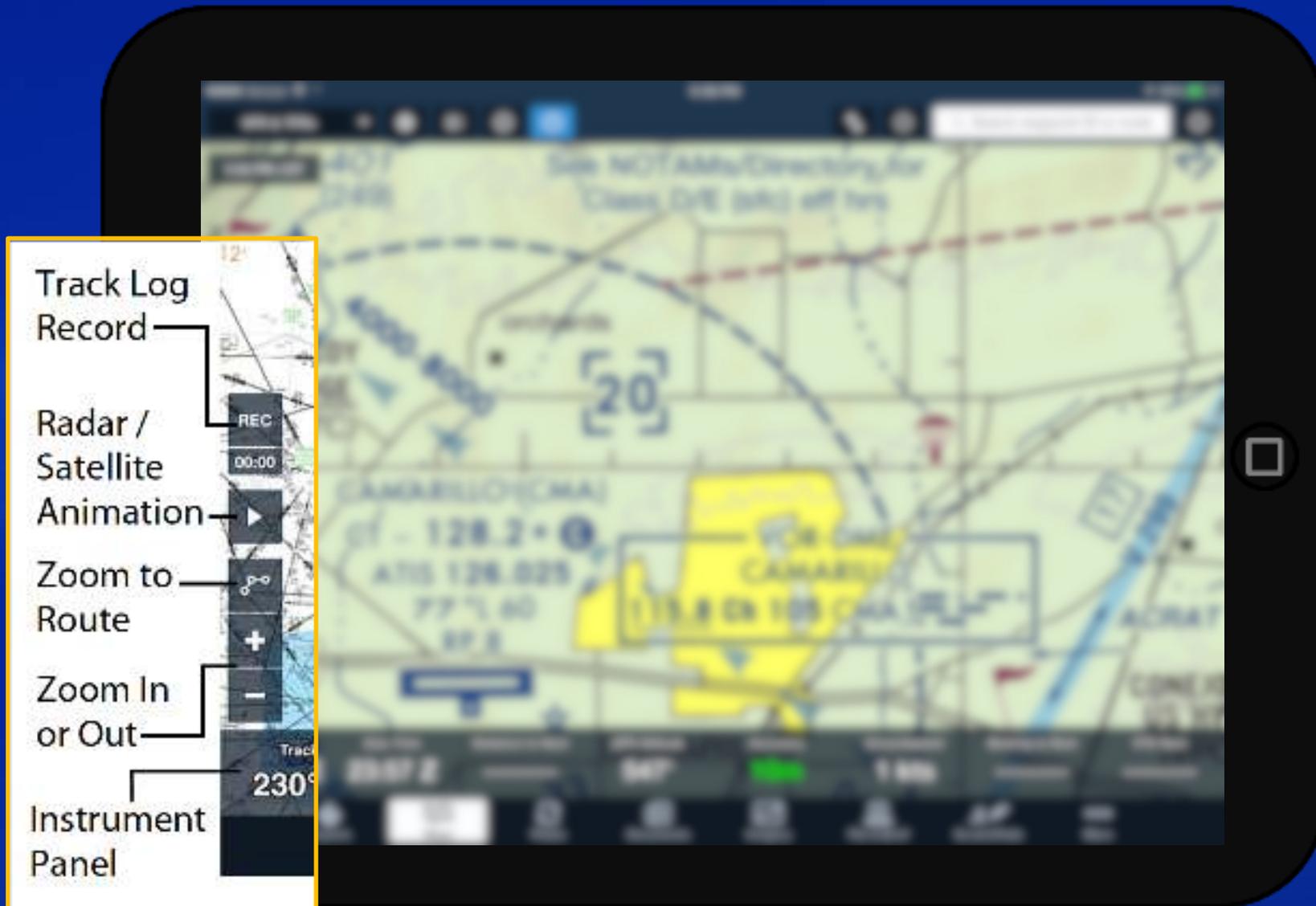
# Tabs: Maps



# Tabs: Maps

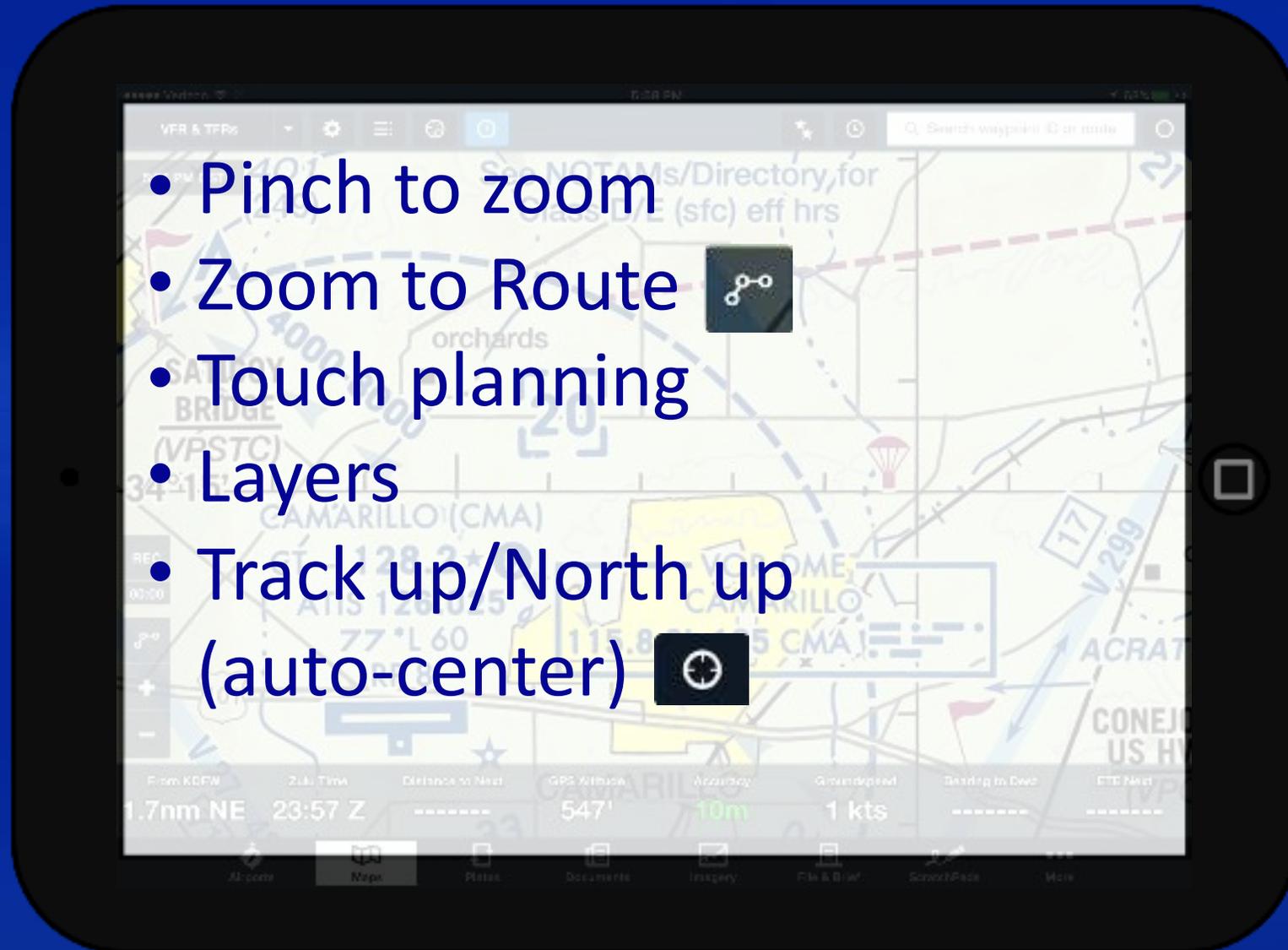


# Tabs: Maps



# Tabs: Maps

- Pinch to zoom
- Zoom to Route 
- Touch planning
- Layers
- Track up/North up (auto-center) 



