

FIS-B Weather

What is it? Where is it? How do I get it?

Automatic Dependent Surveillance - B

ADS-B

```
graph TD; ADS-B --- FIS-B; ADS-B --- TIS-B; FIS-B --- FIS_B_Text[Flight Information Services]; TIS-B --- TIS_B_Text[Traffic Information Services];
```

FIS-B

Flight Information
Services

TIS-B

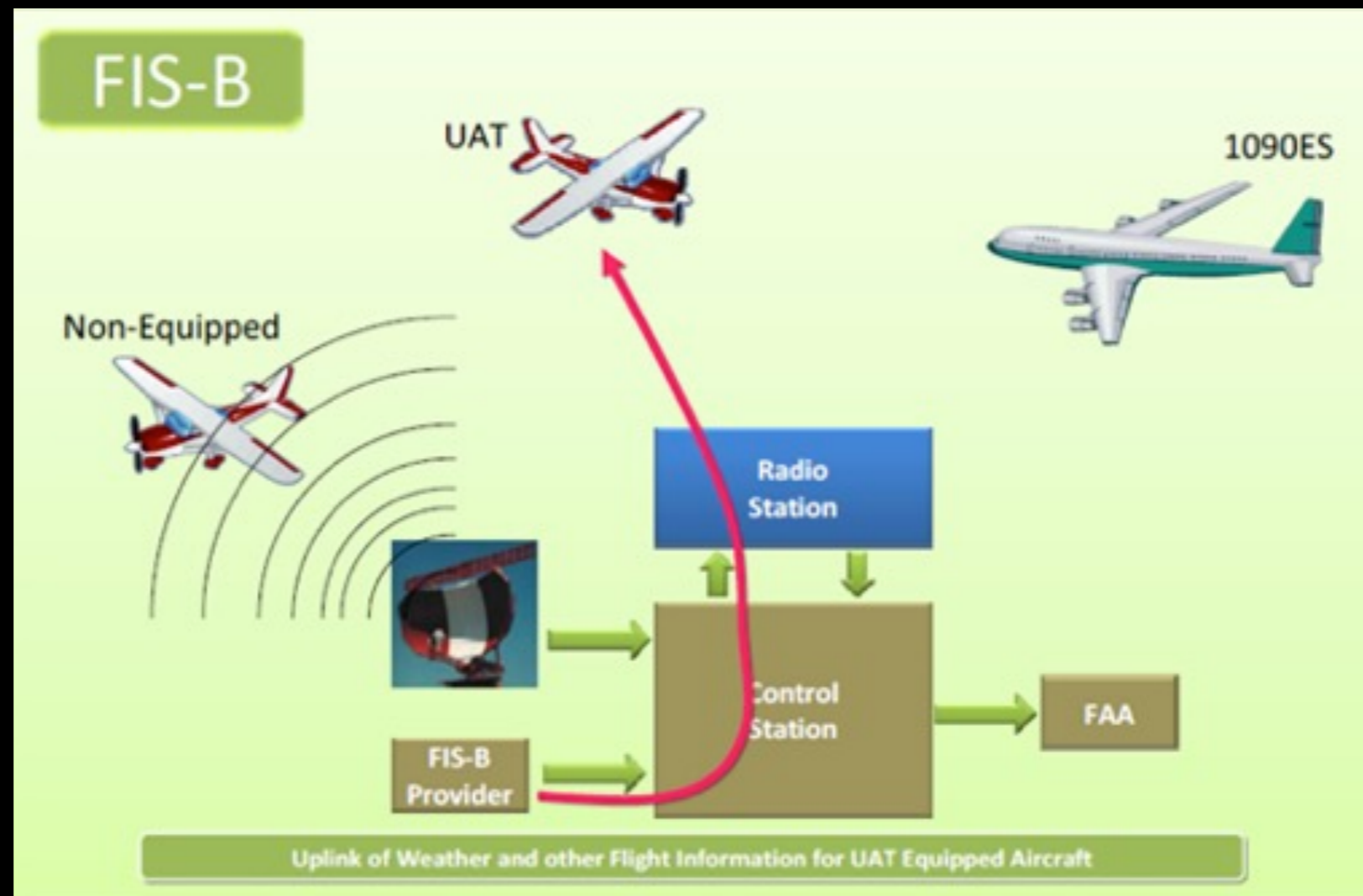
Traffic Information
Services

ADS-B is **Automatic** because it works with no action required by us or ATC. It is **Dependent** because it depends on our GPS system (GNS 430 or 530). And it is sending **Surveillance** info to ATC via a **Broadcast**. FIS-B and TIS-B are provided to aircraft (like ours) that have ADS-B in.

FIS-B

How it works

- Ground based antenna
 - Four levels: Ground, Low, Medium, High
- Continuous transmission
- Lag (1-15 minutes)





= accessible on GNS430/530



= also accessible on iPad



METAR

TAF

National NEXRAD ("CONUS")

Regional NEXRAD

SPECI

AMEND

AIRMET

Convective SIGMET

SIGMET

D-NOTAM

FDC-NOTAM

PIREP

SUA status

Winds/Temp Aloft

Lightning

Turbulence

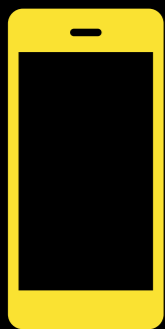
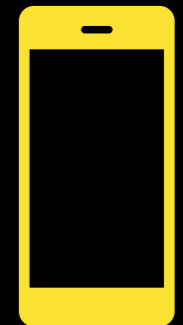
Icing

