



SENTRY

Guide



ForeFlight

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INTRODUCTION

Sentry portable receivers are compact and powerful devices that provide real-time weather, traffic, WAAS GPS, and more to ForeFlight Mobile. These receivers are exclusively compatible with ForeFlight Mobile and can connect to up to five devices simultaneously.

Refer to the table below to compare Sentry features.

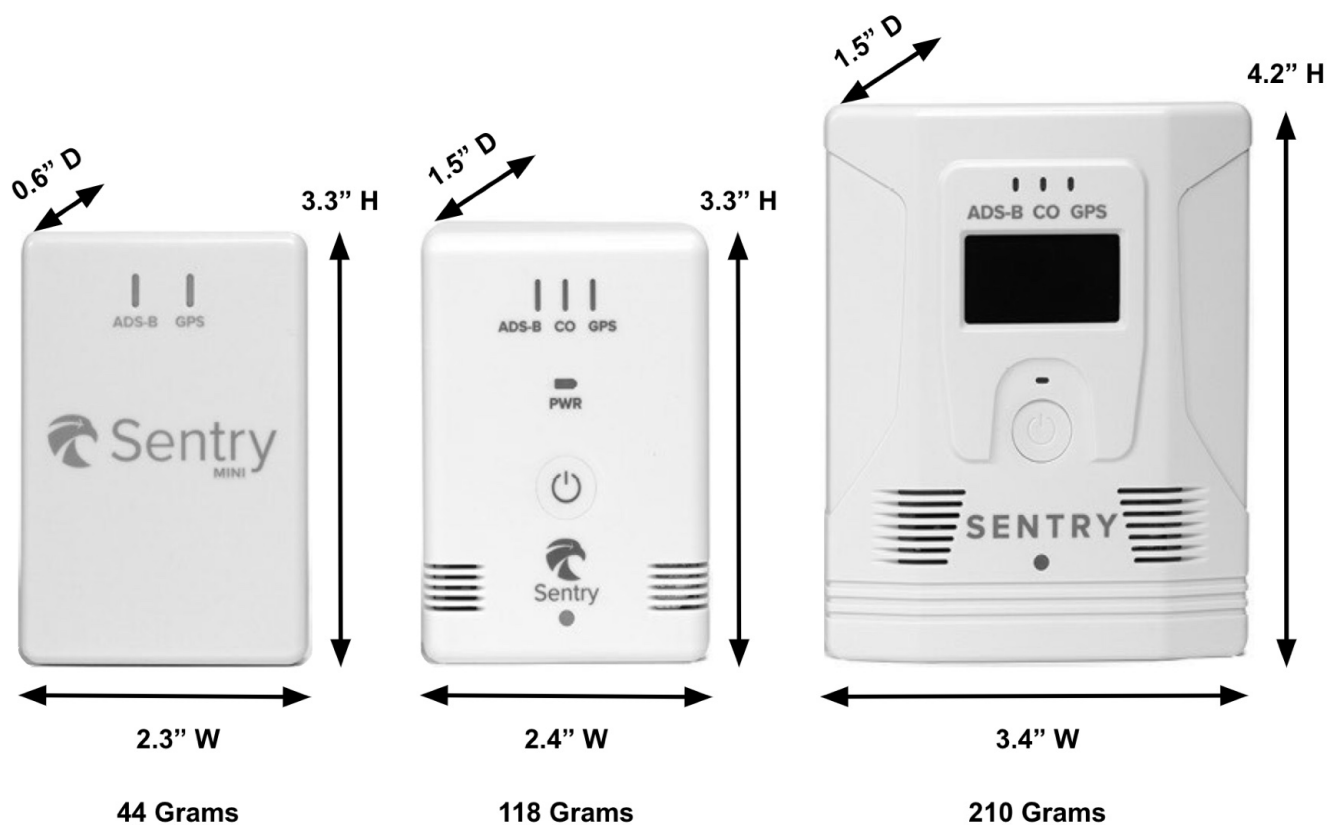
Features	Sentry Mini	Sentry	Sentry Plus
Dual-band ADS-B Weather & Traffic	✓	✓	✓
WAAS GPS	✓	✓	✓
Weather Replay	✓	✓	✓
Internal Battery		✓	✓
Pitch and Roll Data (AHRS)		✓	✓
Barometer		✓	✓
CO Sensor		✓	✓
CO Alarm		✓	✓
Universal USB-C Charging		✓ ¹	✓
Flight Data Recorder			✓
FLARM Receiver			✓
Wi-Fi Client Support			✓
Auto On/Off			✓
Accelerometer (g-Load)			✓
OLED Display			✓

¹ Only available for Sentry units sold after November 2023.

INTRODUCTION

Dimensions

Sentry receivers are portable and compact, designed to fit easily into most flight bags. Their dimensions are shown in the image below.



NOTE: Sentry units sold before November 2023 measure 2.3 inches wide × 3.3 inches high × 1.5 inches deep.

INTRODUCTION

Mounting Sentry

Sentry, Sentry Mini, and Sentry Plus can be mounted using the provided RAM mount, which features a quick-release mechanism that allows the receiver to be detached while leaving the mount in place.

For best performance, mount the receiver vertically on a side window with an unobstructed view to allow reception from nearby aircraft and ADS-B ground towers.

If a window is not available, place the receiver on a level, flat surface with the LED indicators facing the nose of the aircraft. Aircraft structures may block weather and traffic broadcast reception. If traffic targets or ADS-B weather data are missing in ForeFlight, reposition the receiver within the cockpit to improve signal reception.

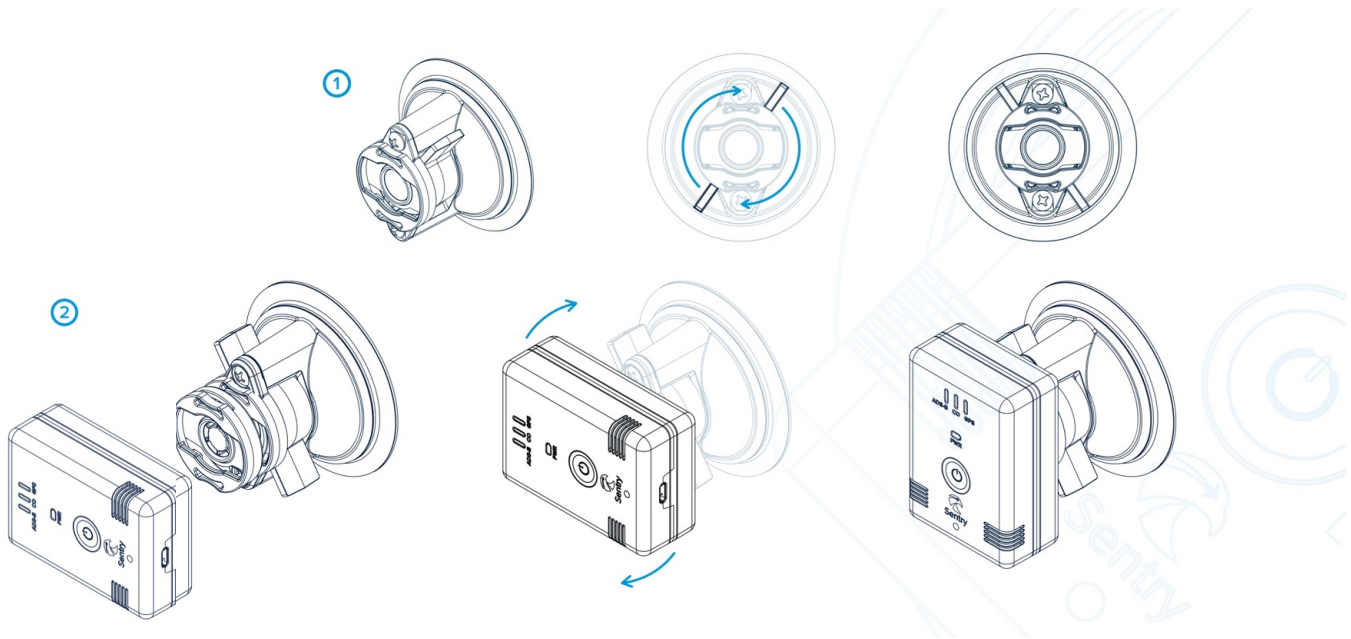
CAUTION: Do not leave the receiver or mount inside an aircraft for extended periods when temperatures are expected to exceed 90°F (32°C).

INTRODUCTION

Mounting Instructions

To mount Sentry, Sentry Mini, or Sentry Plus, follow these steps:

1. Attach the RAM mount to a window:
 - Align the screws vertically.
 - Rotate the tabs on opposite sides of the mount clockwise until they snap into place.
2. Attach Sentry to the RAM mount:
 - Align the quick-release adapter on the rear of the unit with the slot in the RAM mount.
 - Rotate the receiver clockwise until it snaps into place.



Mounting Sentry with included RAM Mount

INTRODUCTION

Powering On Sentry

Sentry, Sentry Mini, and Sentry Plus must be powered on before connecting to an iPad or iPhone.

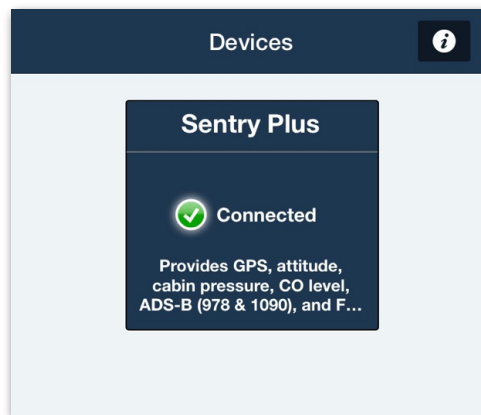
- **To power on Sentry and Sentry Plus:** Press and hold the power button for approximately two seconds until the LEDs illuminate.
- **To power on Sentry Mini:** Connect the provided USB-C cable to a 5-volt, 2-amp power source.

Once powered on, Sentry receivers broadcast their wireless network.

Connecting an iPad or iPhone to Sentry

To connect an iPad or iPhone to a Sentry device:

1. Open the **Settings** app on the iPad or iPhone.
2. Select **Wi-Fi**.
3. Locate the Sentry wireless network under Other Networks and tap to connect.
4. Once connected, open **ForeFlight Mobile**.
5. Navigate to **More > Devices**.
6. Confirm that the **Sentry tile appears**.



Sentry Plus Device Tile

If the Sentry tile does not appear, check the following:

- Verify that the iPad or iPhone is connected to the Sentry Wi-Fi network.
- Ensure the Local Network setting is enabled (required for iOS 14 or later).