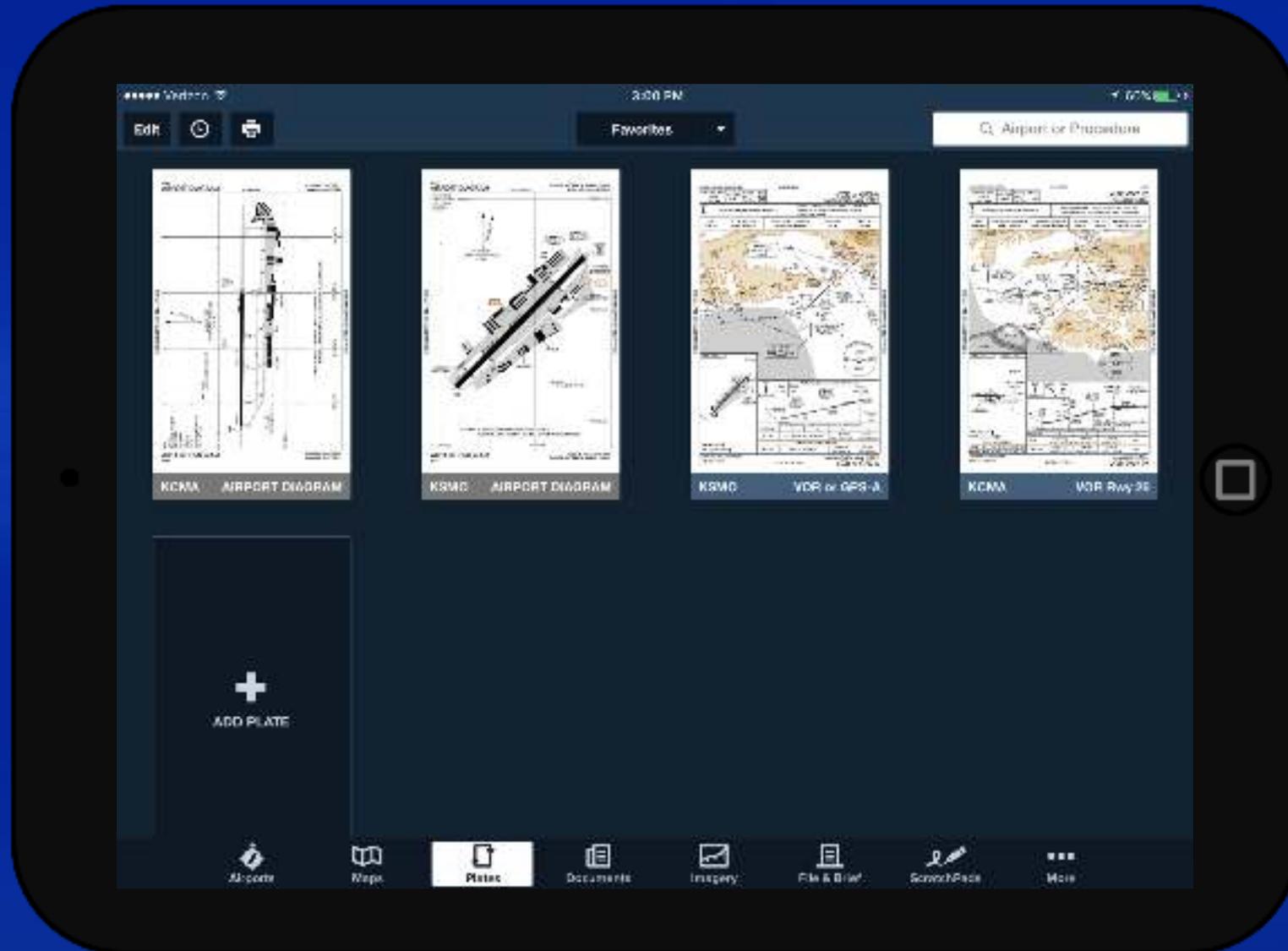
# Tabs: Maps: Auto-Center Button



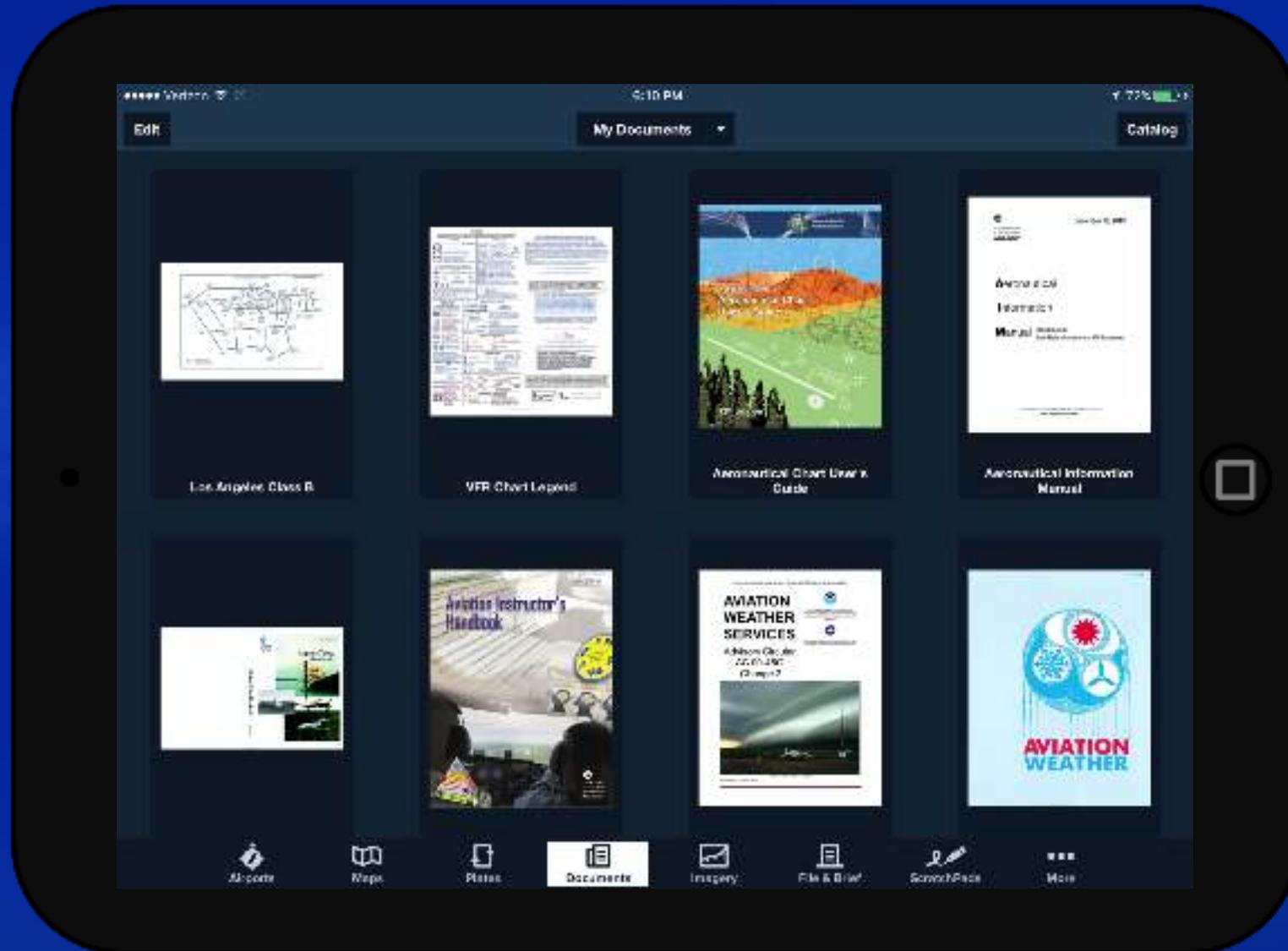
# Tabs: Maps: Map Options Button



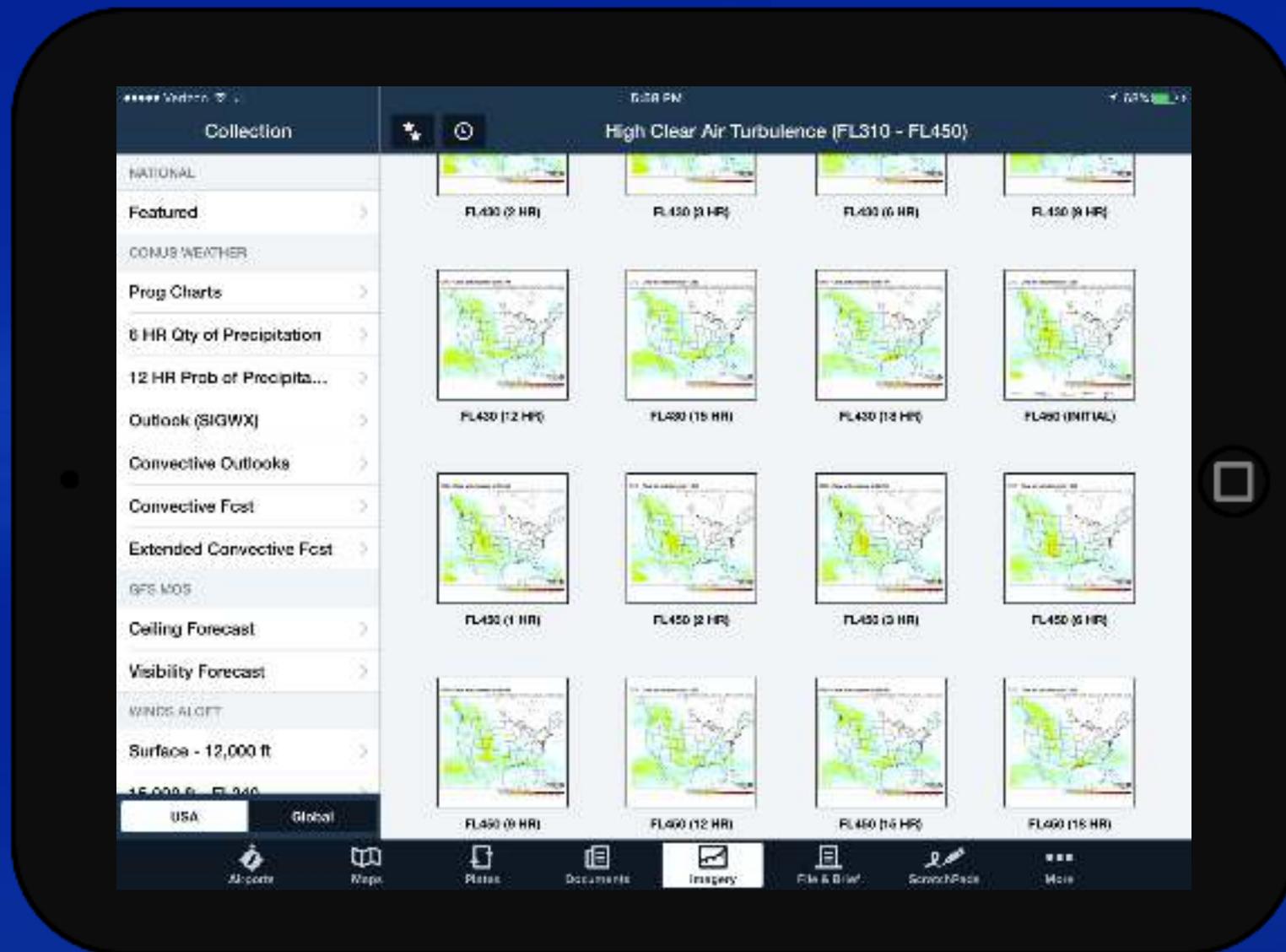
# Tabs: Plates



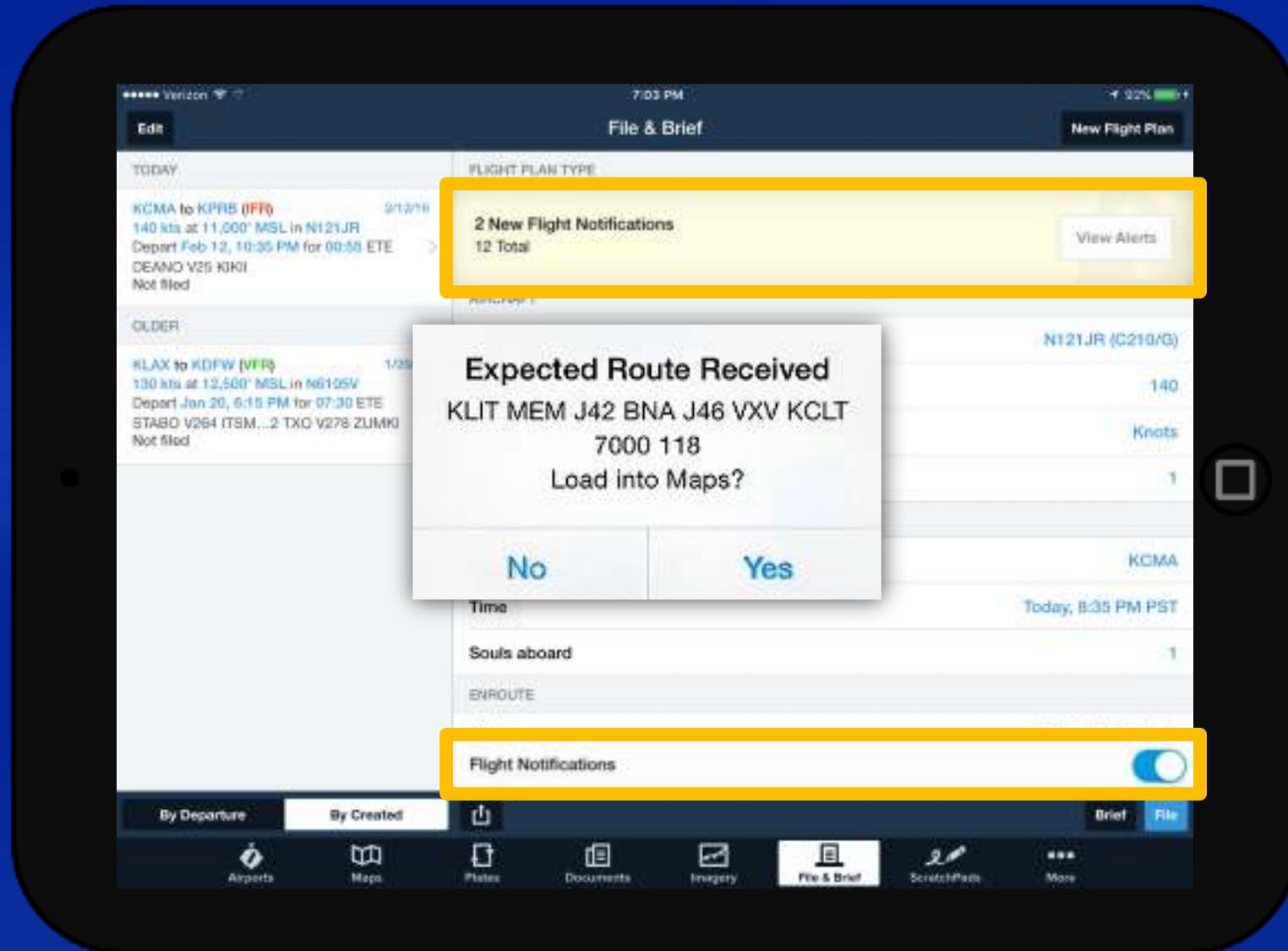