Freezing Levels

Cloud Tops

Graphical AIRMET

Center Weather Advisory



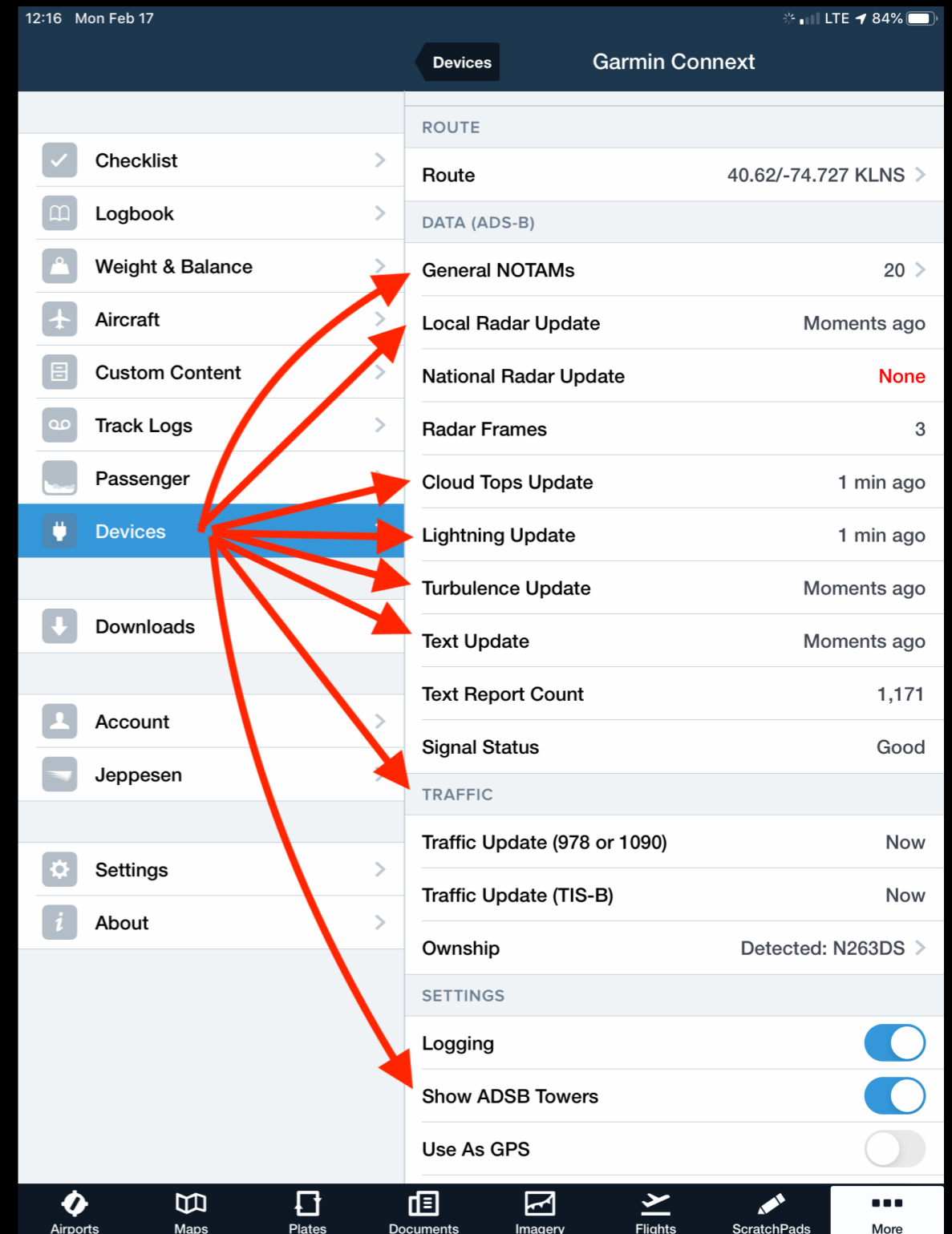