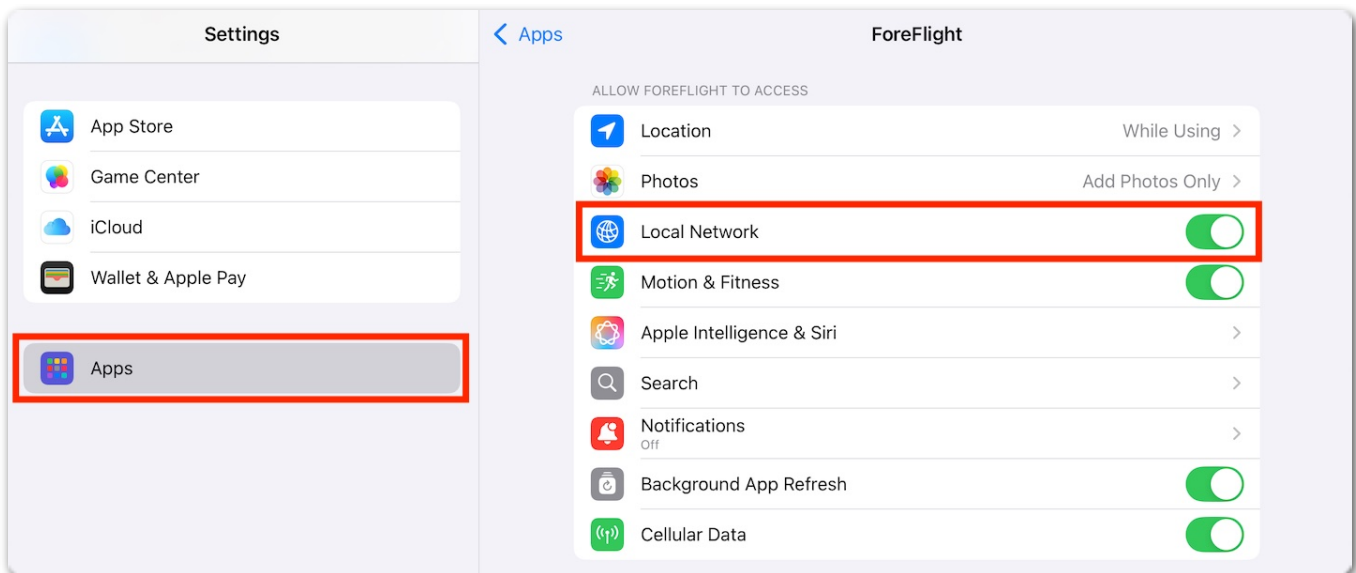
INTRODUCTION

Enabling Local Network Access

Devices running iOS 14 or later require special permission to connect to external devices like Sentry.

To enable Local Network access for ForeFlight Mobile:

1. Open the **Settings** app on the iPad or iPhone.
2. Scroll down and select **Apps**.
3. Select **ForeFlight** from the list of installed apps.
4. Verify that **Local Network** is **enabled**.

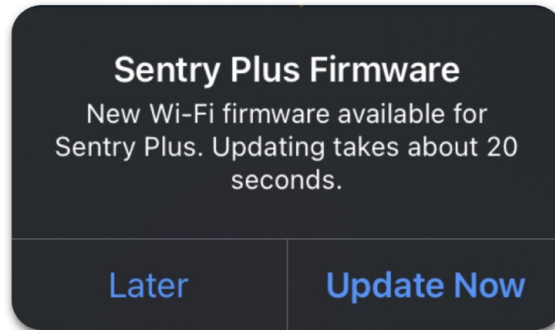


Local Network Setting

INTRODUCTION

Firmware Updates

ForeFlight Mobile provides firmware updates for Sentry, Sentry Mini, and Sentry Plus. If an update is available, ForeFlight Mobile will prompt the user to install it. If no prompt appears, the latest firmware is already installed.



Firmware Update Menu

Managing Firmware Updates

If a firmware update prompt is postponed by tapping **Later**, ForeFlight Mobile will not prompt for the update the next time Sentry is connected.

To manually check for an update, navigate to **More > Devices** and tap the **Sentry tile**.

Updating Firmware

Sentry and ForeFlight must remain powered on during the update. ForeFlight will display a progress bar while the update is being installed.



SENTRY PLUS

Sentry Plus is the most advanced Sentry receiver available for use with ForeFlight Mobile. This portable, battery-powered device delivers real-time weather, traffic, GPS, and more to ForeFlight Mobile.

Sentry Plus Features

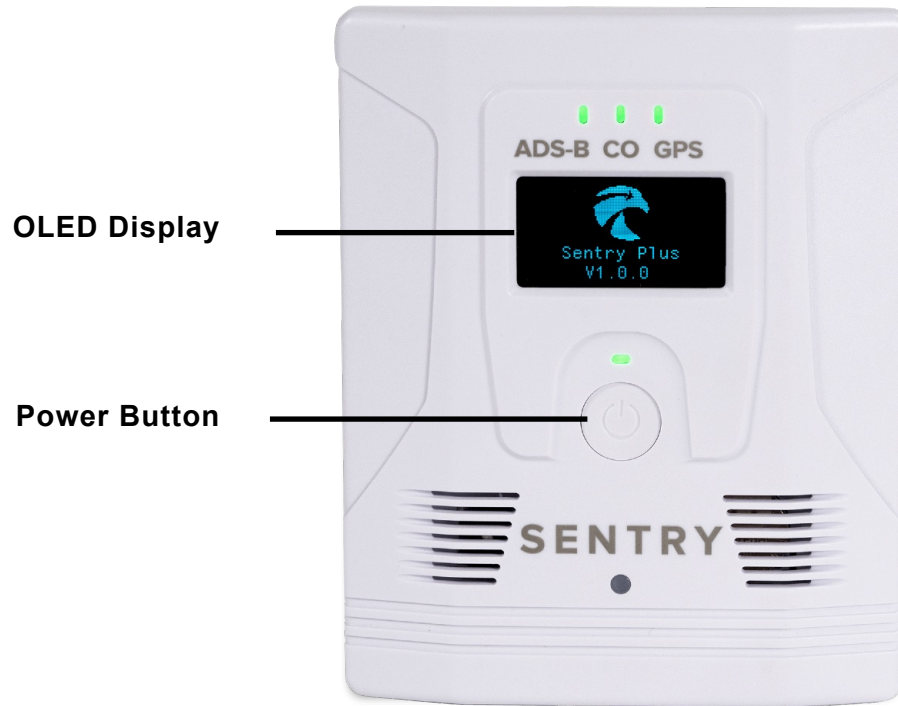
Select a feature to learn more about the Sentry Plus capabilities.

- [Dual-Band ADS-B Traffic](#)
- [ADS-B Weather Receiver](#)
- [Weather Replay](#)
- [FLARM Receiver](#)
- [Carbon Monoxide \(CO\) Sensor](#)
- [Pitch and Roll \(AHRS\)](#)
- [Accelerometer \(g-Load\)](#)
- [18-Hour Rechargeable Battery](#)
- [Flight Data Recorder](#)
- [OLED Display](#)
- [Barometer](#)
- [Advanced Wi-Fi Capability](#)

SENTRY PLUS

Power Button

Sentry Plus has a single power button located below the OLED display.



Sentry Plus LED Status

Powering On/Off

Press and hold the power button for two seconds to power the device on or off.

SENTRY PLUS

LED Status

Sentry Plus has four LEDs that indicate system status:

- **ADS-B, CO, and GPS LEDs** activate when Sentry Plus is powered on.
- **PWR LED** activates when Sentry Plus is charging or powered on.
- If the PWR LED flashes blue, a charging error has occurred. To clear the error, unplug and reconnect the charging cable.

LED Color	ADS-B LED	CO Monitor LED	GPS LED	PWR LED
Green	Multiple towers detected	Normal	Good GPS fix	Battery good (>30%)
Yellow	Single tower detected	Caution	Poor GPS fix	Battery low (<30%)
Red	No tower reception	Danger	No GPS fix	Battery critical (<20%)
Blue	-	-	-	Battery charging

Adjusting LED Brightness

LED brightness can be adjusted in ForeFlight Mobile:

1. Navigate to **More > Devices**.
2. Tap the Sentry Plus device tile.
3. Adjust the **LED Brightness** slider.
4. Enable **Auto Brightness** to adjust LED brightness based on ambient light.

NOTE: Any data received from an ADS-B tower (including tower information) is considered reception. A yellow or green ADS-B LED does not guarantee the reception of FIS-B data.

OLED Display

Sentry Plus is equipped with an OLED display that activates automatically when the device is powered on and remains on until powered off.

OLED Startup & Brightness Adjustment

At startup, a splash screen appears, displaying the Sentry logo and the installed firmware version. After the splash screen, one of four views is displayed.

OLED brightness correlates to LED brightness and can be adjusted in ForeFlight Mobile:

1. Navigate to **More > Devices**.
2. Tap the **Sentry Plus** device tile.
3. Adjust the **LED Brightness** slider.
4. Enable **Auto Brightness** to adjust OLED brightness based on ambient light.

OLED Messages

The OLED display shows system messages during various operations. Below are common messages and their meanings:

- **Connected!** - Displayed when an iPad or iPhone connects to the Sentry Plus wireless network.
- **Disconnected** - Displayed when an iPad or iPhone disconnects from the Sentry Plus wireless network.
- **Connected to ForeFlight** - Displayed when ForeFlight Mobile successfully connects to Sentry Plus.
- **Log Download in Progress** - Displayed when ForeFlight Mobile downloads Track Logs from Sentry Plus.
- **Looking for Network** - Displayed when Sentry Plus is configured to join another network but is not actively connected.
- **Connected to** - Displayed when Sentry Plus successfully connects to another network.
- **Firmware Updated Successfully** - Appears after a firmware update is completed.

SENTRY PLUS

OLED Views

The Sentry Plus OLED display provides four views, each displaying real-time data. Press the power button to cycle between views.

Acceleration View

- Displays real-time accelerometer data on the pitch axis.
- When the aircraft is straight and level, acceleration should indicate 1.0g.



Acceleration (g-Load)

CO Status View

- Displays carbon monoxide (CO) concentration levels.
- Elevated CO levels trigger a warning:
 - **Caution** - Moderate CO levels detected.
 - **Danger** - High CO levels detected.
- If Caution or Danger is displayed, ForeFlight Mobile will alert the user and display the CO concentration level (ppm).



CO Status

Speed View

- Displays groundspeed in knots.
- If groundspeed is seven knots or less, the OLED screen shows: Speed (kts) < 7.



Groundspeed (knots)

Accuracy View

- Displays the accuracy of the Sentry Plus integrated WAAS GPS.
- Accuracy is determined by the Sentry Plus GPS processor.



Accuracy (meters)

SENTRY PLUS

Battery

Sentry Plus is equipped with a rechargeable battery designed to provide up to 18 hours of use on a full charge. The battery is not replaceable.

Battery Charge Level

When Sentry Plus is powered on, the battery percentage is displayed in the top left corner of the OLED screen.



**Battery Charge
Percentage**

The battery percentage is also visible in **ForeFlight Mobile**:

1. Tap **More**.
2. Select **Devices**.
3. Tap the **Sentry Plus device tile**.
4. View the battery charge level on the Battery line.

Charging Indicators

When charging, the PWR LED is blue, and the battery percentage is replaced with a “CHRG” label. When fully charged:

- If powered on, the PWR LED turns green.
- If powered off, the PWR LED turns off.

Universal USB-C Charging

Sentry Plus can be charged with any USB-C compatible charger. Fast charging is not supported.