# Tabs: Documents



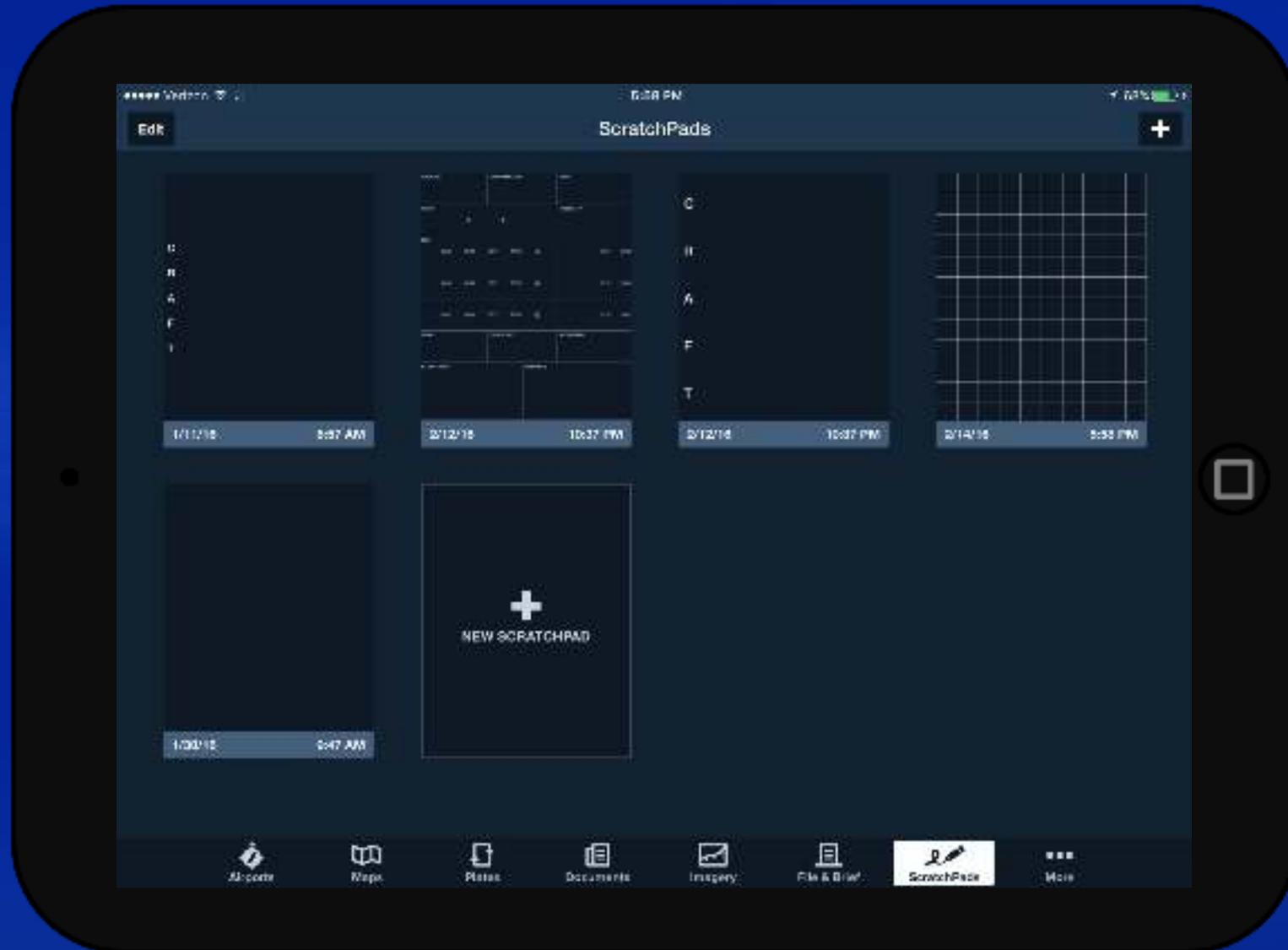
# Tabs: Imagery



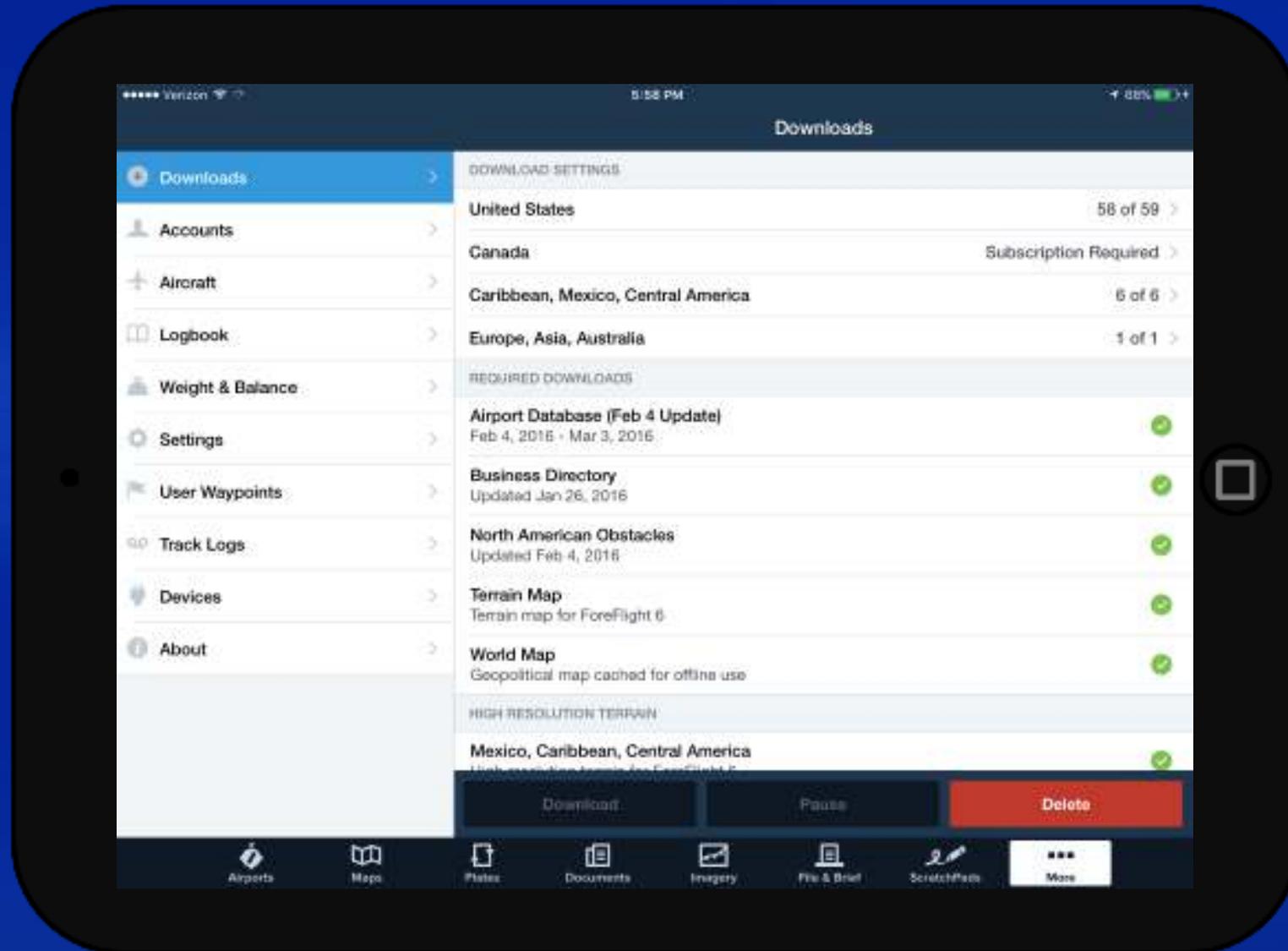
# Tabs: Flights



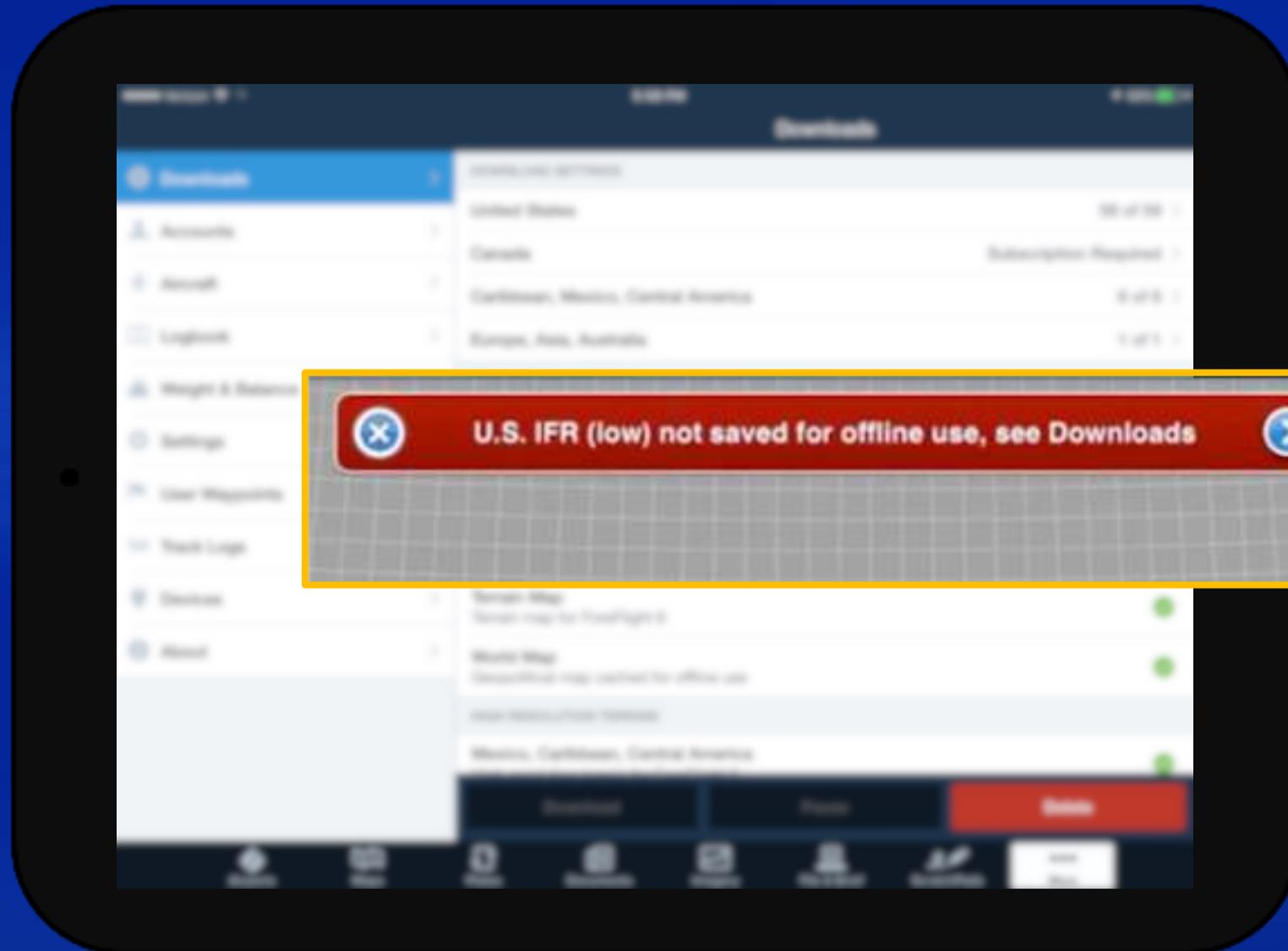
# Tabs: Scratchpads



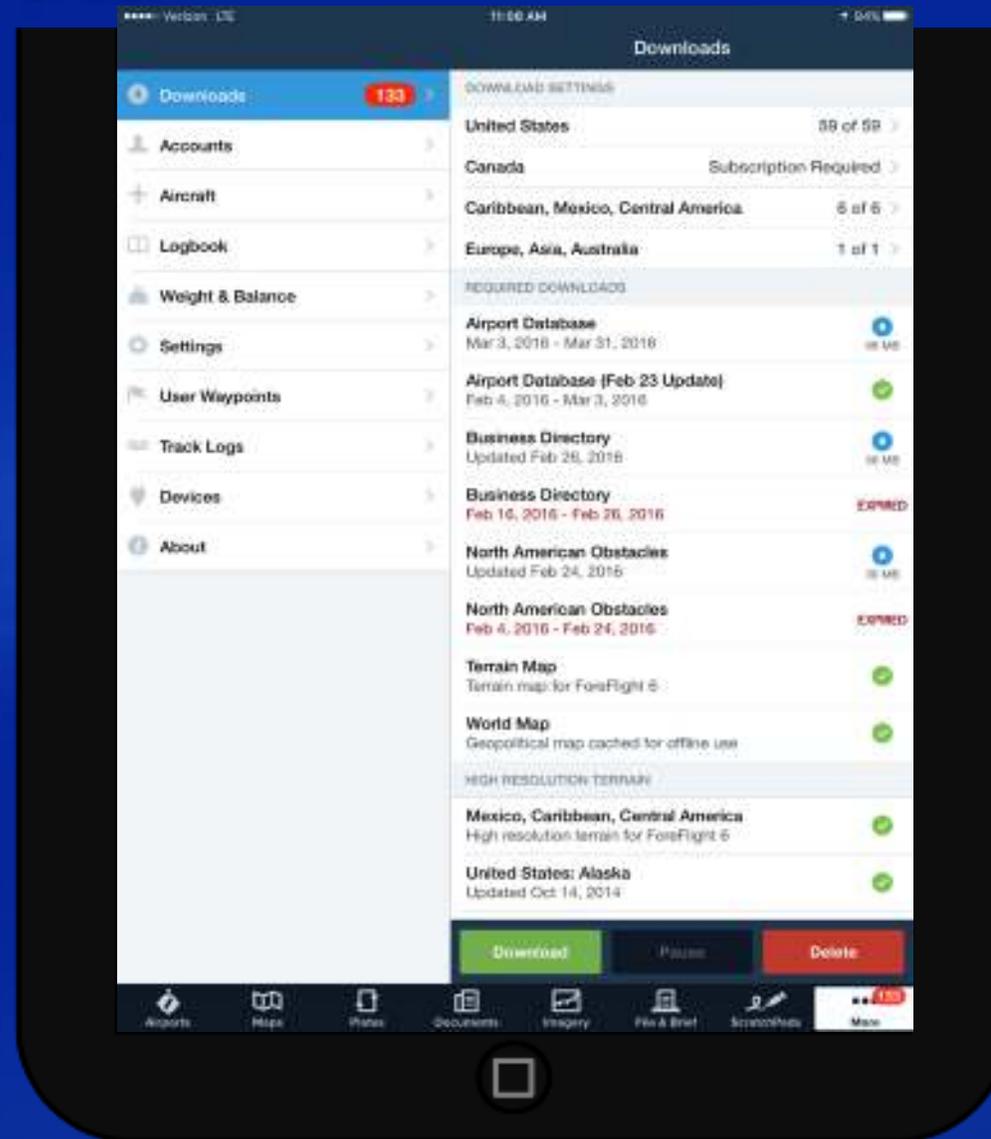