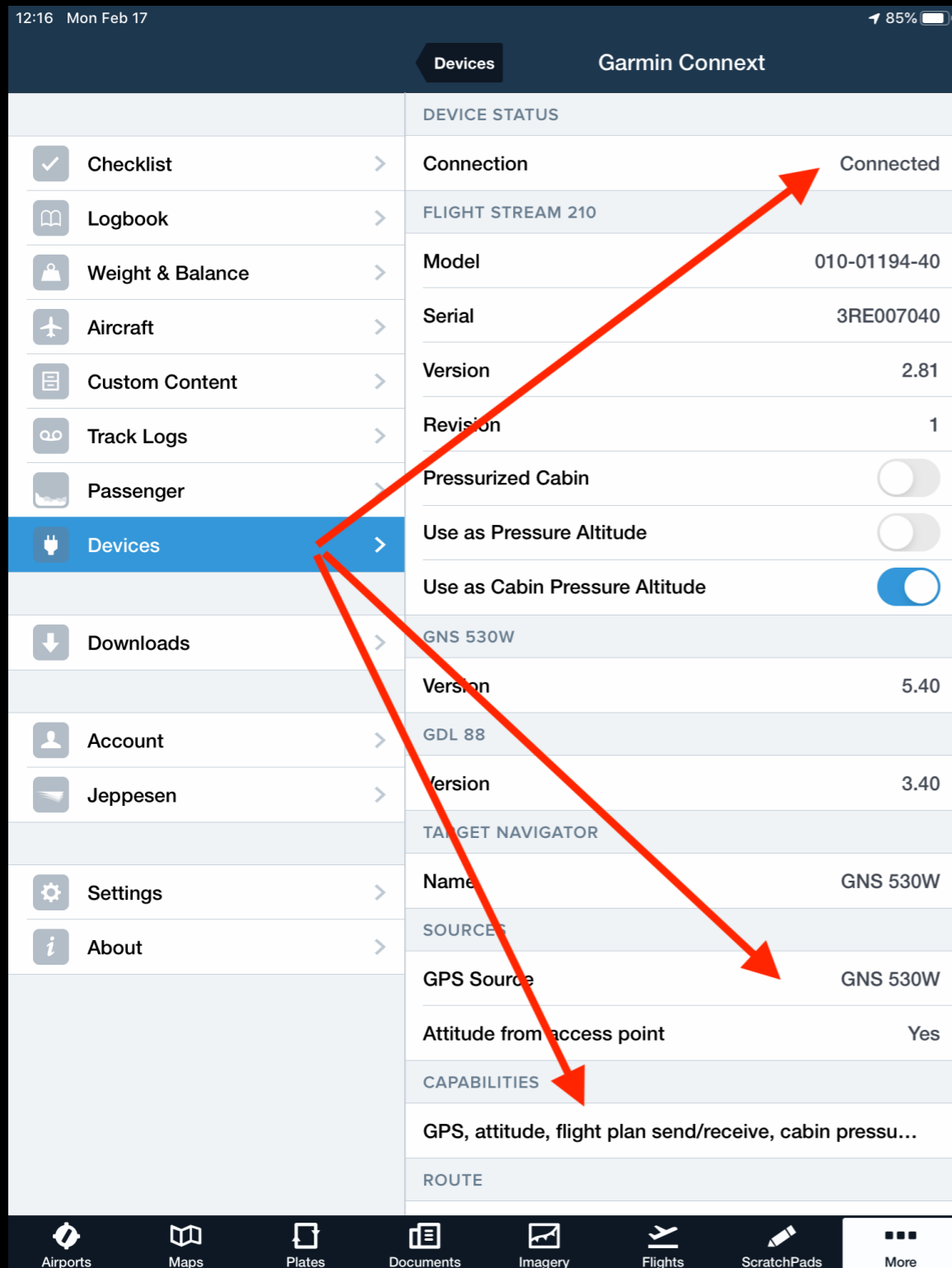
If you don't connect via Flight Stream 210, you are missing a LOT of good weather information.