SENTRY PLUS

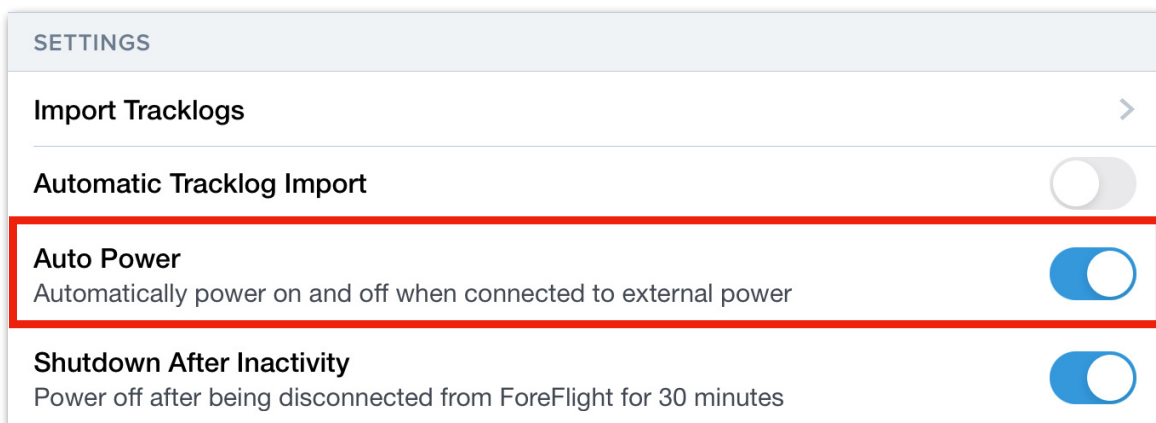
Auto Power

Sentry Plus includes an Auto Power setting that allows it to turn on and off automatically based on power source availability.

If Auto Power is enabled, Sentry Plus automatically turns on when plugged in and turns off when the power source is removed, provided that GPS groundspeed is less than 10 knots for 45 seconds.

By default, Auto Power is disabled. To enable it:

1. Open **ForeFlight Mobile**.
2. Tap **More**.
3. Tap **Devices**.
4. Tap the **Sentry Plus device tile**.
5. Enable **Auto Power**.



Auto Power Setting

Manual Power Control with Auto Power Enabled

The power button can still be used to turn the device off when Auto Power is enabled.

If Auto Power is disabled, the power button must be used to manually turn the unit on and off.

NOTE: If both Auto Power and Shutdown After Inactivity are enabled, Auto Power takes precedence. Sentry Plus will power down based on the Auto Power criteria.

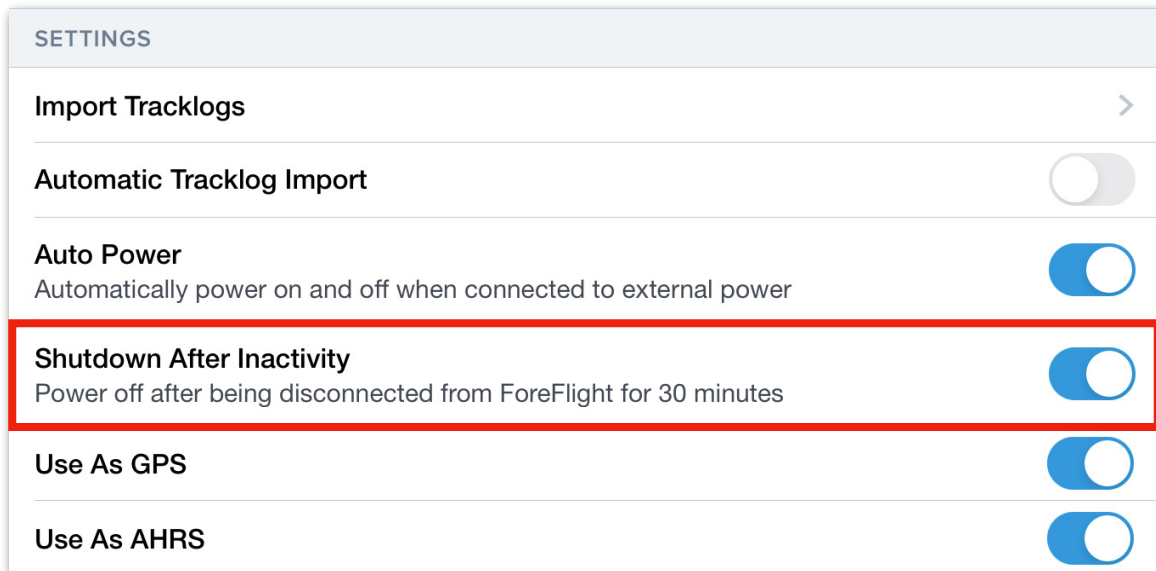
SENTRY PLUS

Shutdown After Inactivity

Sentry Plus includes a Shutdown After Inactivity setting, which automatically powers off the device 30 minutes after disconnecting from ForeFlight, unless it remains connected to a power source.

By default, Shutdown After Inactivity is disabled. To enable it:

1. Open **ForeFlight Mobile**.
2. Tap **More**.
3. Tap **Devices**.
4. Tap the **Sentry Plus device tile**.
5. Enable **Shutdown After Inactivity**.



Shutdown After Inactivity Setting

NOTE: If both Auto Power and Shutdown After Inactivity are enabled, Auto Power takes precedence. Sentry Plus will power down based on the Auto Power criteria.

Connectivity

When powered on, Sentry Plus automatically creates a wireless network that can connect up to five devices simultaneously. By default, the network does **not** have a password.

To connect an iPad or iPhone to the Sentry Plus:

1. Power on the Sentry Plus.
2. Open the **Settings app** on the iPad or iPhone.
3. Tap **Wi-Fi**.
4. Select **Sentry Plus** from the available networks.

Once the initial connection is established, the iPad or iPhone will automatically reconnect, provided the following conditions are met:

- Sentry Plus is powered on.
- Wi-Fi is enabled on the iPad or iPhone.
- The Sentry Plus network name and password have not changed.
- The iPad or iPhone is not connected to another network.
- **Auto-Join** is enabled in **iPad or iPhone Settings > Wi-Fi > Sentry Plus** settings.

SENTRY PLUS

Sentry Plus Network Name (SSID)

The default Sentry Plus wireless network name is a generic identifier (e.g., SentryPlus_12AB). The network name can be customized.

Customizing the Network Name (SSID)

To change the Sentry Plus network name:

1. Open **ForeFlight Mobile**.
2. Navigate to **More > Devices**.
3. Tap the **Sentry Plus device tile**.
4. Select **Sentry Plus Network**.
5. Tap the **SSID field**.
6. Enter a new network name with the following qualifiers:
 - Contain between 1 and 32 characters.
 - Contain only letters, numbers, spaces, and underscores.
7. Tap **Done**.
8. **Restart Sentry Plus** to apply the changes.

SENTRY PLUS

Hiding the SSID Broadcast

To prevent other devices from discovering the Sentry Plus network, disable SSID broadcast:

1. Open **ForeFlight Mobile**.
2. Navigate to **More > Devices**.
3. Tap the **Sentry Plus device tile**.
4. Toggle **SSID Broadcast** Off.

If the SSID broadcast is disabled, previously connected devices will automatically reconnect when Sentry Plus is powered on if **Auto-Join** is enabled in **iPad or iPhone Settings > Wi-Fi > Sentry Plus settings**.

Connecting a New Device When SSID Broadcast Is Disabled

If the SSID is hidden, to manually connect a new device:

1. Open the **iPad or iPhone Settings app**.
2. Tap **Wi-Fi**.
3. Select **Other...** under Other Networks.
4. Enter the Sentry Plus network name (SSID) and passcode (if applicable).

SENTRY PLUS

WPA2 Passcode Security

By default, Sentry Plus does not have a passcode. A WPA2 passcode can be assigned from the Devices view.

Assigning a WPA2 Passcode

To assign a passcode:

1. Open **ForeFlight Mobile**.
2. Navigate to **More > Devices**.
3. Tap the **Sentry Plus device tile**.
4. Select **Sentry Plus Network**.
5. Enable **WPA2 Security Enabled**.
6. Tap **New Passcode....**
7. Enter a passcode that meets the following conditions:
 - Is between 8 and 63 characters.
 - Can contain letters, numbers, spaces, and underscores.

NOTE: Sentry Plus network names and passwords are case-sensitive.

8. Tap **Done**.
9. Restart the Sentry Plus.
10. Open the **iPad or iPhone Settings app**.
11. Tap **Wi-Fi**.
12. Connect using the new passcode.

SENTRY PLUS

Resetting the Passcode without the Passcode

If WPA2 security is enabled and the passcode is forgotten or prevents a successful connection, a factory reset is required to remove the passcode and restore Sentry Plus to its default settings.

To perform a factory reset:

1. Power on the Sentry Plus.
2. Press and hold the power button for approximately ten seconds until all LED lights turn off.
3. Power on the Sentry Plus again.
4. Open the **iPad or iPhone Settings app**.
5. Tap **Wi-Fi**.
6. Connect to the Sentry Plus.

WARNING: Performing a factory reset on Sentry Plus will delete all Track Logs on the Sentry. Once a factory reset is performed, restoring Track Logs is impossible.

IMPORTANT: **Import all Track Logs** into ForeFlight before performing a factory reset.

Wi-Fi Client Support

Sentry Plus can join an aircraft wireless network and provide data through the network, allowing ForeFlight Mobile to receive data from both Sentry Plus and the aircraft's Wi-Fi simultaneously. Once connected, Sentry Plus will remember the aircraft network and automatically join when powered on.

Wi-Fi Client Support Exclusions

Sentry Plus Wi-Fi Client Support does not support:

- Capture portals.
- Wireless networks that restrict UDP traffic.
- Some weather data types (see the table in [Simultaneous Data Feeds](#)).

NOTE: For best results, disable Auto-Join for Sentry Plus and connect devices to the aircraft network instead.

Establishing a Wi-Fi Client Support Connection

To connect Sentry Plus to an aircraft wireless network, ensure the network is discoverable and within range of both the iOS device and Sentry Plus. Then, do the following:

1. Connect the iOS device to the Sentry Plus and open **ForeFlight Mobile**.
2. Navigate to **More > Devices**.
3. Tap the **Sentry Plus device tile**.
4. Select **Wi-Fi Client Network**.
5. Select the **aircraft network** from the list. If the network is hidden, tap **Other...** and enter the network name and passcode.
6. Enter the network passcode (if required).
7. Tap **Join Network**. Sentry Plus will restart automatically to apply the changes. ForeFlight will re-establish communication with Sentry Plus to determine if the network change was successful.
8. Connect the iOS device to the aircraft wireless network.
9. Open **ForeFlight Mobile**.

NOTE: For best results, disable **Auto-Join** for the aircraft wireless network in iOS Wi-Fi settings.

SENTRY PLUS

Simultaneous Data Feeds

When the Sentry Plus is connected to an aircraft Wi-Fi network (e.g., Satcom Direct, GoGo), ForeFlight can receive data from both the Sentry Plus and the aircraft network simultaneously.

Data Considerations

The data that ForeFlight can send or receive depends on the aircraft's network settings. ForeFlight will continue to send and receive the same data as before if the aircraft wireless network previously supported it. If a weather product is provided by Sentry via ADS-B, ForeFlight will not display the same data from the aircraft network.

The table below details the data source for weather products when Sentry Plus is connected as a client.