# Tabs: More: Downloads



# Tabs: More: Downloads



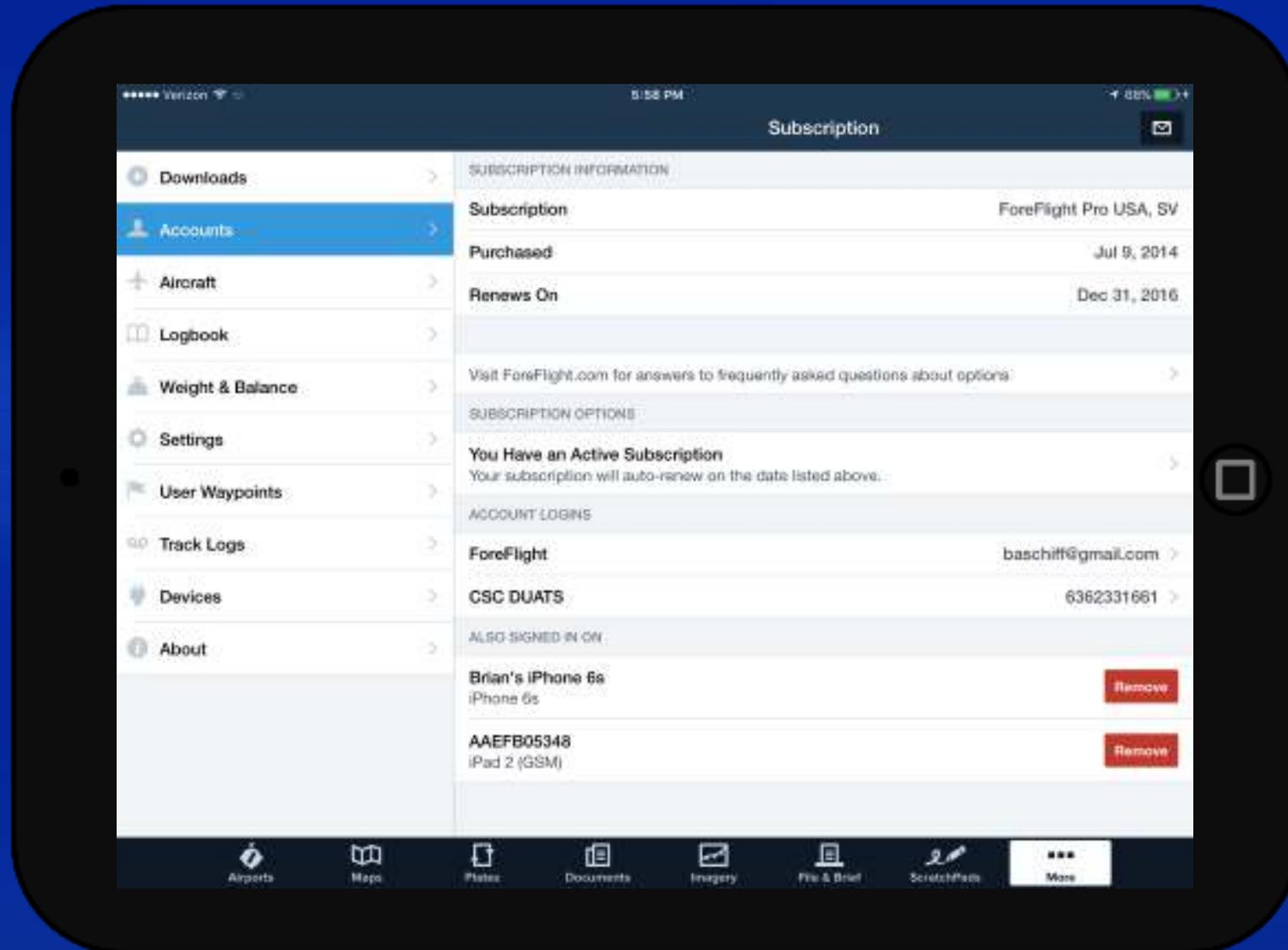
# Download Data



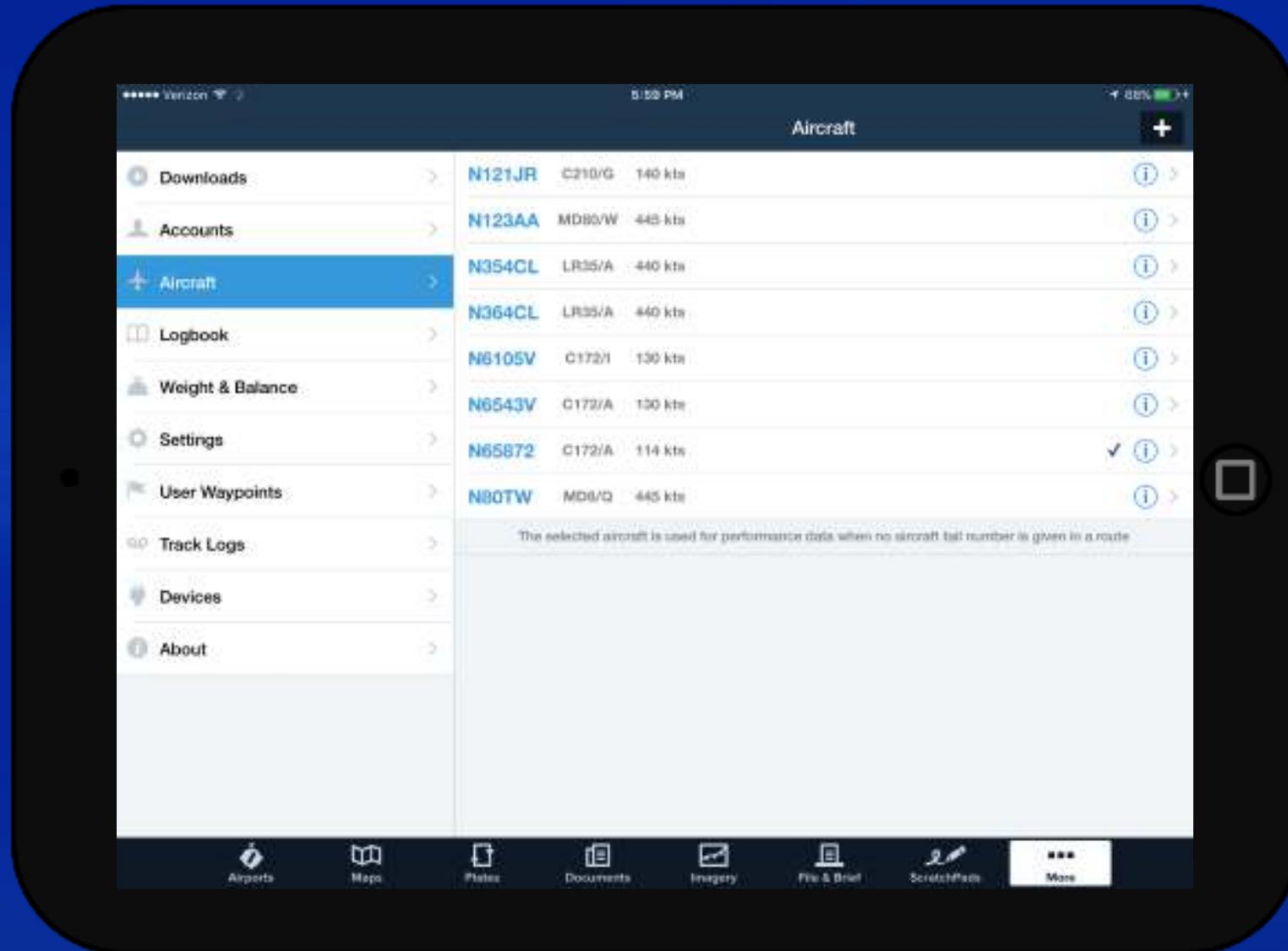
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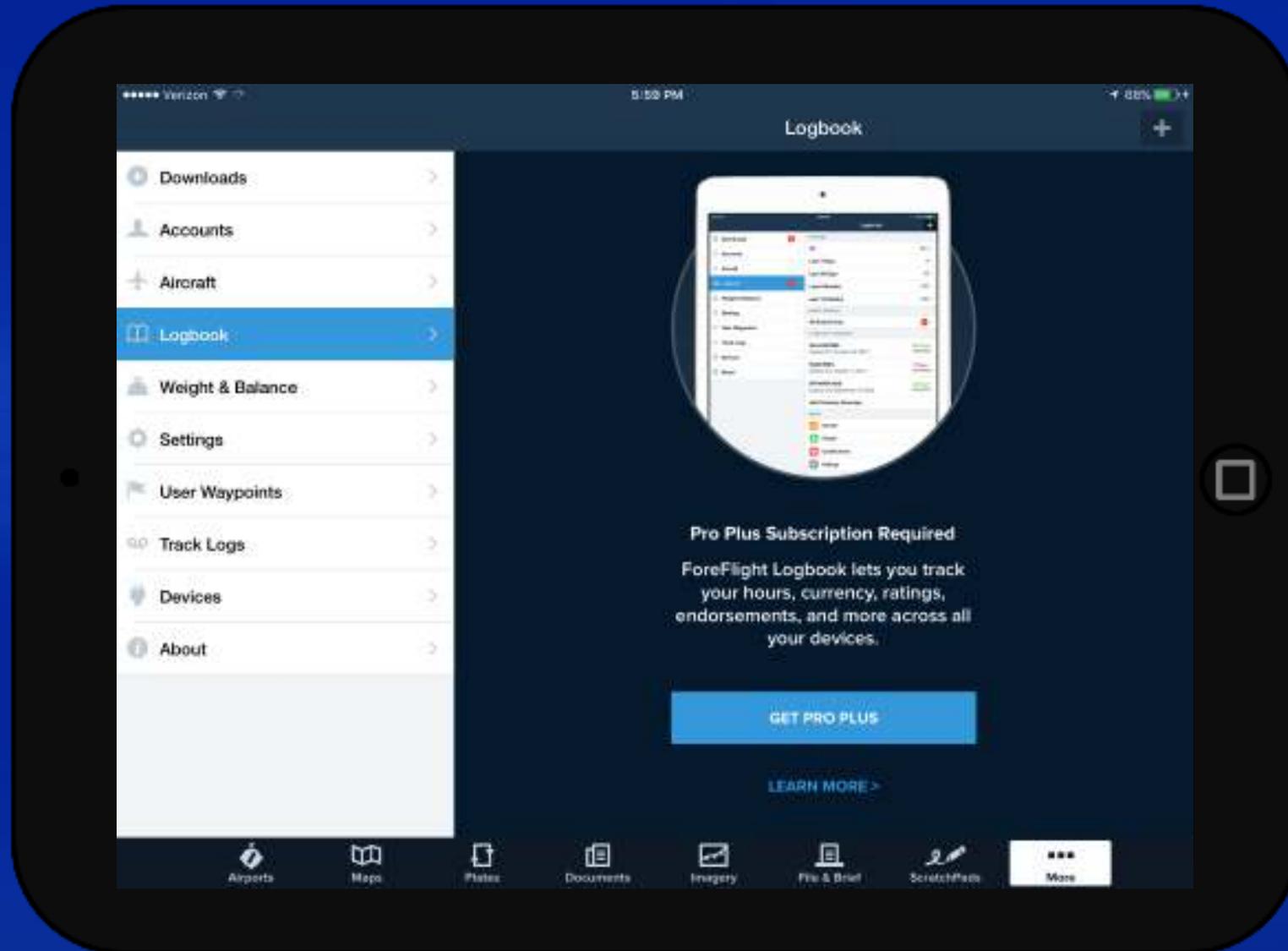
# Tabs: More: Accounts