**Cheatsheet on how to connect:
<http://blueskyaa.com/wp-content/uploads/Flightstream.pdf>**

Disclaimer: This is geared towards ForeFlight users but other systems are not too different.

Nice to know (but not required). You can check your connection.
The last slider switch on the right will display towers (next page)



See the ADS-B antenna towers - Grnd, Low, Medium, High



**Low
ADS-B
Tower**

The GNS 430/530 automatically connects to the right level tower. This preserves bandwidth for the system.



High

Up to 24000' AGL



Medium

Up to 14000' AGL



Low

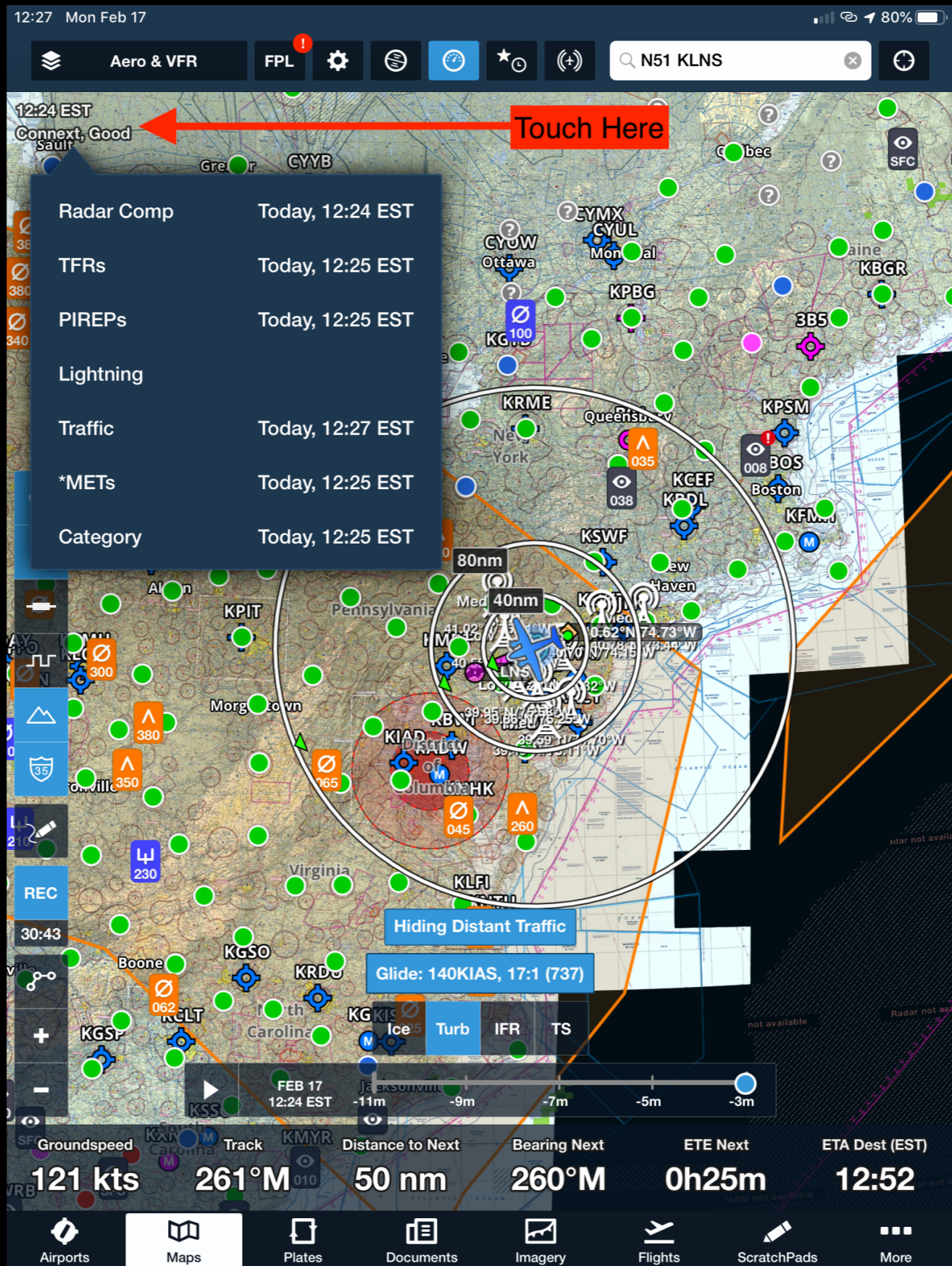
Up to 3000' AGL



Surface

**On the ground at
limited airports**