Weather Product	GoGo / SDR	Sentry Plus
Traffic (ADS-B)		✓
Radar (ADS-B)		✓
Radar	✓	
Cloud Tops (ADS-B)		✓
Enhanced Satellite	N/A	
Color IR Satellite	N/A	
Icing (ADS-B)		✓
Icing (US/Global)	✓	
Turbulence (ADS-B)		✓
Turbulence (US/Global)	✓	
Clouds	✓	
Surface Analysis	✓	
Freezing Lvs (ADS-B)		✓
Winds (Temps/Speeds)	✓	
AIR/SIGMET/CWAs		✓
PIREPs		✓
Lightning		✓
Digital ATIS (D-ATIS)	✓	
METARs/TAFs		✓
NOTAMs (Including TFRs)		✓

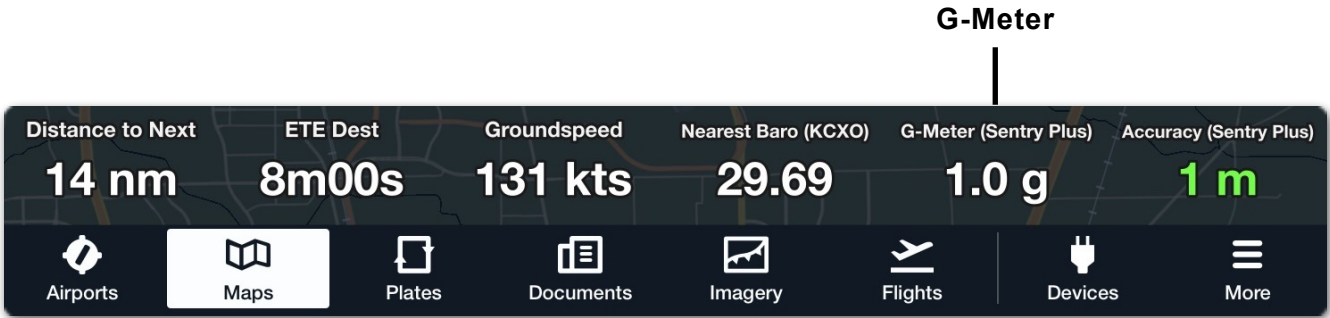
SENTRY PLUS

Accelerometer (g-Load)

Sentry Plus is equipped with an accelerometer that detects loads placed on the pitch axis during flight. Real-time accelerometer data can be viewed on the OLED screen and in the ForeFlight Mobile instrument panel.



Accelerometer
Data



G-Meter

ForeFlight Mobile Instrument Panel

SENTRY PLUS

g-Load in Track Logs

Track Logs recorded with Sentry Plus or ForeFlight Mobile while connected to Sentry Plus include g-Load data, which is recorded at 1 Hz (once per second).

To display g-Load in a Track Log:

1. Open the **Track Log** in ForeFlight Mobile.
2. Tap the Track Log Layer Selector.
3. Select **g-Load**.

When g-Load is selected, accelerometer data is displayed on a scale. To analyze specific points:

- Tap and hold a finger on the scale, then scrub left or right to view flight metrics at a specific location.
- To view the maximum g-Load recorded for the flight, tap the Track Log **Info** button.

SENTRY PLUS

Flight Data Recorder (Track Logs)

Sentry Plus features an integrated Flight Data Recorder that automatically captures track, altitude, attitude, groundspeed, and g-load data at 1 Hz (once per second) for every flight. The captured data is stored as Track Logs.



SENTRY PLUS

Automatic Track Log Recording

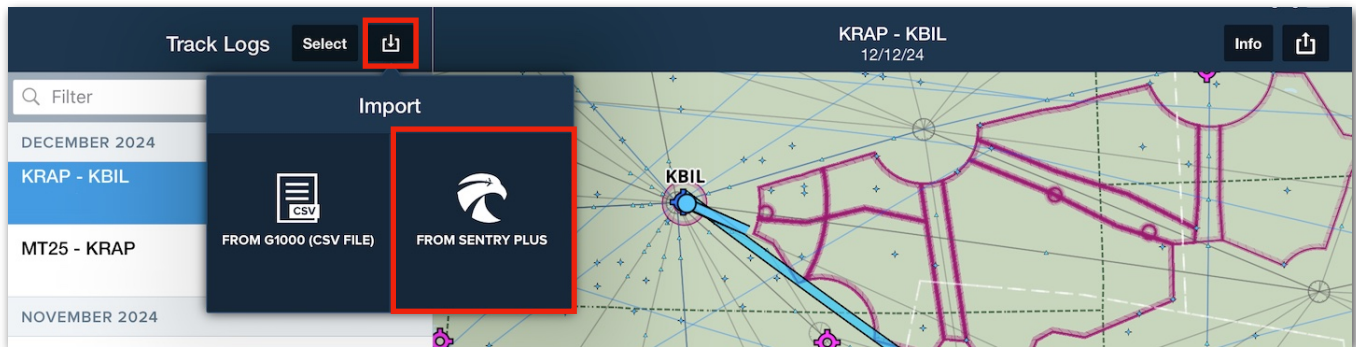
The Flight Data Recorder automatically starts a **Track Log** each time Sentry Plus is powered on and records continuously until the device is powered off. There is no indication that a Track Log recording has started.

Up to 16 Track Logs are stored in internal memory. Once this limit is reached, the oldest Track Log is overwritten with new recordings, even if it has not been imported.

Manually Importing Track Logs into ForeFlight Mobile

To manually import Track Logs from Sentry Plus into ForeFlight Mobile:

1. Open **ForeFlight Mobile** while connected to Sentry Plus.
2. Navigate to **More > Track Logs**.
3. Tap **Import** in the upper toolbar.
4. Select **From Sentry Plus**.



Manually Importing Sentry Plus Track Logs

SENTRY PLUS

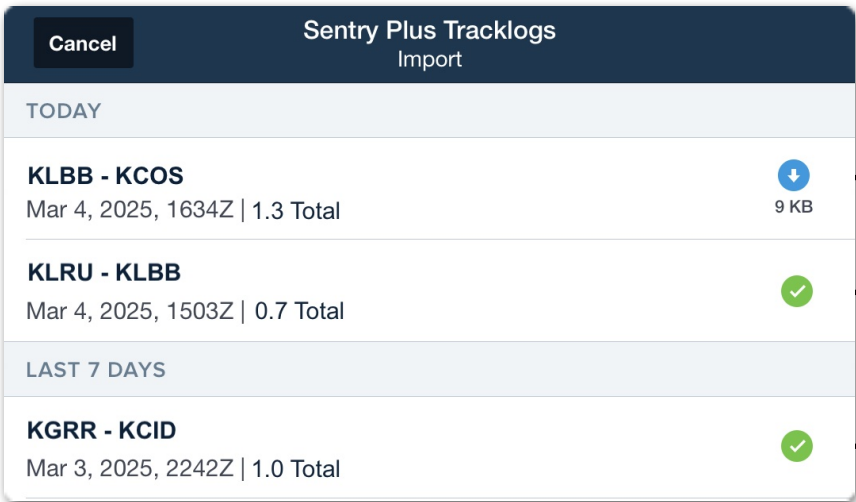
Alternative Manual Import Method

Track Logs can also be imported through the Devices menu. To do this:

1. Open **ForeFlight Mobile** while connected to Sentry Plus.
2. Navigate to **More > Devices**.
3. Select the **Sentry Plus** device tile.
4. Tap **Import Track Logs**.

Viewing and Selecting Track Logs for Importation

Up to 16 Track Logs from Sentry Plus's internal memory are displayed with details such as departure and destination locations, date, time, and total flight time. Track Logs that have already been imported show a green checkmark. Track Logs that have not been imported display a blue download button next to the file size. Tap the blue **download button** to import a Track Log into ForeFlight Mobile.



Imported and Available Track Logs

NOTE: Track Logs can be imported to multiple ForeFlight accounts.

SENTRY PLUS

Automatically Importing Track Logs into ForeFlight Mobile

ForeFlight can automatically import Track Logs from Sentry Plus when all of the following conditions are met:

- Sentry Plus is powered on.
- Sentry Plus is connected to ForeFlight.
- The Automatic Track Log Import setting is enabled in ForeFlight Mobile.
- Groundspeed is less than ten knots.

When Automatic Track Log Import is enabled, Sentry Plus finalizes and imports Track Logs into ForeFlight before powering off, provided all conditions are met. If a Track Log is not imported before powering off due to unmet conditions, Sentry Plus will attempt to import it the next time it is powered on and the conditions are met.

NOTE: ForeFlight will not import Track Logs that are shorter than five minutes or do not contain valid GPS points.

Enabling Automatic Track Log Import

The Automatic Track Log Import setting can be enabled during initial configuration or at any time later. To enable this setting:

1. Go to **More**.
2. Select **Devices**.
3. Tap the **Sentry Plus** device tile.
4. Enable **Automatic Track Log Import**.

NOTE: Enabling or disabling Automatic Track Log Import on one device does not cause the selection to sync between devices. It is recommended to enable this setting on only one device per account.

Auto Power Setting and Automatic Track Log Imports

When the **Auto Power** setting is enabled, Sentry Plus automatically powers on and starts recording a Track Log when a power source is detected. If the power source is disconnected, Sentry Plus will automatically import the Track Log before shutting down, provided it is connected to ForeFlight and groundspeed is less than ten knots.

SENTRY PLUS

Track Log Sync

When **Sync** is enabled, Track Logs imported from Sentry Plus automatically appear on all devices signed into the same ForeFlight account.

To enable Sync in ForeFlight Mobile:

1. Go to **More**.
2. Tap **Settings**.
3. Enable **Sync Data To/From Device**.

Deleting Track Logs

Track Logs can be deleted from both ForeFlight Mobile and Sentry Plus.

Deleting a Track Log from ForeFlight Mobile

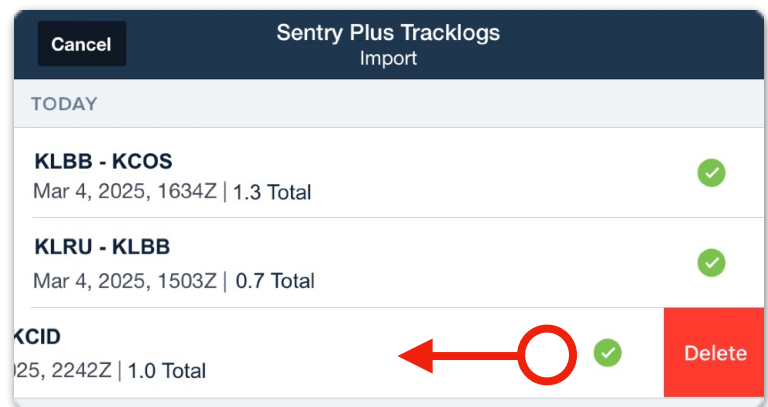
To delete a Track Log from ForeFlight Mobile:

1. Go to **More > Track Logs**.
2. Swipe on the Track Log to delete from right to left to reveal a delete button.
3. Tap **Delete**.

Deleting a Track Log from Sentry Plus

To delete a Track Log from the Sentry Plus:

1. Go to **More > Track Logs**.
2. Tap the **Track Log Import button** (square with a down arrow).
3. Select **From Sentry Plus**.
4. Swipe the Track Log from **right to left** in the **Sentry Plus Import** menu to reveal a delete button.
5. Tap **Delete**.



Delete a Track Log from Import Menu

Once a Track Log is deleted from Sentry Plus, it cannot be restored. Deleting a Track Log from Sentry Plus does not delete it from ForeFlight Mobile.

SENTRY PLUS

Deleting a ForeFlight Track Log Recorded with Sentry Plus

Deleting a Track Log from ForeFlight Mobile does not delete it from Sentry Plus. Track Logs recorded with Sentry Plus that are imported and later deleted from ForeFlight may be able to be imported again, provided that the Track Log has not been overwritten. Once a Track Log is overwritten in Sentry Plus, it cannot be recovered.

Deleting All Track Logs from Sentry Plus

When connected to the Sentry, all track logs except for the current one being recorded can be deleted by swiping to delete. However, to clear the entire list of track logs stored on the Sentry Plus, a factory reset is required. This process also removes the passcode (if applicable) and resets the network name (SSID) to factory settings.