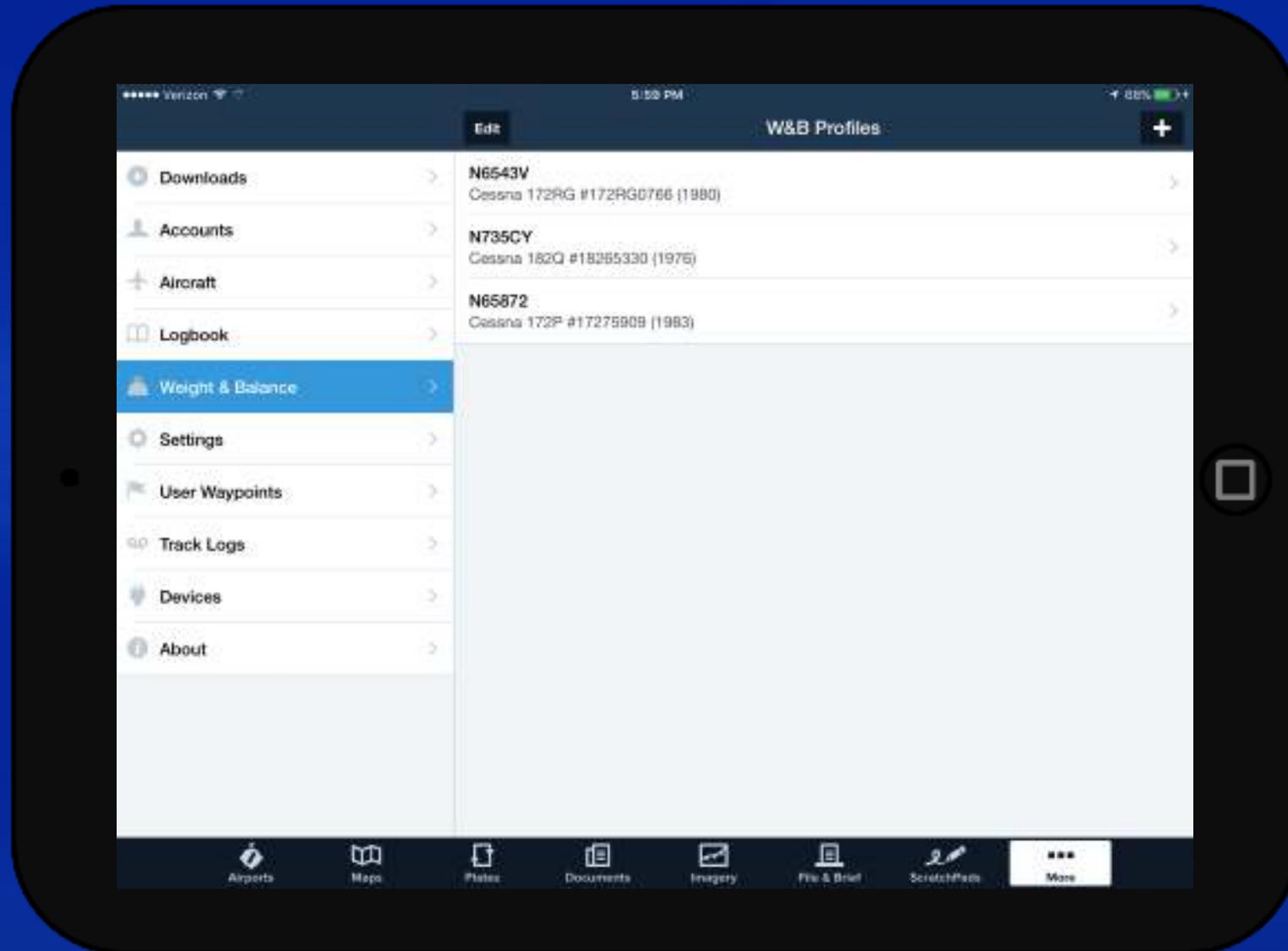
# Tabs: More: Aircraft



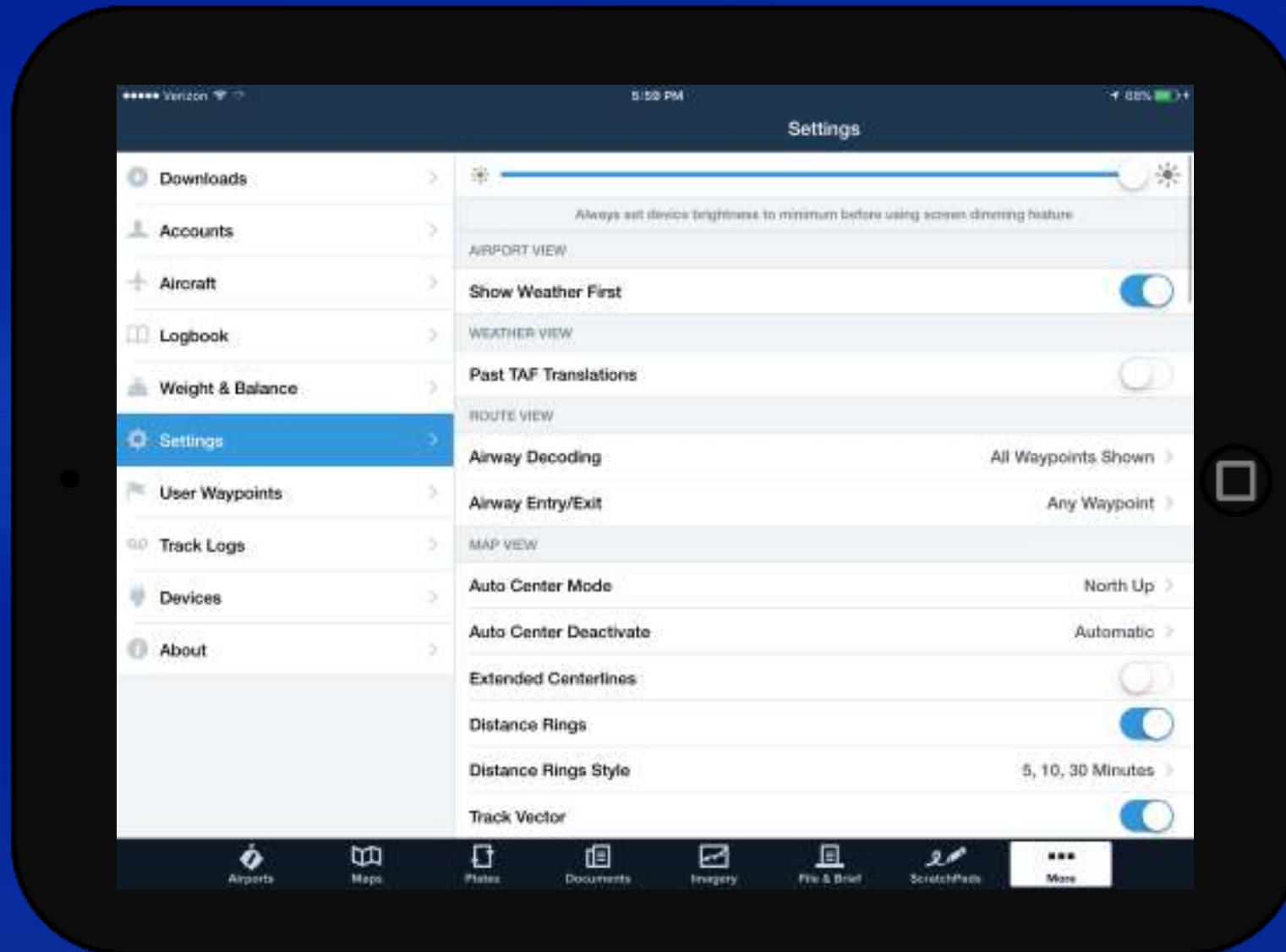
# Tabs: More: Logbook



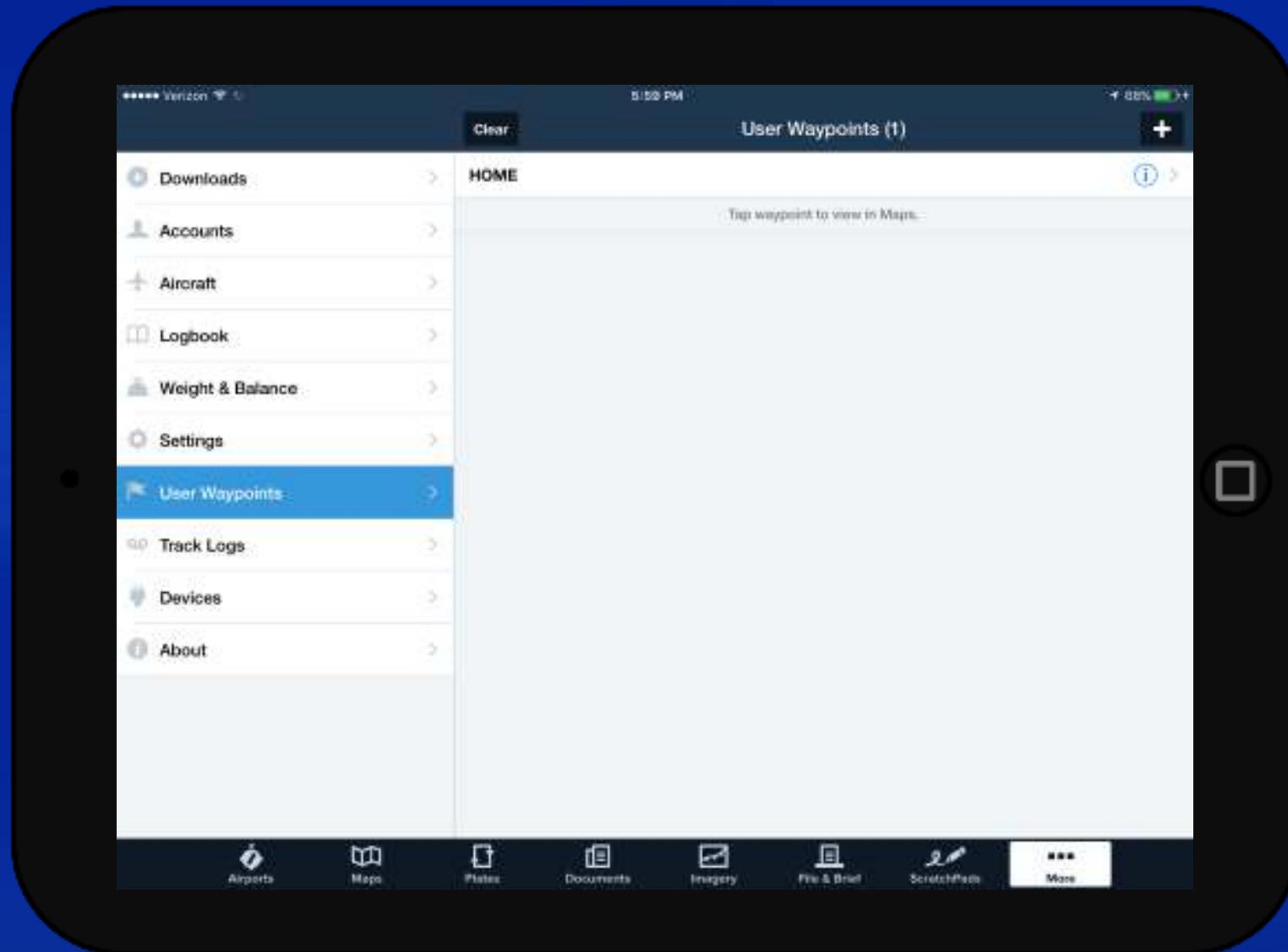
# Tabs: More: Weight & Balance



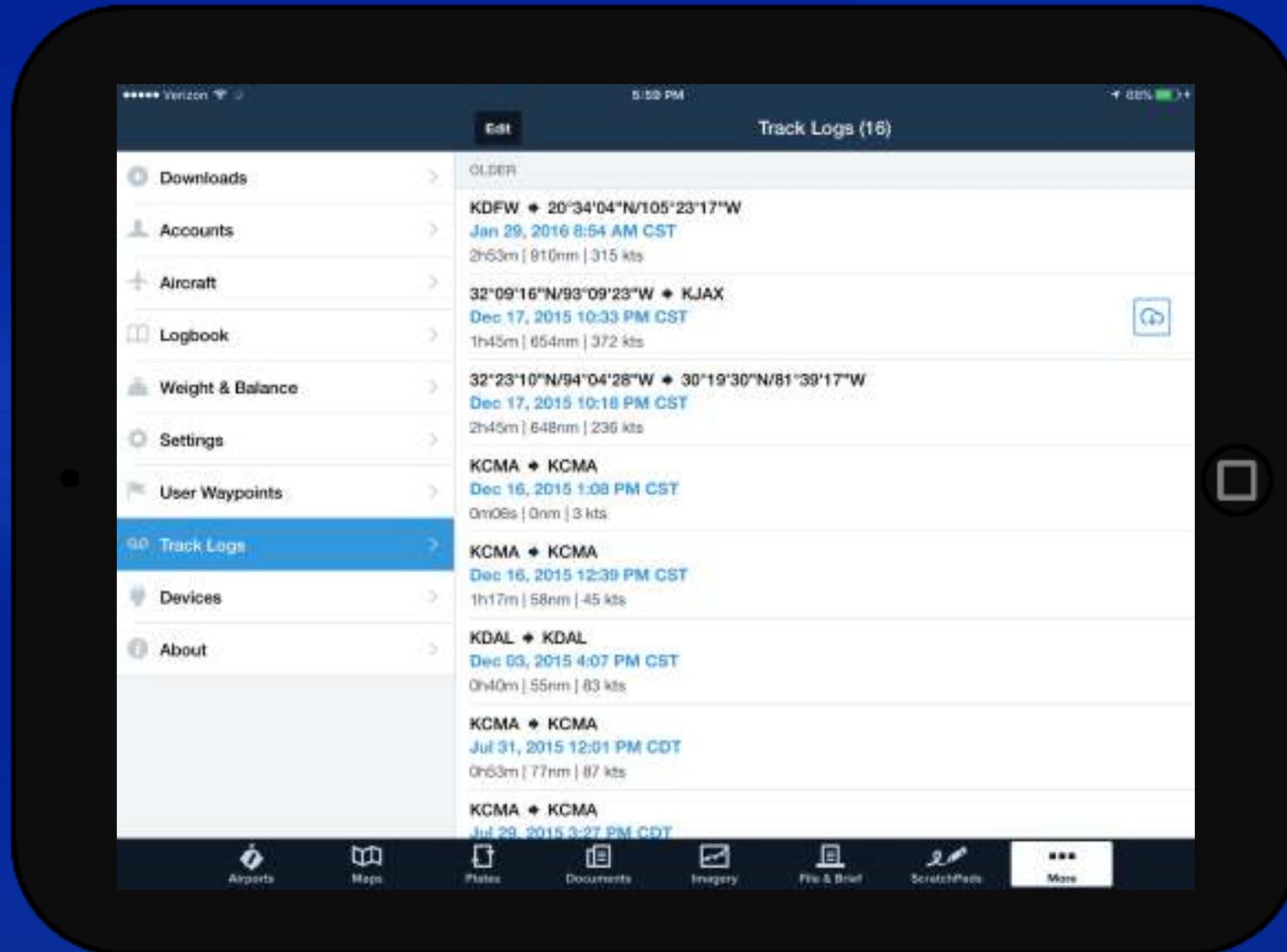
# Tabs: More: Settings



# Tabs: More: User Waypoints



# Tabs: More: Track Logs



# Tabs: More: Devices



# Tabs: More: Devices



## Stratus (in flight):

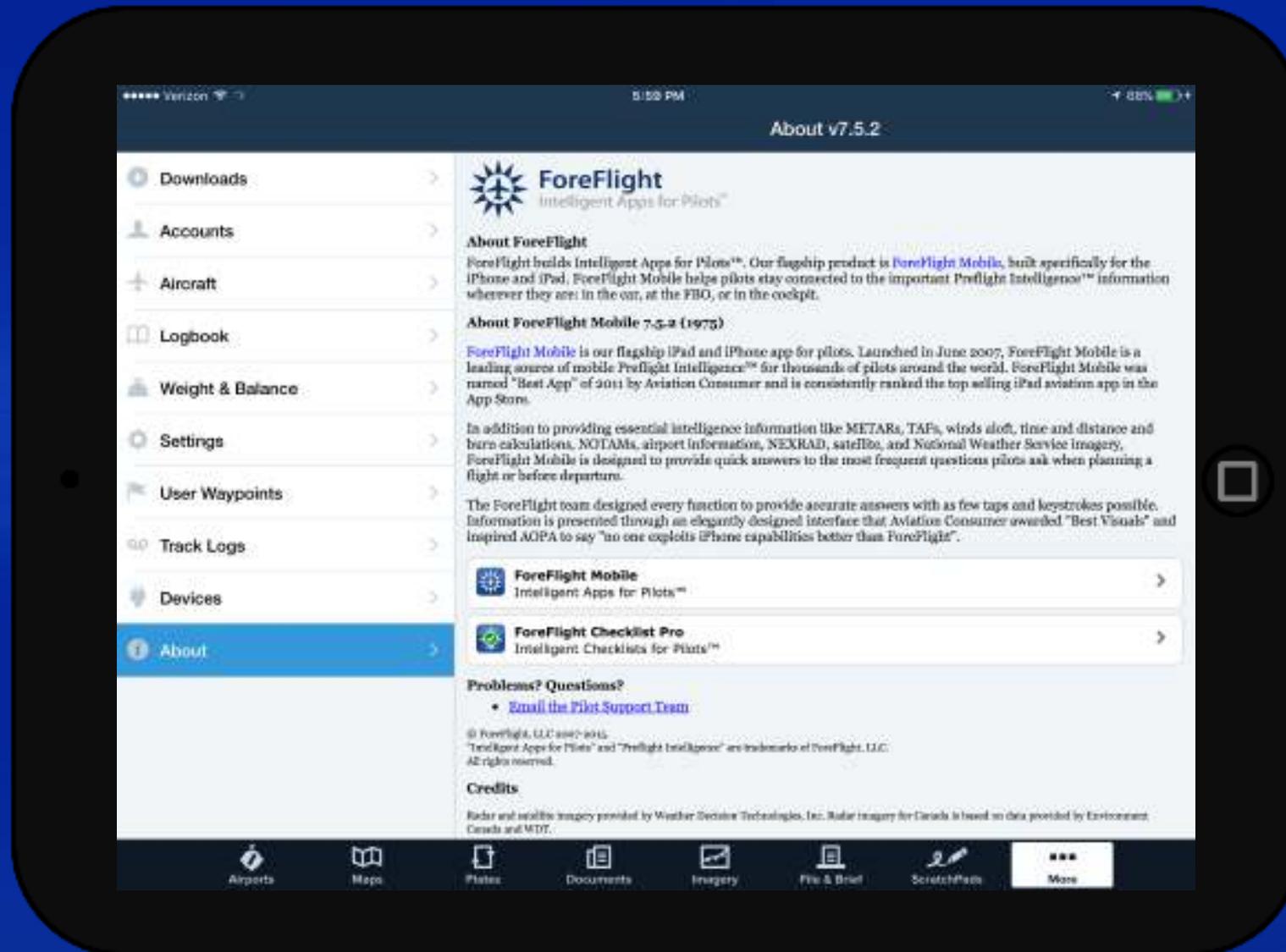
- WAAS GPS
- NEXRAD Radar
- METARs/TAFs
- TFRs
- PIREPs
- AIRMETs & SIGMETs
- NOTAMS



## External GPS (in flight):

- GPS position

# Tabs: More: About



# Many Advisors

- Route Advisor **Routes**
- Altitude Advisor **5,500'**
- Procedure Advisor **Procedure**
- Runway Proximity Advisor
- NOTAM Advisor
- Hazard Advisor
- Cabin Altitude Advisor (requires e)
- Glide Advisor



# Runway Proximity Advisor

- Audio & visual alert system
- Uses GPS
- Available to ALL subscribers
- Runs automatically in background