You can tap on the timestamp to see what is being updated



The Graphic Options

Tap the map overlay box to pull down your options

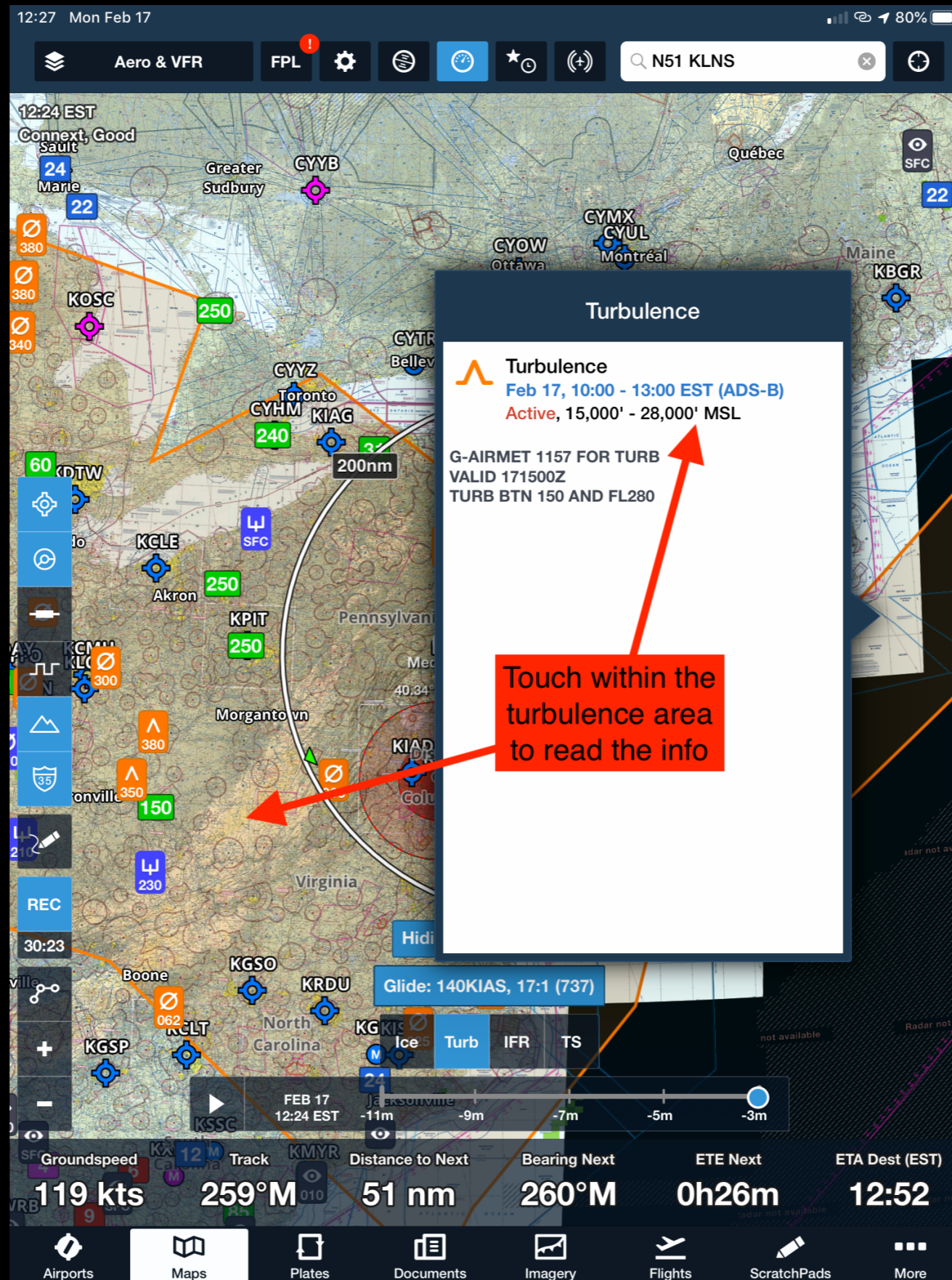
Tap the weather product that you want to see

The screenshot shows a flight simulator interface with a map overlay menu. The menu is divided into two columns of options. The left column includes: Aeronautical, Jeppesen VFR, Jeppesen IFR (low), Jeppesen IFR (high), Street Map, Aerial Map, US VFR sectional, US IFR (low), US IFR (high), Canada VNC, Canada IFR (low), Canada IFR (high), US IFR (planning), US IFR (ocean), US VFR (flyway), Caribbean/Mexico (low), and Caribbean/Mexico (high). The right column includes: Radar (Composite), Radar (Lowest Tilt), Cloud Tops (ADS-B), Enhanced Satellite, Color IR Satellite, Icing (US), Icing (Global), Turbulence (ADS-B), Turbulence (US), Turbulence (Global), Surface Analysis, Freezing Lvl (ADS-B), Hazard Advisor, Traffic, AIR/SIGMET/CWAs, TFRs, Flight Category, Surface Wind, Winds Aloft, Dewpoint Spread, Temperature, Visibility, Ceiling, Sky Coverage, PIREPs, and Lightning. The background map shows a flight path with various weather overlays and navigation data. The top status bar shows the time as 12:04 on Mon Feb 17, and the battery level at 90%. The bottom status bar shows flight data: 6 kts, 2200m, 77 nm, 261°M, 12h09m, 00:13, and Fuel: 100LL.