To restore the Sentry Plus to factory settings:

1. **Power on** Sentry Plus.
2. Press and hold the **power button** for approximately ten seconds until all LED lights turn off.
3. **Power on** Sentry Plus again.
4. On the iOS device, go to **Wi-Fi settings** and connect to **Sentry Plus**.

FLARM Traffic

FLARM is a collision avoidance technology used in Europe. Sentry Plus includes a built-in FLARM receiver that enhances traffic awareness for general aviation and light aircraft.

FLARM Frequency

FLARM operates on different frequencies depending on the region. The FLARM receiver in Sentry Plus is designed to operate on the European FLARM SRD860 frequency band (868.2 MHz to 868.4 MHz).

Enabling FLARM Traffic in ForeFlight Mobile

To display FLARM traffic in ForeFlight Mobile, a FLARM decoding license must be purchased. This license is linked to a ForeFlight account and can be obtained at www.foreflight.com/buy when the Europe region is selected.

Viewing FLARM Traffic

FLARM traffic targets appear on the map when the **Traffic** layer is enabled and Sentry Plus is connected. The only indication that FLARM traffic is being received is within the traffic pop-up, where (FLARM) is displayed as the traffic source when applicable.



FLARM Traffic in ForeFlight



SENTRY

Sentry is the original ADS-B receiver designed for ForeFlight, providing real-time weather, traffic, GPS, and more. Its built-in rechargeable battery offers up to 12 hours of use on a single charge. Sentry creates a wireless network that allows up to five devices to connect simultaneously.

Sentry Features

Select a Sentry feature to learn more.

- [Dual-Band ADS-B Traffic](#)
- [ADS-B Weather](#)
- [Weather Replay](#)
- [Carbon Monoxide \(CO\) Sensor](#)
- [Attitude Heading Reference System \(AHRS\)](#)
- [12-Hour Rechargeable Battery](#)
- [Barometer](#)

Power Button

Sentry has a single power button located at the center of the device. Press and hold the button for approximately two seconds to power the Sentry on or off.

LEDs

The Sentry LEDs provide status information and have adjustable brightness settings.

LED Brightness Control

To adjust LED brightness in Sentry settings:

1. Open **ForeFlight Mobile**.
2. Select **More > Devices**.
3. Tap the **Sentry device tile**.
4. Use the **LED Brightness** slider to adjust brightness.
5. (Optional) Enable **Auto Brightness** to automatically adjust LED brightness based on ambient light.

SENTRY

LED Status

Sentry has four LEDs that indicate system status. The following LEDs activate when Sentry is powered on:

- **ADS-B, CO, and GPS LEDs** - Indicate the status of ADS-B reception, carbon monoxide detection, and GPS accuracy.
- **PWR LED** - Illuminates when Sentry is powered on or charging.

The table below explains the meaning of each LED color for different system functions:

LED Color	ADS-B LED	CO Monitor LED	GPS LED	PWR LED
Green	Multiple towers detected	Normal	Good GPS fix	Battery good (>30%)
Yellow	Single tower detected	Caution	Poor GPS fix	Battery low (<30%)
Red	No tower reception	Danger	No GPS fix	Battery critical (<20%)
Blue	-	-	-	Battery charging



Sentry LEDs

NOTE: Any data received from an ADS-B tower, including tower information, is considered reception. A yellow or green ADS-B LED does not guarantee the reception of FIS-B weather data.

Battery

Sentry is equipped with a single rechargeable battery that is not designed to be removed or replaced. It supports USB 5V, 2A chargers exclusively and will not charge if connected to a power source that exceeds this specification.

When charging, the PWR LED illuminates blue. A fully depleted battery can take up to 12 hours to charge completely.

Checking Battery Percentage

The battery percentage can be viewed in ForeFlight Mobile. To check the Sentry battery percentage:

1. Connect the iPad/iPhone to the Sentry.
2. Disconnect the Sentry from the charger (if applicable).
3. Open ForeFlight Mobile and go to **More > Devices**.
4. Tap the **Sentry device tile**.
5. Scroll to the Battery field to view the battery percentage.

Connecting to Sentry

To connect an iPad or iPhone to the Sentry, follow these steps:

1. Power on Sentry by holding the **power button** for approximately two seconds. When powered on, Sentry creates a wireless network that supports up to five devices simultaneously.
2. Open the **Settings** app on the iPad or iPhone.
3. Select **Wi-Fi**.
4. Locate the **Sentry wireless network** and tap to connect. The network name follows the format **Sentry_XXXX**, where **XXXX** is a random sequence of letters and numbers (e.g., **Sentry_AV53**).

Automatic Reconnection

Once connected, the iPad or iPhone will automatically reconnect if the following conditions are met:

- Sentry is powered on.
- **Wi-Fi is enabled** on the iPad/iPhone.
- The Sentry network name and password have not changed.
- The iPad/iPhone is not connected to another network.
- **Auto-Join** is enabled in **Wi-Fi > Sentry settings**.

Sentry Network Configuration

The Sentry Wi-Fi network can be configured in the following ways:

- A unique network name (SSID) can be set
- The network can be hidden
- A WPA2 security passcode can be enabled.

Sentry Network Name (SSID)

By default, the Sentry network name (SSID) is a generic identifier (e.g., Sentry_AV53). The network name can be changed if desired, with the following requirements:

- Must be unique
- Must be between 1 and 32 characters
- May contain only letters, numbers, spaces, and underscores.

Changing the Network Name

To change the Sentry wireless network name (SSID):

1. Go to **More > Devices**.
2. Tap the **Sentry device tile**.
3. Select **Sentry Network**.
4. Tap the **SSID** field.
5. Enter a network name (1–32 characters).
6. Tap **Done**.
7. Restart Sentry for the changes to take effect.

Hiding the Sentry Wireless Network

To prevent Sentry from broadcasting its network, disable SSID broadcast. This hides the network from devices that have not previously connected to Sentry.

Hiding the SSID Broadcast

To hide the Sentry network:

1. Go to **More > Devices**.
2. Tap the **Sentry device tile**.
3. Toggle **SSID Broadcast** off.

Once an iOS device has connected to Sentry, it will automatically reconnect when powered on, provided **Auto-Join** is enabled in **Wi-Fi > Sentry settings**.

Connecting a New Device When SSID Broadcast Is Disabled

To connect a new device to the Sentry when the SSID broadcast is disabled:

1. Open **Wi-Fi settings** on the iPad/iPhone.
2. Select **Other...** from the OTHER NETWORKS section.
3. Manually enter the **Sentry network name (SSID)** and password (if applicable).

WPA2 Security

By default, Sentry does not require a passcode. However, a WPA2 passcode can be assigned for network security.

Assigning a Passcode

To enable WPA2 security:

1. Go to **More > Devices**.
2. Tap the **Sentry device tile**.
3. Tap **Sentry Network**.
4. Tap the **WPA2 Security Enabled** toggle.
5. Tap **New Passcode...** on the **WPA2 Passcode** line.
6. Enter a passcode between 8 and 63 characters. The passcode may only contain letters, numbers, spaces, and underscores. WPA2 passcodes are case-sensitive.
7. Tap **Done**.
8. Restart Sentry by holding the **power button** for two seconds to power it off.
9. Open the iPad/iPhone Settings app.
10. Select **Wi-Fi settings** and connect to **Sentry** using the new passcode.

Resetting a Passcode (Factory Reset)

If WPA2 security is enabled and connecting to Sentry is unsuccessful, a factory reset will remove the passcode.

To restore the Sentry to factory settings:

1. Power on Sentry.
2. Press and hold the **power button** until the LEDs flash white (approximately ten seconds).
3. Power the Sentry on again.
4. Open **Wi-Fi settings** on the iPad/iPhone.
5. Connect to Sentry.



SENTRY MINI

Sentry Mini is a compact ADS-B receiver measuring 3.3 x 2.3 x 0.6 inches and weighing 44 grams. It provides ForeFlight Mobile with real-time weather, traffic, and WAAS GPS.

Sentry Mini is powered by a 5-volt portable or panel power source and creates a wireless network that supports up to five devices simultaneously.

Sentry Mini Features

Select a Sentry Mini feature to learn more.

- [Dual-Band ADS-B Traffic](#)
- [ADS-B Weather](#)
- [WAAS GPS](#)
- [Weather Replay](#)

Powering Sentry Mini

To power Sentry Mini, plug the provided USB-C cable into a 5V, 2A portable or aircraft power source. Sentry Mini does not have an internal battery and requires a continuous power connection.

When powered on, the GPS and ADS-B LEDs illuminate, and Sentry Mini creates a wireless network.

LED Status

Sentry Mini has two LEDs that indicate GPS and ADS-B reception. These LEDs change color based on signal status:

LED Color	ADS-B LED	GPS LED
Green	Multiple towers detected	Good GPS fix
Yellow	Single tower detected	Poor GPS fix
Red	No tower reception	No GPS fix



NOTE: Any data received from an ADS-B tower, including tower information, is considered reception. A yellow or green ADS-B LED does not guarantee the reception of FIS-B weather data.

Connecting to Sentry Mini

To connect an iPad or iPhone to a Sentry Mini:

1. Power on Sentry Mini by connecting it to a 5V, 2A power source.
2. Open the **Settings** app on the iPad or iPhone.
3. Select **Wi-Fi**.
4. Locate Sentry Mini's wireless network.
5. Tap the network to connect.

The **network name** follows the format: **SentryMini_XXXX**, where **XXXX** is a random sequence of letters and numbers (e.g., **SentryMini_AV53**).

Once connected, the iPad or iPhone will automatically reconnect if the following conditions are met:

- Sentry Mini is powered on.
- Wi-Fi is enabled on the iPad/iPhone.
- The iPad/iPhone is not connected to another network.
- **Auto-Join** is enabled in **Wi-Fi > SentryMini settings**.

Sentry Mini Wireless Network

The Sentry Mini creates a wireless network for connecting up to five devices simultaneously. The following characteristics apply to the Sentry Mini wireless network:

- The default network name is generic and cannot be changed.
- The wireless network does not require a passcode.
- Sentry Mini cannot be restored to factory defaults.

GPS

Sentry, Sentry Mini, and Sentry Plus include an integrated WAAS GPS and can receive GNSS position data from GPS and GLONASS.

GPS Accuracy

GPS accuracy is determined by the internal Sentry processor, which controls the GPS LED and sends accuracy data to ForeFlight for display in the Accuracy instrument.

GPS LED Accuracy Indicators

Each Sentry device has a front-facing GPS LED that automatically changes color based on GPS accuracy:

- **Green** - Three-dimensional GPS data is available.
- **Yellow** - Two-dimensional GPS data is available.
- **Red** - No GPS data is available.



Sentry Mini GPS LED

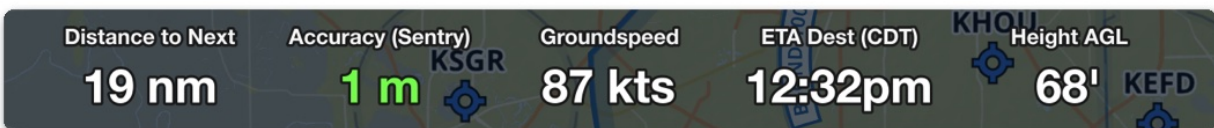
GPS

Displaying GPS Accuracy in ForeFlight

When an accurate GPS signal is received from Sentry, the aircraft position is displayed on the ForeFlight Moving Map. The Accuracy instrument in ForeFlight provides real-time GPS accuracy data, with smaller values indicating greater precision.