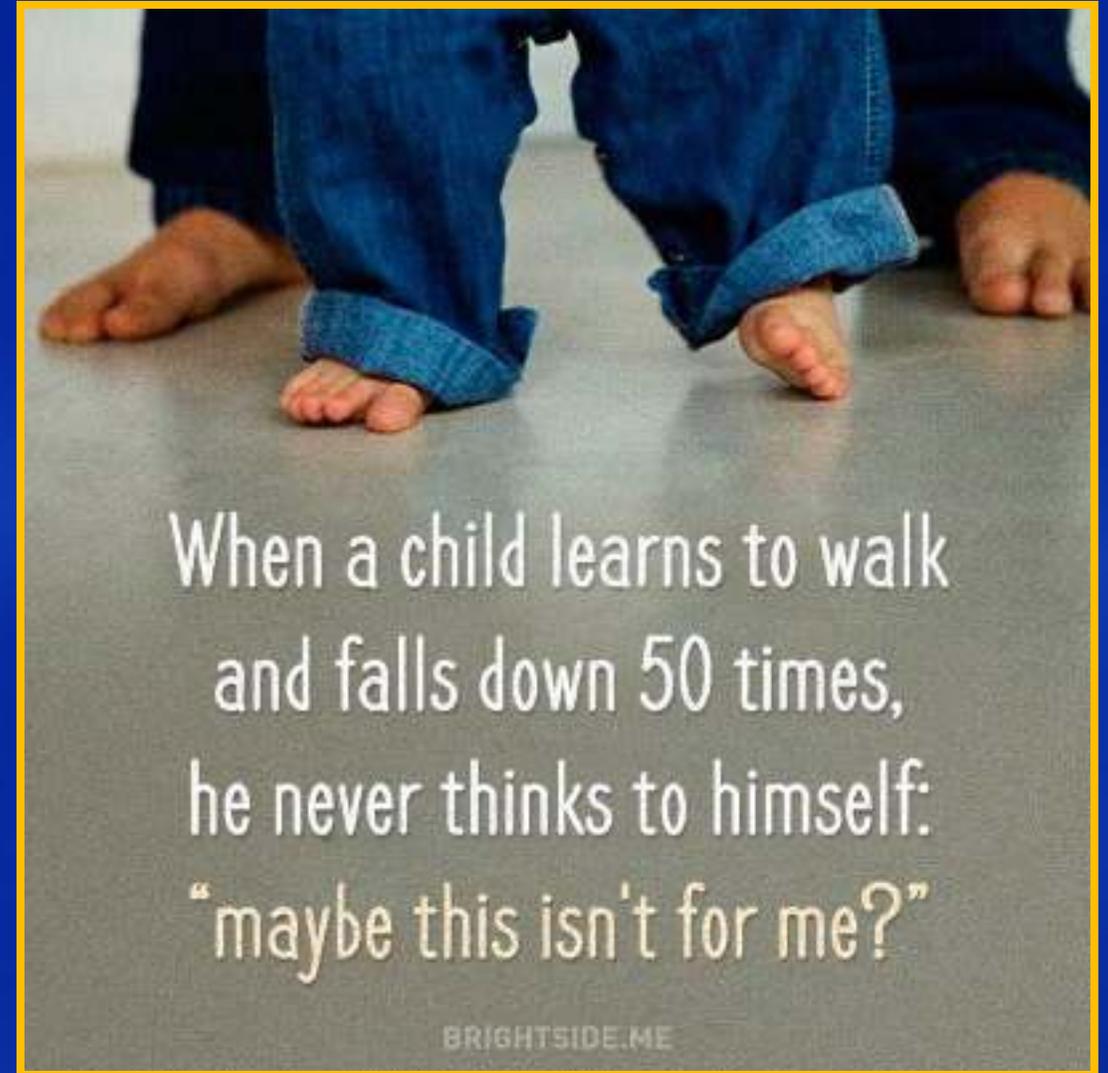


# Glance View – New!

- In synthetic vision mode – swipe across screen
  - Pan
  - Zoom
  - 6-second radial timer to return

# Progress

- ✦ iPadology
- ✦ ForeFlight Overview
- ✦ Setup iPad & ForeFlight
- ✦ **Flight Planning**
- ✦ Tips & Tricks





# Flight Planning



*“Measure twice, cut once.”*

# Flight Planning Exercise

- KBTF – KEKO
  - VFR
  - Route?
    - Direct?
    - BVL-LWL-ARAYI-BOU
  - Altitude?

# Flight Plan #2

---

## Maps: Search Box

- KSLC - KELY
- VFR
- 110 Knots
- 10,500' Feet
- 10 GPH



Type: "KSLC KELY"

Type: "KSLC KELY 110kts 10500ft 10gph"

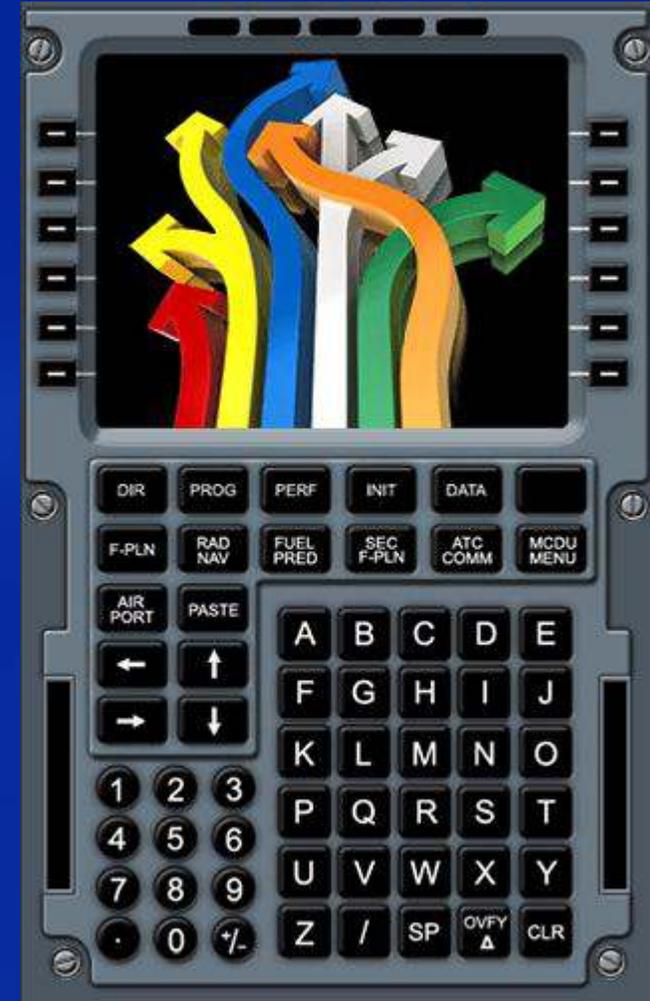
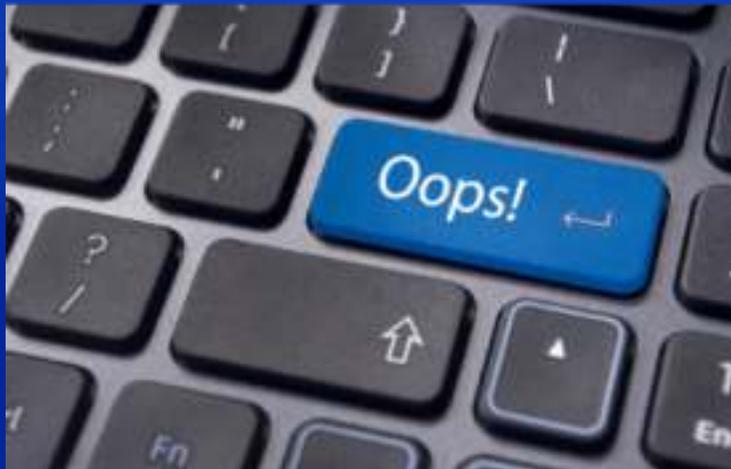
or: "KSLC KELY 110 10500 10"

# Create Custom Route

- Altitude Advisor
- Profile Advisor
- Rubber-banding
- Drag-a-fix
- Touch (tap & hold)

# Oops! – Save and Favorites

- What if you've accidentally deleted your entire route by direct to a downline fix?