The Turbulence Layer

So, here's one example; the other graphic items behave the same e.g. Graphical Airmets, Icing, Sigmets, Center Weather Advisories.

Here we can see that the PIREP and Ceiling layers have also been selected.



Textual items: Tap an airport on the map

12:38 Mon Feb 17 75%

Aero & VFR FPL

N51 KLNS

KRDG
Reading Regional/Carl A Spaatz Field

Direct To Add to Route

43m ago (ADS-B)

VFR

KRDG 171654Z 02008KT 10SM CLR
A3027 RMK AO2 SLP258 T00781033

Time 11:54 EST

Wind 020° at 8 kts

Visibility 10 sm

Clouds Sky clear

Temperature 8°C (46°F)

Dewpoint -3°C (27°F)

Altimeter 30.27 inHg

Humidity 46%

Density Altitude -734'

Info METAR Forecast Winds FBOs

Hiding Distant Traffic

Glide: 140KIAS, 17:1 (737)

Ice Turb IFR TS

REC 41:06

Groundspeed 126 kts

Track 248°M

Distance to Next 24 nm

Bearing Next 246°M

ETE Next 0h11m

Descent to Dest 180 fpm

Airports Maps Plates Documents Imagery Flights ScratchPads More

The Airports Pages provide textual weather and NOTAMS

KABE: Lehigh Valley International
Allentown, Pennsylvania, US
40.65°N/75.44°W
Sunrise, set: 6:52 AM, 5:38 PM EST

Flight category: **VFR**
Elevation: **394' MSL**
Pattern altitude: **1,394' MSL (est.)**
Fuel: **Jet A+, Jet A, 100LL**
Procedures: **ILS, GPS, VOR, LOC,...**

ATIS: **126.975**
Clearance: **124.05**
Ground: **121.9**
Tower: **120.5**
Appr, Dep: **Multiple**

NOTAMS

METAR
KABE 172051Z 29003KT 10SM CLR 12/M07 A3024 RMK AO2 SLP243 T01171072 50000
Time: 3:51 PM EST
Wind: 290° at 3 kts
Visibility: 10 sm
Clouds: Sky clear
Temperature: 12°C (54°F)
Dewpoint: -7°C (19°F)
Altimeter: 30.24 inHg
Humidity: 26%
Density Altitude: -170'