To display GPS accuracy in ForeFlight:

1. Open the **Maps** view.
2. Tap the **Instrument Panel** button (airspeed indicator icon).
3. Tap the instrument at the bottom of the screen where the Accuracy instrument will be displayed.
4. Select **GPS Accuracy** from the list of available instruments.



ForeFlight Mobile GPS Accuracy Instrument

Displaying GPS Accuracy on Sentry Plus

The Sentry Plus OLED display shows GPS accuracy. Press the **power button** to cycle through views. Smaller accuracy values indicate greater precision.



Accuracy (meters)

Resolving Missing Aircraft Position on the Map

A missing aircraft icon may result from poor GPS reception or device settings. Follow these steps to troubleshoot:

- Ensure Sentry has a clear view of the sky.
- Verify Ownship Display settings:
 1. Go to **More > Settings > Enable Ownship**.
 2. Select **Always**.
- Verify Use as GPS is enabled:
 1. Go to **More > Devices**.
 2. Tap the **Sentry device tile**.
 3. If enabled, toggle **Use as GPS** off, then back on, to see if the issue resolves.
- Verify iOS Location Services:
 1. Open the **Settings** app on the iPad/iPhone.
 2. Select **Privacy & Security > Location Services**.
 3. Ensure **Location Services** are enabled.
 4. Select **ForeFlight**.
 5. Set to **While Using the App** or **Always**.
 6. Enable **Precise Location**.

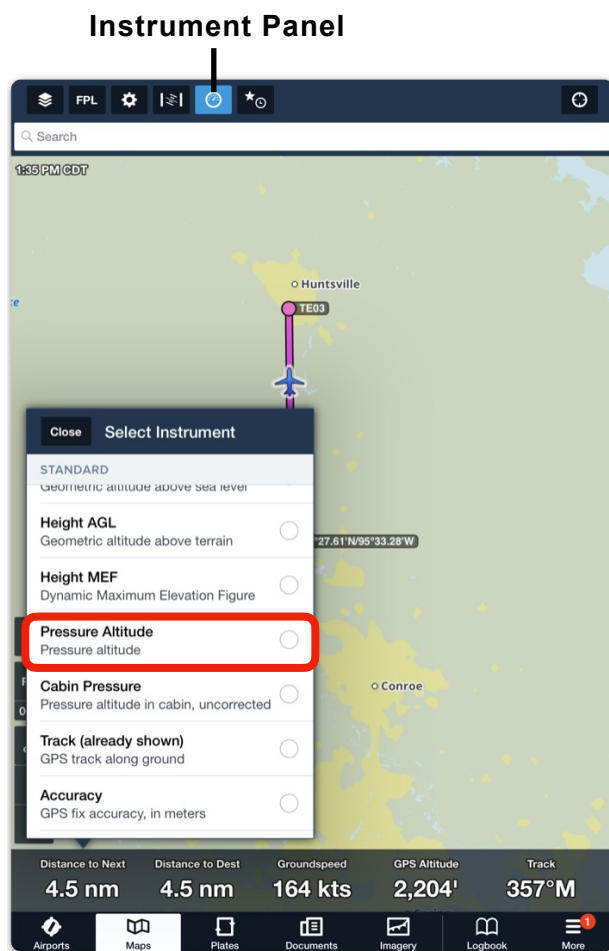
BAROMETER

Sentry and Sentry Plus include an integrated barometer that provides ForeFlight Mobile with ambient air pressure data (uncorrected). This data is used to determine Pressure Altitude or Cabin Pressure within ForeFlight.

Displaying Pressure Altitude

To display pressure altitude in ForeFlight Mobile:

1. Open the **Maps** view.
2. Tap the **Instrument Panel** button (airspeed indicator icon - see image).
3. Tap the instrument at the bottom of the screen where the Pressure Altitude instrument will be displayed.
4. Select **Pressure Altitude** from the list of available instruments.



Displaying Pressure Altitude

Displaying Cabin Pressure

ForeFlight can display cabin pressure for both pressurized and non-pressurized aircraft. To enable cabin pressure display:

1. Open the **Maps** view.
2. Tap the **Instrument Panel** button (airspeed indicator icon).
3. Tap the instrument at the bottom of the screen where the Cabin Pressure instrument will be displayed.
4. Select **Cabin Pressure** from the list of available instruments.

For non-pressurized aircraft, Pressure Altitude and Cabin Pressure display the same value.

For pressurized aircraft:

1. Go to **More > Devices**.
2. Tap the **Sentry** device tile.
3. Enable **Cabin is Pressurized**.

When Cabin is Pressurized is enabled, the Pressure Altitude instrument displays dashes.

Cabin Altitude Alerts

Sentry barometric data is used for Cabin Altitude Alerts in ForeFlight:

- A **caution alert** is displayed when pressure altitude or cabin pressure reaches **12,000 ft**.
- A **warning alert** is displayed when pressure altitude or cabin pressure reaches **25,000 ft**.

AHRS

Sentry and Sentry Plus provide ForeFlight Mobile with an Attitude and Heading Reference System (AHRS). Attitude data is generated using a 3-axis accelerometer and a digital gyroscope.

The backup attitude indicator in ForeFlight Mobile displays real-time attitude and GPS track information from Sentry. Post-flight, attitude and GPS track data can be reviewed using ForeFlight Track Log.



Sentry Provided Pitch & Roll Information

NOTE: Sentry and Sentry Plus AHRS are not optimized for aerobatic flight.

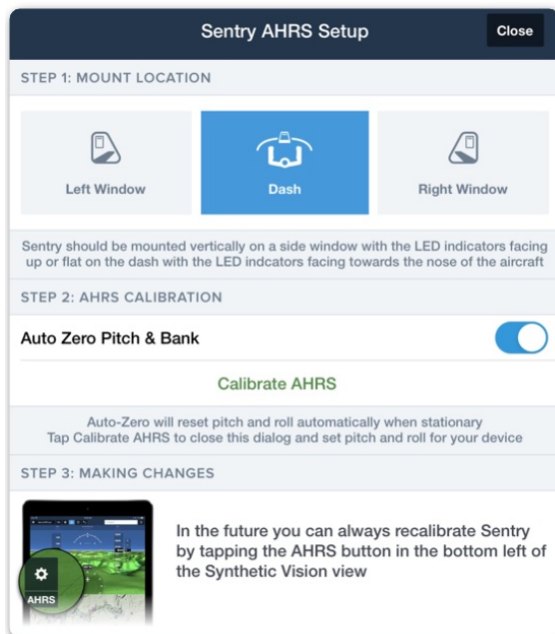
Setting the Mounting Location for Sentry

To provide accurate pitch and roll information, the mounting orientation of the Sentry must be set in ForeFlight Mobile. This is part of the initial setup process, which automatically appears when ForeFlight detects a new Sentry or Sentry Plus.

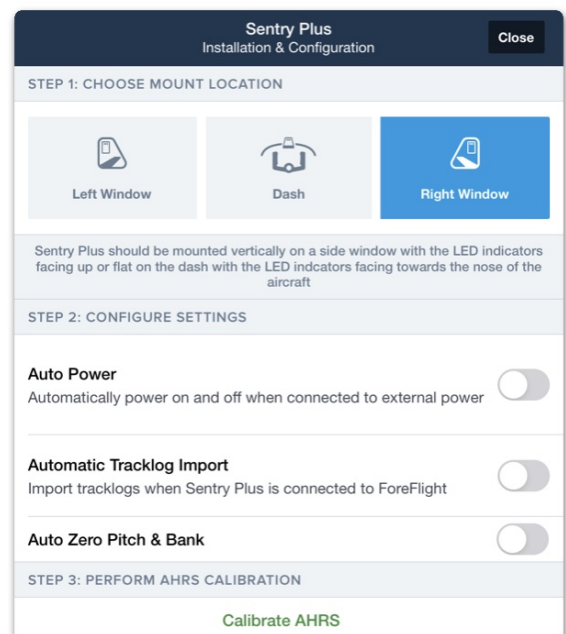
Changing the Mounting Location

To adjust the mounting location after the initial setup from within ForeFlight Mobile:

1. Open the **Maps** view.
2. Tap the **Attitude Indicator** button in the upper toolbar.
3. Tap the **AHRS settings (gear)** button near the bottom left corner of the screen.
4. Select a new mounting location: **Left Window**, **Dash**, or **Right Window**.



Sentry Initial Setup



Sentry Plus Initial Setup

NOTE: Sentry and Sentry Plus mounting locations can be changed as often as needed.

Calibrating AHRS

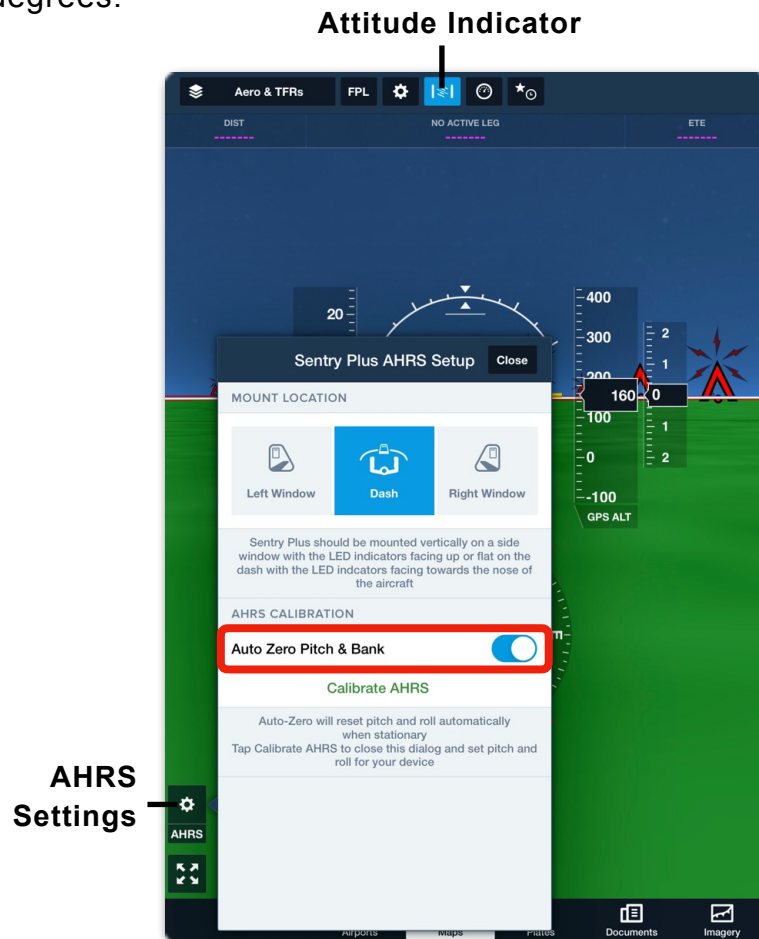
Sentry and Sentry Plus AHRS can be calibrated automatically or manually. Calibration ensures that the backup attitude indicator displays a level horizon when the aircraft is straight and level. Automatic calibration is the recommended method.

Automatically Calibrating AHRS

To automatically calibrate Sentry or Sentry Plus AHRS in ForeFlight Mobile:

1. Open the **Maps** view.
2. Tap the **Attitude Indicator** button in the upper toolbar.
3. Tap the **AHRS settings (gear)** button near the bottom left corner of the screen.
4. Enable **Auto Zero Pitch & Bank**.