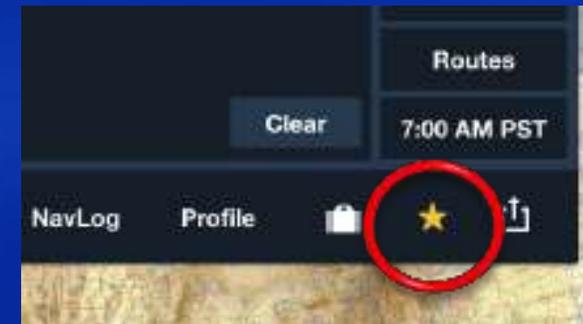
# Oops! – Save and Favorites



- Use the History button



- Save route to favorites...



- Recall with the Favorites button



# Filing Flight Plan

- In Route Editor:

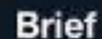
- Select “send to” button



- Send to “File & Brief” for full briefing



- “File” to file flight plan

A dark grey button with the word 'Brief' in white text.A blue button with the word 'File' in white text.

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Airports



Maps



Plates



Documents



Imagery



Flights



ScratchPads

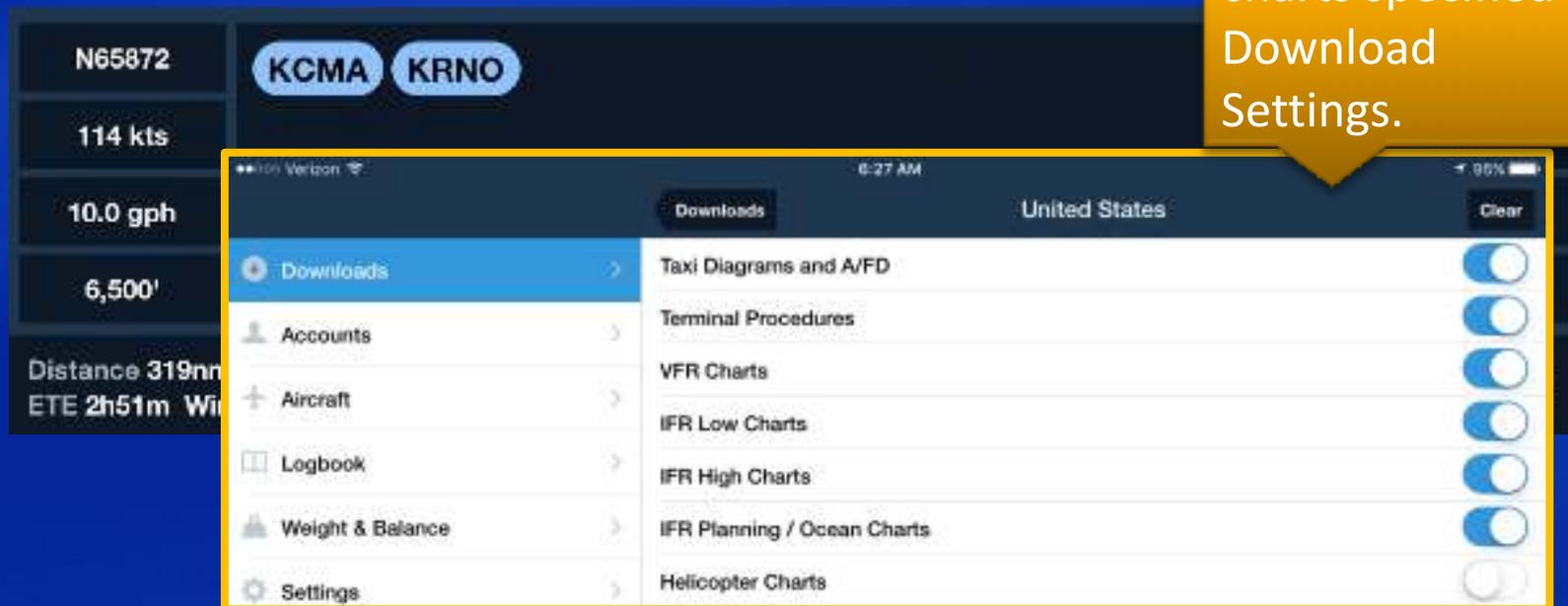
More

# Maps Tab: Route Advisor: Pack



- Downloads everything required for the flight

Note: Will only pack types of charts specified in Download Settings.



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# Get Briefing

- Flights Tab:
  - tap Brief

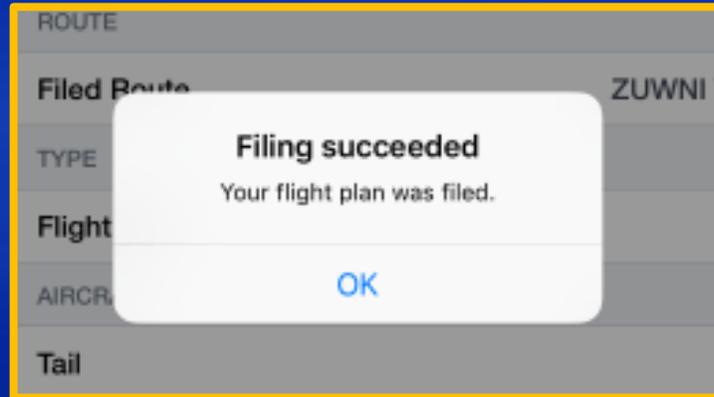
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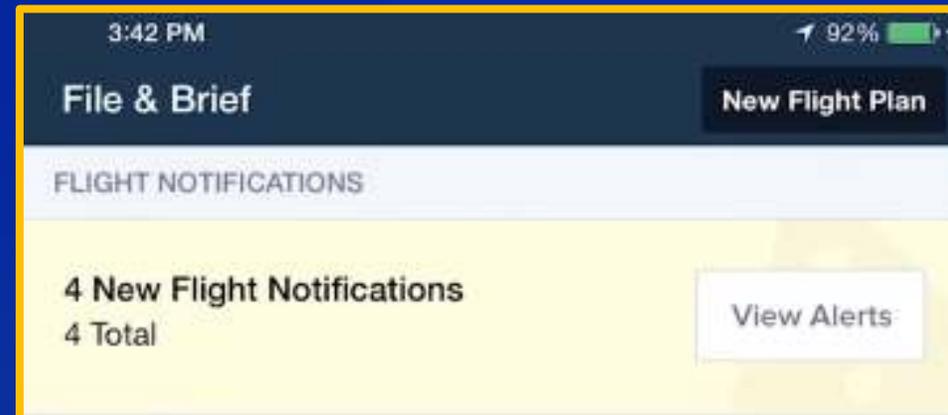
# File Flight Plan

- File & Brief Tab:
  - tap File



# After Filing

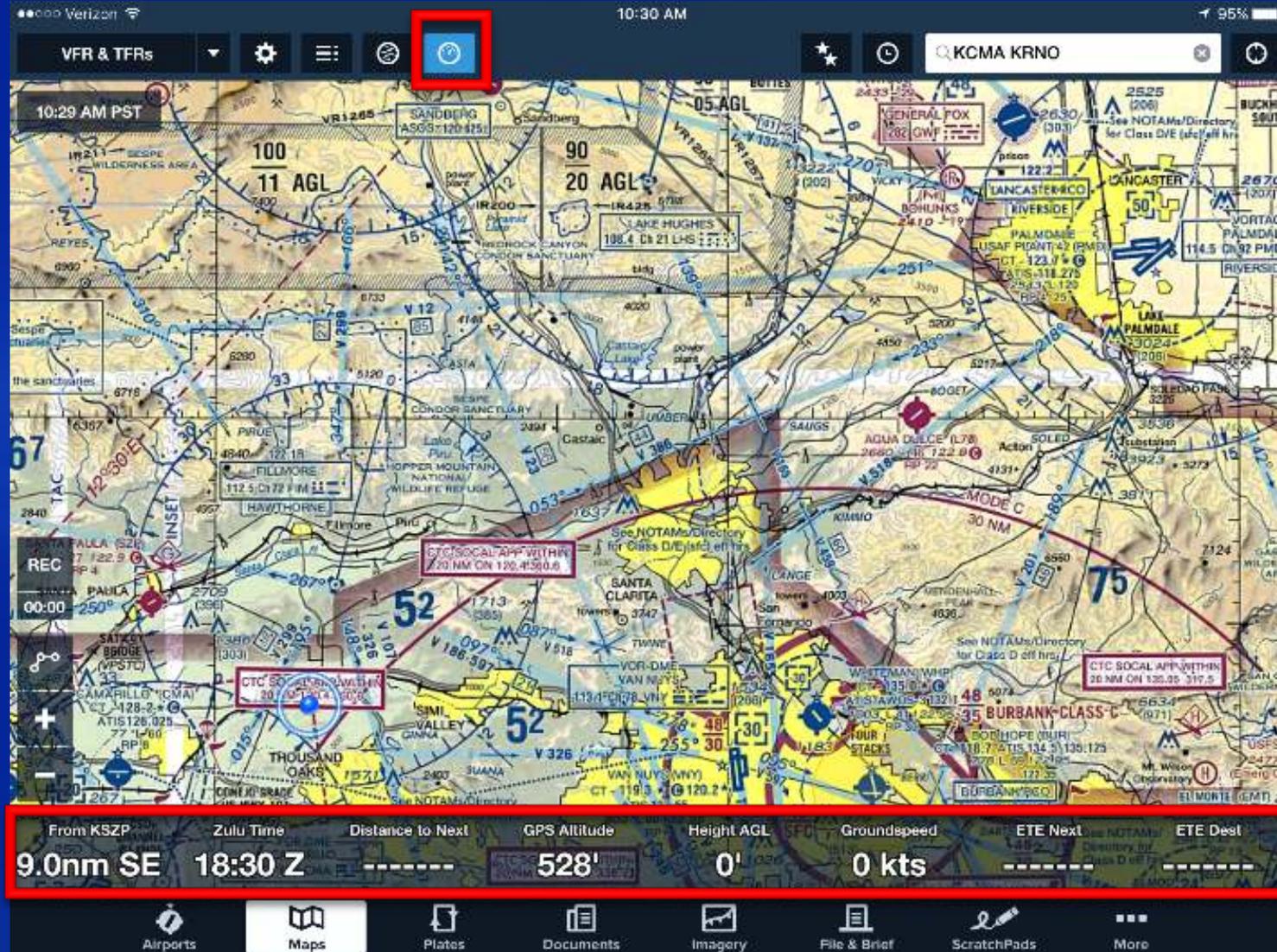
- Approved by ATC notification
- Flight Notifications:
  - New TFRs
  - New AIRMETs
  - New SIGMETs



# After Filing You Can:

- Cancel flight plan
- Amend (new route—"cleared as filed")
  - Discard Changes
  - File Changes
- VFR
  - Open
  - Close

# Instrument Panel



# What's Up – On The Map

- IFR or VFR chart
- Radar or Hazard Advisor
- TFR



## Map overlays **IMPORTANT NOTICE:**

An active Internet connection or in-flight weather receiver such as a Stratus 2 ADS-B or Baron Mobile Link/XM are required to display timely map overlay information.

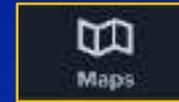
**Immediately before your flight:** While still connected to the Internet, use the [Pack](#) feature to ensure all relevant TFR and weather data is downloaded. Note the time-stamp in the upper-left corner of the Maps page, indicating the time when the overlay data was received.



# Nearest Airport

- Three ways to find the nearest airport:

1. Maps tab – finger touch & hold



2. Airports tab – search, nearest button



3. Instrument Panel – option:



# Synthetic Vision (Pro Subscription)

- Should NOT be used as primary method of terrain & obstacles avoidance – backup only



Attitude Indicator with GPS input but no SV subscription or AHRS input.



Attitude Indicator with AHRS input and SV subscription.

# Flight Plan #6 – To Be Flown!

- KLGB – L35
- Cessna 172
- VFR
- Altitude: ?
- Route: ?



# Flight Plan #6

- Ammeter – full scale charge!!



CESSNA  
MODEL 172R

SECTION 3  
EMERGENCY PROCEDURES

## ELECTRICAL POWER SUPPLY SYSTEM MALFUNCTIONS

### AMMETER SHOWS EXCESSIVE RATE OF CHARGE (Full Scale Deflection)

1. Alternator -- OFF.

**⚠ CAUTION**

WITH THE ALTERNATOR SIDE OF THE MASTER  
SWITCH OFF, COMPASS DEVIATIONS OF AS  
MUCH AS 25° MAY OCCUR.