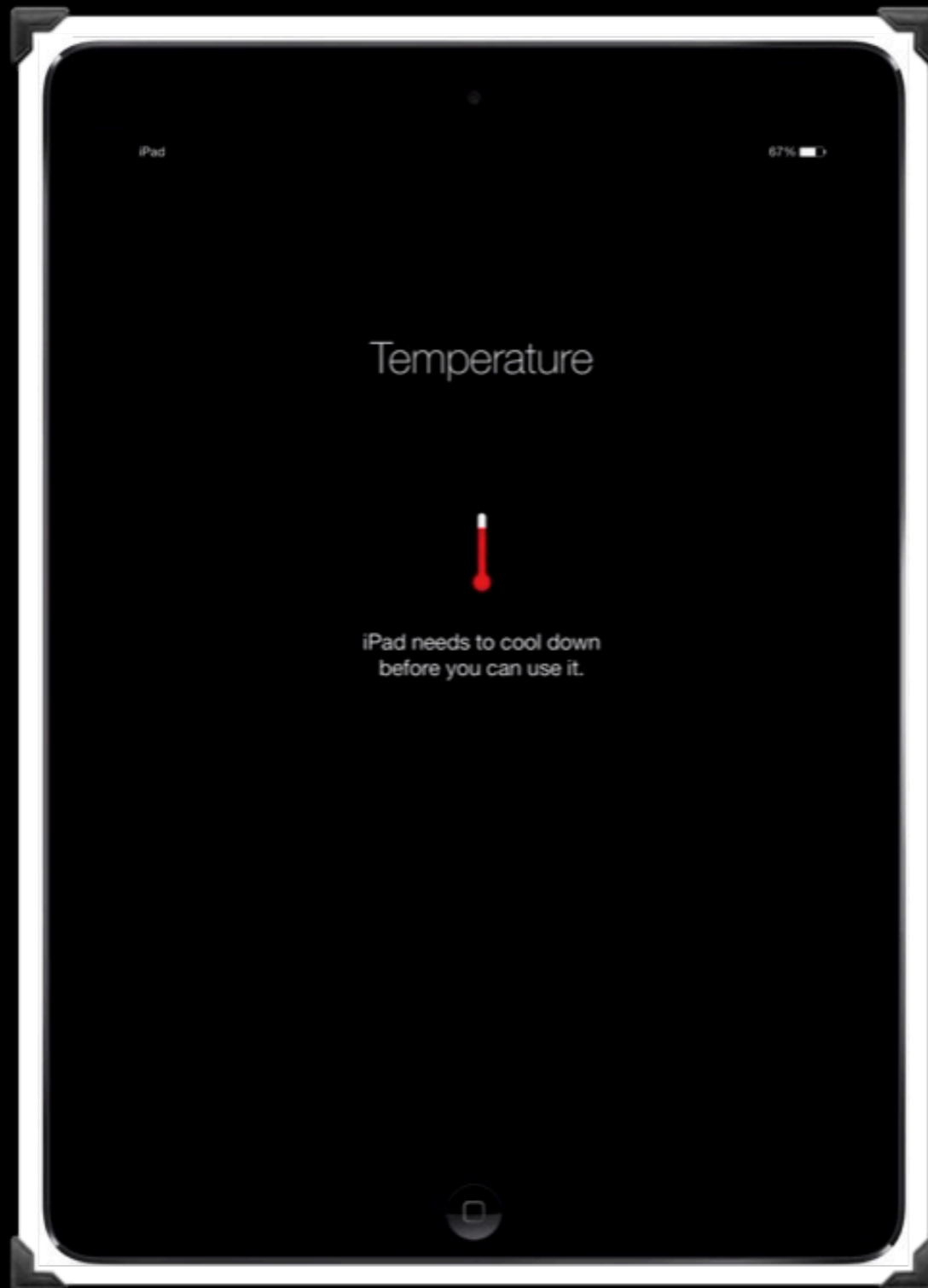
Winds Aloft

CAUTION:
“Except for TFRs, NOTAMs older than 30 days are not provided.”
AIM 7-1-11

This is to preserve bandwidth. You still need a briefing.

Imagine launching to an airport that has been repaving the only runway for the past month and a half!

These things can happen...



iPad Overheat

**Flightstream 210
INOP**

**Bluetooth
INOP**



iPad Battery Dead

**But you still have access to some of the weather - through the GNS 430 or 530. These ADS-B Weather Products are accessible.
(no iPad required)**

METAR [T]

TAF [T]

National NEXRAD ("CONUS") [G]

Regional NEXRAD [G]



The ADS-B Graphical Weather Page



Page 4 of the NAV Chapter

Use the cursor/highlight button and the small right knob to scroll through three different graphical weather products



CONUS NEXRAD

-large scale, multi-state precipitation - for general planning only. (15 minute update)



REGION NEXRAD
-uses local doppler radars, stitched together. "Composite" meaning multi-level. (2 1/2 minute update)

[graphic] **METARS**

- cyan = VFR
- green = MVFR
- amber = IFR
- red = LIFR



The METAR Page



FPLN destination is default. Can be changed with cursor and small right knob.

But there is a look-ahead limitation preventing selection of airports at a significant distance from present position. (again... bandwidth preservation)

Page 7 of the Waypoint Chapter

The TAF Page



TAFs are issued:

- 0000Z
- 0600Z
- 1200Z
- 1800Z

(One more click to the right)

Page 8 of the Waypoint Chapter

Avoid unpleasant iPad disruptions. Pre-flight Planning:

- Keep it cool
- Keep it charged
- Keep it handy



Tail Winds!