When **Auto Zero Pitch & Bank** is enabled, ForeFlight continuously evaluates pitch, bank, and acceleration. If the aircraft remains straight and level with no acceleration for more than ten seconds, ForeFlight automatically cages the AHRS and sets pitch and roll to zero degrees.

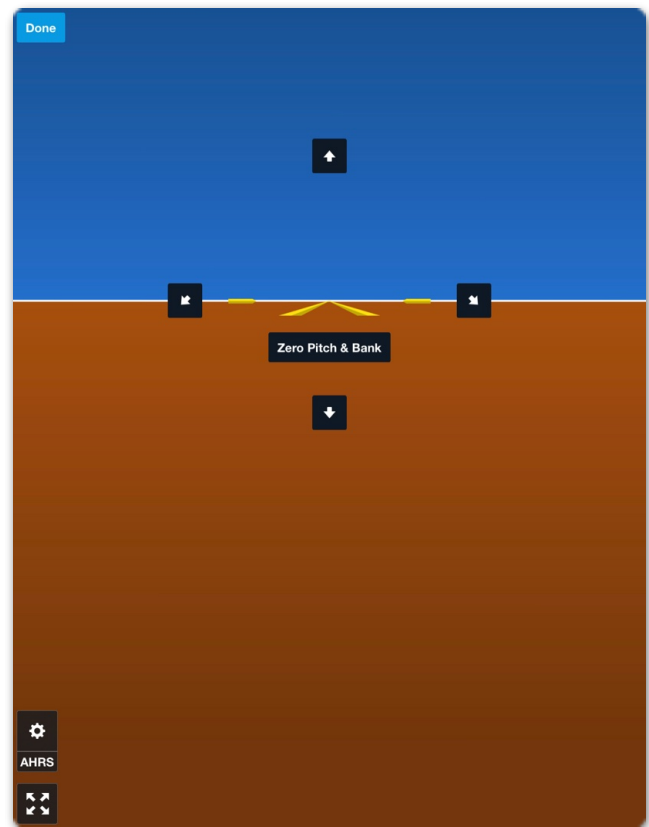


AHRS

Manually Calibrating AHRS

To manually calibrate AHRS in ForeFlight Mobile:

1. Open the **Maps** view.
2. Tap the **Attitude Indicator** button in the upper toolbar.
3. Tap the **AHRS settings (gear)** button near the bottom left corner of the screen.
4. Verify that the correct mounting location is selected.
5. Disable **Auto Zero Pitch & Bank** (if enabled).
6. Tap **Calibrate AHRS**.
7. If the aircraft is level, tap **Zero Pitch & Bank**.
8. Use the arrows as needed until the yellow reference bars align with the white horizon line.
9. Tap **Done** in the upper left corner of the screen.



Manual AHRS Calibration

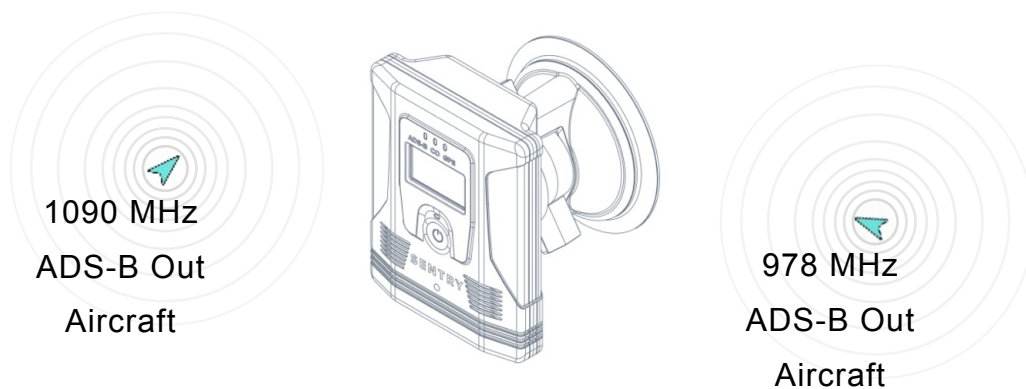
Once manually calibrated, pitch and roll corrections are saved to the device. Each time Sentry or Sentry Plus connects to ForeFlight, these corrections are applied automatically, eliminating the need for repeated manual calibration.

ADS-B TRAFFIC

ADS-B data is broadcast on either the 978 MHz or 1090 MHz frequency. 1090 MHz is required for operations internationally and above FL180. Sentry, Sentry Mini, and Sentry Plus are dual-band receivers capable of detecting traffic on both frequencies.

Receiving ADS-B Traffic with Sentry

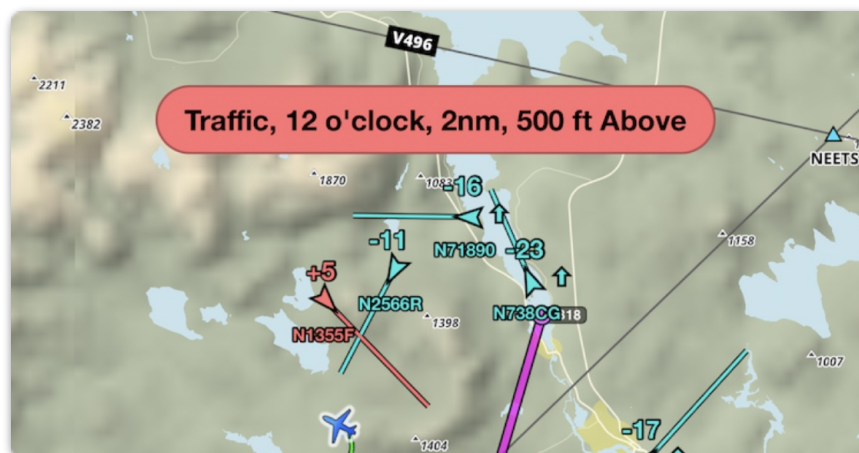
Aircraft using Sentry do not need to be ADS-B Out equipped to receive traffic. However, if the aircraft is not ADS-B Out equipped, ForeFlight may display significant relative altitude discrepancies. See [ADS-B Ownship](#) for more details. Additionally, non-ADS-B Out equipped aircraft may not display traffic detected via surveillance radar. See [Traffic Information Service Broadcast \(TIS-B\)](#) for further details.



Sentry Plus Detecting ADS-B Traffic

Displaying ADS-B Traffic in ForeFlight

Sentry receivers detect and display ADS-B traffic in ForeFlight when the Traffic layer is selected. No additional equipment is required to receive ADS-B traffic with Sentry.



ADS-B TRAFFIC

Traffic Icons

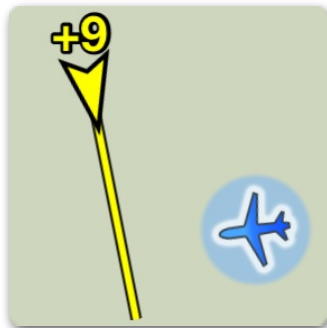
Traffic icons in ForeFlight Mobile are displayed based on the following factors:

- **Moving targets** appear as arrowheads pointing in the direction of travel.
- **Stationary targets** or targets with no direction or speed data appear as diamonds.

Traffic Colors and Alerting

Traffic icons are color-coded as follows:

- Airborne targets are **cyan**.
- Surface targets are **brown**.
- Traffic proximity alerts:
 - **Yellow** - Moving faster than 40 knots and predicted to be within 2.0 nm and $\pm 1,200$ ft in ≤ 45 seconds.
 - **Red** - Moving faster than 40 knots and predicted to be within 1.3 nm and $\pm 1,200$ ft in ≤ 25 seconds.
- Traffic targets remain highlighted for 15 seconds after no longer exceeding these thresholds.



Traffic Caution
within 2.0 nm and
+/- 1,200 ft or will be
within 45 seconds



Traffic Warning
within 1.2 nm and
+/- 1,200 ft or will be
within 25 seconds

ADS-B TRAFFIC

Traffic Altitude and Trend Indicators

Relative altitude and position are displayed using the following elements:

- "+" for altitude above (e.g., +9 = 900 ft above).
- "-" for altitude below (e.g., -9 = 900 ft below).
- A TrafficTrend™ vector in front of an arrowhead shows the expected position in 60 seconds (longer vector = faster speed).
- Up/down arrows for traffic climbing or descending with rates exceeding 500 feet per minute (fpm).

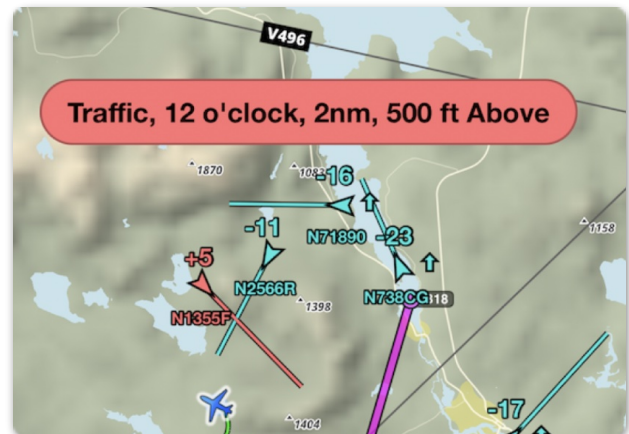
CAUTION: If the aircraft is not ADS-B Out equipped, ForeFlight may display significant altitude discrepancies. See [ADS-B Ownship](#) for details.

Traffic Alerts

Visual traffic alerts are enabled by default. To review or adjust alert settings, go to **More > Settings > Alerts**.

Traffic alerts activate when both the aircraft and traffic have a ground speed exceeding 40 knots and a target is within 25 seconds of being less than 1.3 nm and $\pm 1,200$ ft. When triggered:

- The traffic target turns red.
- A **pop-up alert** appears regardless of the active ForeFlight view.



Traffic Alert

Alert Details

Traffic alerts include the target direction, distance, and relative altitude. If ForeFlight detects that the aircraft is ADS-B Out equipped, an audio alert will be issued if the **Speak All Alerts** setting is enabled. If ADS-B Out is not detected, audio alerts will not be provided.

CAUTION: Any target within 500 ft vertically should be considered at the same altitude as the aircraft with Sentry. Never use ADS-B traffic data from ForeFlight as the sole means of traffic avoidance. Always use See & Avoid or follow ATC instructions.

ADS-B TRAFFIC

Synthetic Vision

Traffic targets within 11 nm of a Sentry-equipped aircraft are displayed in the Synthetic Vision view when using ForeFlight Mobile version 10.2 or later. As traffic moves beyond 11 nm, it fades out of the display. As traffic moves closer, it increases in size. ADS-B traffic is depicted in Synthetic Vision, but tapping a target does not display a traffic information pop-up.