2. Nonessential Electrical Equipment -- OFF.
3. Flight -- TERMINATE as soon as practical.

# The Dreaded Diversion

- Nearest Airport?
  1. Maps – finger touch & hold
  2. Airports – search, nearest button 
  3. Instrument Panel – option
- Turn on Distance Rings (Quick Settings) 
- Two-finger ruler
- Tap on airport
- Tap on More tab
- Tap “Direct To”
- Tap Airport again, Tap “Details”
- Tap “Info” & scroll down

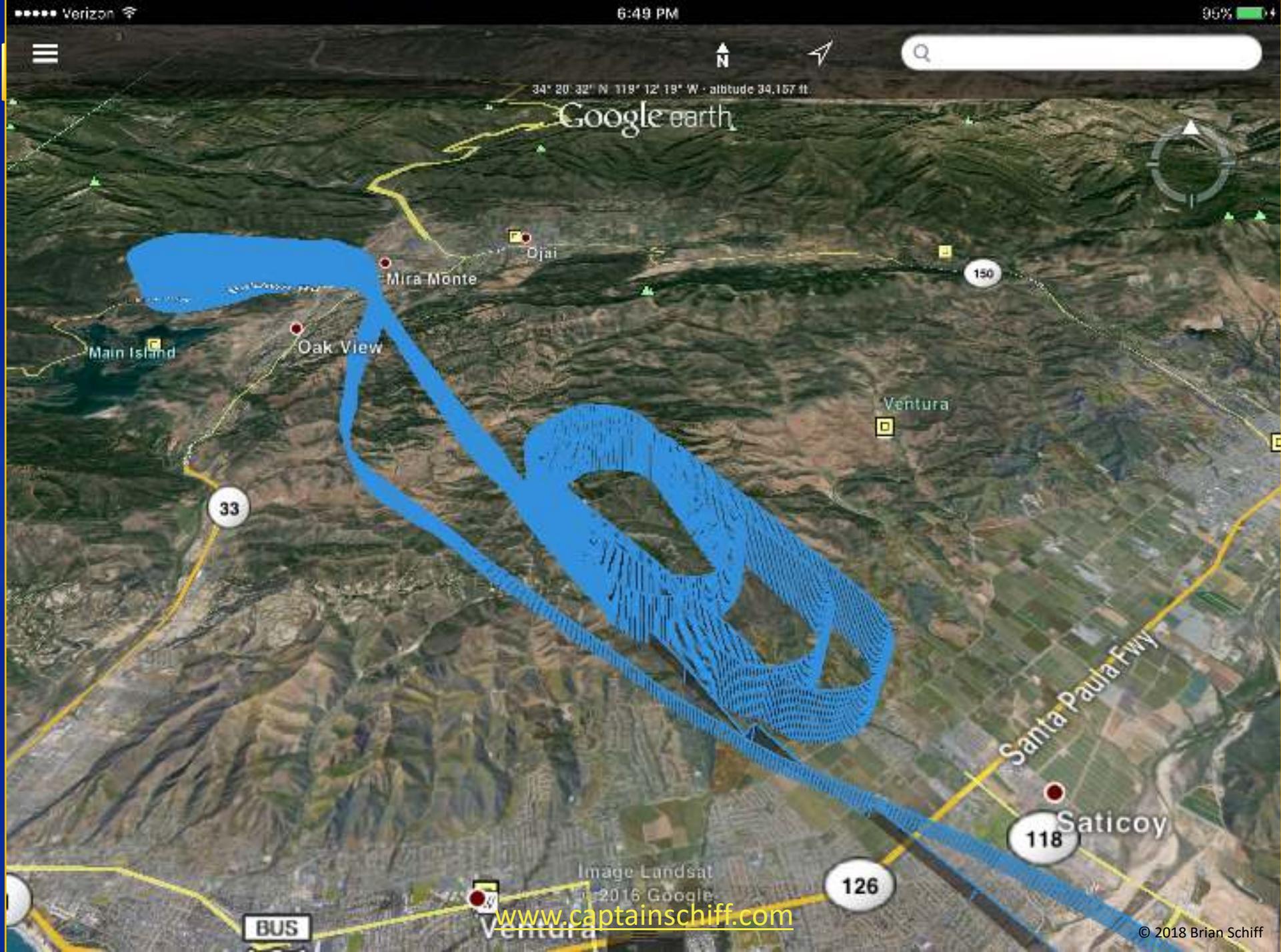


# Post Flight



- After landing, the brain relaxes
- ForeFlight helps with Airport Diagram (Pro)
  - **More > Settings > Taxi Diagram**
- Geo-referenced airplane symbol on plate (Pro)
- Tap to view NOTAMs box if visible
  - **Shows taxiway NOTAMs only**
- FBO button on top 
- Pen Button to highlight taxi route 

# Track





# Tips & Tricks

*"Wisdom is the quality that keeps you from getting into situations where you need it."*

-- Doug Larson,  
American newspaper columnist

# How do you create a waypoint?

- Radial and distance from VOR?
- Intersection of two radials?

The Secret...



PLACE/BEARING/DIST

Example: VNY/180/10

The Secret...



PLACEbearing/PLACEbearing

Example: VNY180/SMO112



# Tips & Tricks

- Screen capture
- Share routes with Send To button
  - Another iPad on network
  - Email address
  - Printer
- Map Touch Action (Quick Settings)
- Ruler Profile
- Instrument Panel Options
  - Nearest Airport



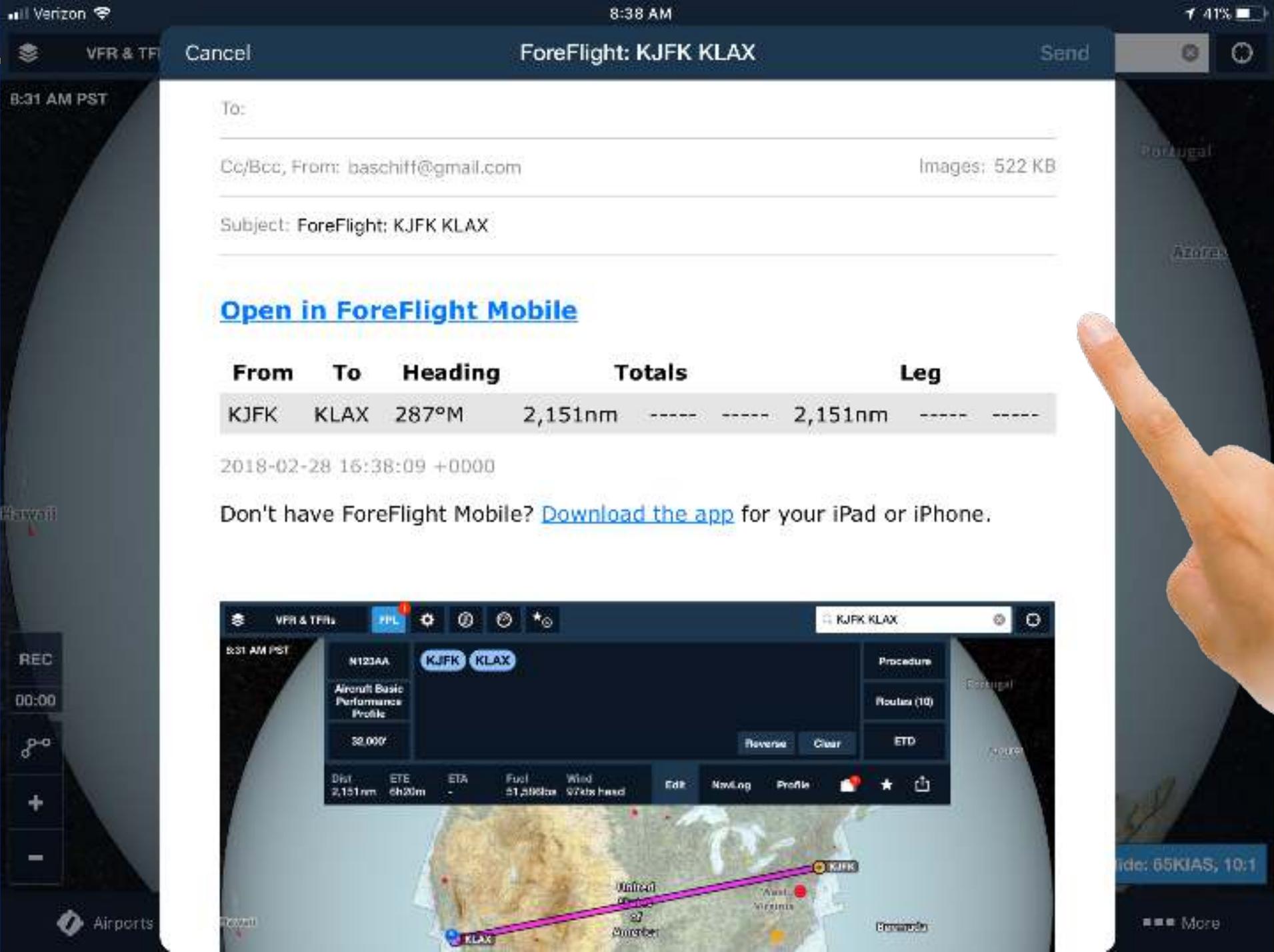
The

The screenshot displays a flight planning application interface. At the top, the status bar shows 'Verizon', signal strength, Wi-Fi, and battery level at 44%. The app header includes 'VFR & TFRs', 'FPL', and various icons. A search bar at the top right contains 'AAL1'. The main display area is divided into several sections:

- Flight Information:** Aircraft ID 'N123AA', Aircraft Basic Performance Profile, and altitude '32,000'.
- Waypoints:** A series of waypoints are listed in colored buttons: KJFK, COATE, Q436, RAAKK, Q438, RUBY, DABJU, BAE, KP81A, LAR, CHE, HVE, and KLAX.
- Performance Data:** Dist 2,230nm, ETE 6h03m, ETA -, Fuel 49,304lbs, Wind 68kts head.
- Map:** A map of the United States showing a flight path from the West Coast (near Los Angeles) through California, New Mexico, Wyoming, and Colorado towards the East Coast. Waypoints are marked along the path.
- Send To Menu:** A dark overlay menu is open, showing options: MAIL, FLIGHTS, LOGBOOK, CLIPBOARD, OTHER, and PRINT. A yellow box highlights the 'Share' icon (two overlapping squares with an upward arrow), which is being pointed to by a hand.
- Bottom Bar:** Navigation icons for Airports, Maps, Plates, Documents, Imagery, Flights, ScratchPads, and More.

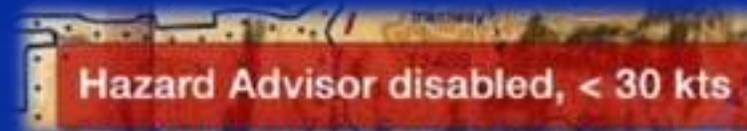
At the bottom right, a blue box displays 'Glide: 65KIAS, 10:1'. The time '8:07 AM PST' is shown in the top left corner of the app.

# The



# Tips & Tricks

- Settings:
  - Distance Rings (with green track triangles)
  - Extended Centerlines
    - Unfamiliar airports
    - Multiple runways
  - Track Vector (the “noodle”)
  - Current Location Marker
  - Hazard Advisor



# Tips & Tricks

- Plates tab Smart Search
- Plates – send to map overlay (Pro)
- Switching approach plates (Pro)
  - Three finger swipe L to R or R to L
- Two “Nearby” buttons on Airports Tab
- Spotlight Search – iPad Air and later

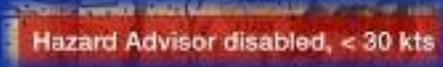
# Tips & Tricks: Direct

- Fly direct vs. intercept airway (fly the leg)
- Direct to (3 ways):
  1. Search box – “D KCMA”
  2. Nav Log – tap arrow, tap “Direct XXX”
  3. Map – tap & hold, tap more, “Direct To”

# Tips & Tricks

- iPad inverted “night” mode: Tripple-clicking the home button on the iPad will toggle between inverting the colors & normal.
- To set up:
  - iPad Settings tab
  - General > Accessibility > Physical & Motor
  - Tap Accessibility Shortcut, Tap Invert Colors

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  - Physical & Motor section
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# iPad Safety

*Don't crash the airplane to fly  
the iPad.*



# Safety Tips

- Setup as much as possible before flight
- Copilot
- Cockpit mount
- Battery management
- What ifs:
  - Little blue airplane goes away?
  - GPS position lost?
  - Screen goes blank?
  - Battery dies?

# Safety Tips

- Don't use polarized sunglasses
- Don't become a "Child of the Magenta"
- Look out the window!
- Practice, practice, practice
  - Couch flying
  - X-Plane Simulator [www.x-plane.com](http://www.x-plane.com)
  - Microsoft FSX [www.fsxflight.com](http://www.fsxflight.com)
  - [www.infinite-flight.com](http://www.infinite-flight.com)
  - Play with ForeFlight!

# Safety Tips

- ADS-B data gaps (15-minute cycle)
- Nexrad Latency
  - WX can be up to 20 minutes old!

# Ways to Learn More

- Read the Pilot's Guide available online or through the App Documents tab
- Go “couch flying” – Integrates with:



# ForeFlight Customer Support

***team@foreflight.com***

*Fanatical Pilot Support™*



End

[www.captainschiff.com](http://www.captainschiff.com)

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[ForeFlight PowerPoint Slides](#) (Coming Soon)

[ForeFlight Pilot's Guide](#) (version 9.4)

[ForeFlight Layout Map](#) (needs updating)

[iPad Checklist](#)

FAR 91.21 Portable Electronic Devices

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