Hide Distant Traffic

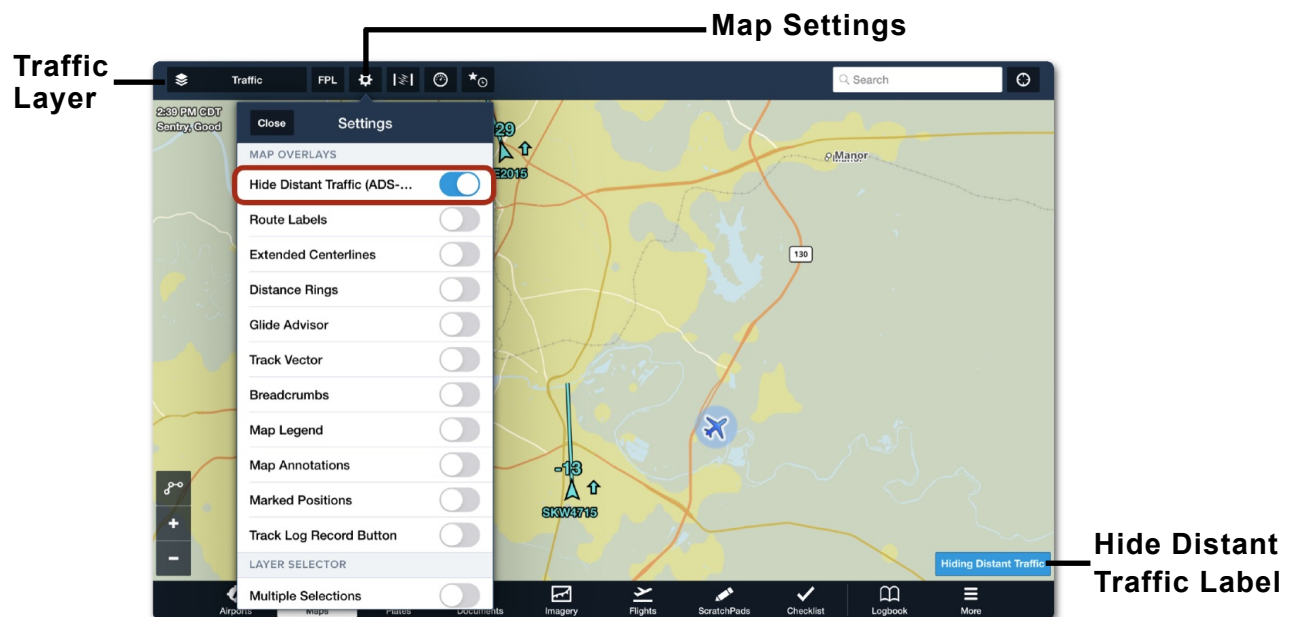
All traffic detected by Sentry is displayed in ForeFlight Mobile when the **Traffic** map layer is selected. To reduce map clutter, enable the **Hide Distant Traffic** setting (available only when connected to Sentry).

Enabling **Hide Distant Traffic** is recommended in congested areas to improve situational awareness. A label appears in the lower right corner when the setting is enabled.

Enabling Hide Distant Traffic

To enable **Hide Distant Traffic**:

1. Go to the **Maps** view.
2. Open the **Map Settings** menu.
3. Select **Hide Distant Traffic (ADS-B)**.



Hide Distant Traffic (ADS-B) Enabled

ADS-B TRAFFIC

When **Hide Distant Traffic** is enabled, traffic is removed from the map if it is:

- More than 15 nautical miles away, or
- More than 3,500 ft above or below the current position.

To remove all traffic from the map, deselect the **Traffic** layer from the map layer menu in the upper left corner.

NOTE: The Hide Distant Traffic setting does not affect traffic alerts.

Traffic Information Service Broadcast (TIS-B)

The Traffic Information Service Broadcast (TIS-B) is a component of ADS-B traffic. The TIS-B broadcast includes non-ADS-B Out equipped traffic on the 978 MHz frequency.

TIS-B is transmitted for the benefit of client aircraft, meaning it is only broadcast when an aircraft equipped with ADS-B Out is present. As a result, only aircraft (traffic targets) that are considered relevant to a client aircraft are included in the broadcast.

TIS-B Inclusion Criteria

To be included in the TIS-B broadcast, a traffic target must:

- Operate within 15 nm and 3,500 ft vertically of a client aircraft.
- Be equipped with an altitude encoding (Mode C) transponder.
- Operate within the service volume of surveillance radar.

Aircraft Excluded from TIS-B

The following aircraft are not included in the TIS-B broadcast:

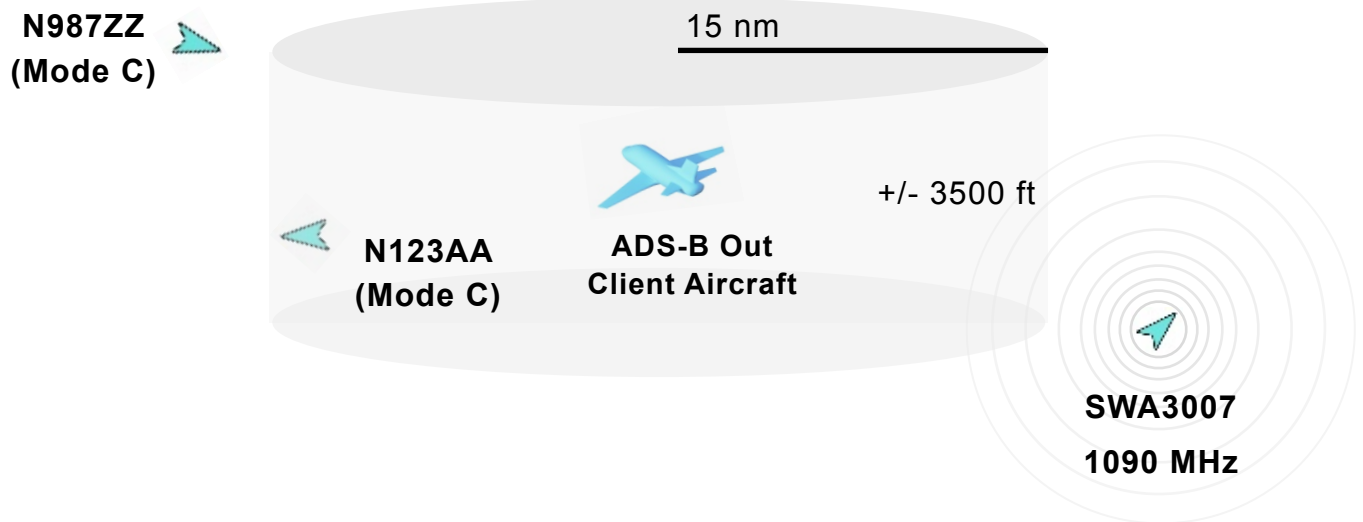
- Aircraft outside the 15 nm and 3,500 ft vertical range of a client aircraft.
- Aircraft without transponders.
- ADS-B Out equipped aircraft (as they already broadcast their own position).

ADS-B TRAFFIC

ADS-B Traffic Example

In the example below:

- **N123AA** is included in the TIS-B broadcast because it is within 15 nm and 3,500 ft of a client aircraft.
- **N987ZZ** is not included in the TIS-B broadcast because it is outside the 15 nm range.
- **SWA3007** is not included in the TIS-B broadcast because it is ADS-B Out equipped and transmits on 1090 MHz.



Example TIS-B Scenario

If the client aircraft is equipped with Sentry, both SWA3007 (ADS-B Out) and N123AA (TIS-B) will be displayed in ForeFlight. N987ZZ will only appear if it enters a client aircraft's 15 nm service volume.

ADS-B TRAFFIC

How TIS-B is Received

TIS-B traffic is broadcast on the 978 MHz frequency and includes only Mode C transponder-equipped aircraft detected by surveillance radar within 15 nm and 3,500 ft of an ADS-B Out equipped aircraft. Air-to-air ADS-B broadcasts are not part of TIS-B.

Pilots using a Sentry receiver within the service volume of an ADS-B ground station will receive TIS-B data for display in ForeFlight. When a traffic target is tapped, the traffic pop-up will indicate whether the target is received via air-to-air ADS-B or TIS-B broadcast.

Unlike traffic data received directly from ADS-B Out equipped aircraft, TIS-B targets often lack identifying information such as tail number or call sign.

NOTE: TIS-B does not include aircraft without transponders or ADS-B Out equipped aircraft.

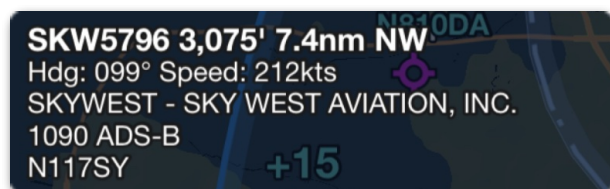
ADS-B and TIS-B Differences

ADS-B traffic typically provides more detailed information than TIS-B traffic, including:

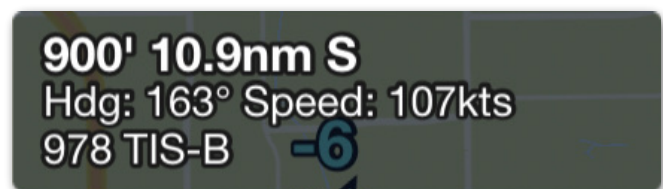
- Registration number
- Relative altitude.

TIS-B traffic targets only display relative altitude and lack identifying details.

Tapping a traffic symbol in ForeFlight reveals additional information about the target, depending on whether it is received via ADS-B or TIS-B.



ADS-B Traffic Pop-up



TIS-B Traffic Pop-up

ADS-B TRAFFIC

ADS-B Ownship

ADS-B Ownship is the process of identifying a traffic target as the aircraft itself. ForeFlight determines Ownship by comparing the aircraft's ADS-B Out data with Sentry GPS data, using location, speed, and heading. If the position data closely matches, ForeFlight assigns Ownship status and applies the following benefits:

- **Traffic suppression** – The aircraft's traffic target is hidden from the ForeFlight map.
- **Track Log integration** – ADS-B Out information, such as the Call Sign, is recorded in ForeFlight Track Logs.
- **Improved altitude comparison** – ForeFlight uses the pressure altitude from the aircraft's ADS-B Out transmission for altitude comparison instead of GPS altitude. If Ownship is not detected, ForeFlight compares GPS altitude with the pressure altitude of nearby traffic.

To check Ownship status and ADS-B Out data in ForeFlight:

1. Go to **More > Devices**.
2. Tap the **Sentry device tile**.
3. Tap **Ownship**.

If Ownship is assigned, the page will display information from the aircraft's ADS-B Out transmission. If Ownship is not detected, the status will display **Not Detected**.

Sentry Plus Ownship	
GENERAL	
Last Update	Now
Call Sign	Unknown
Flight ID	LIFE5
Squawk	
ICAO Address	
Source	1090 ADS-B
LOCATION	
Lat/Lon	30.38°N/95.37°W
Geometric Altitude	1,345'
Pressure Altitude	1,275'
Groundspeed	120.3038 kts
Vertical Speed	0 fpm
In Flight	Yes
OTHER	
Emitter Category	Rotorcraft
ADS-B Version	DO-260B
1090 In	Yes
978 In	Yes
NIC	8
NACp	10
Airports Maps Plates Devices More	

ADS-B Ownship

NOTE: Sentry must directly receive the ownship aircraft ADS-B Out signal to accurately assign Ownship status. In larger aircraft, airframe interference may prevent Sentry from detecting the ADS-B Out signal.

ADS-B TRAFFIC

Ownship Detection via TIS-B

If the aircraft does not have ADS-B Out, ForeFlight Mobile may still determine ownship status if:

- The aircraft is detected via TIS-B by being within 15 nm and 3,500 ft of an ADS-B Out equipped aircraft.
- Sentry receives the TIS-B traffic target, allowing ForeFlight to determine ownship.

False Traffic Alerts

If Sentry detects the aircraft's ADS-B Out signal but its information does not match the Sentry GPS, the aircraft will appear as a traffic target. Ownship status cannot be assigned when GPS data does not match, potentially resulting in false traffic alerts.

False TIS-B Target Behavior

A false TIS-B target caused by ownship detection failure may exhibit the following characteristics:

- It may appear slightly behind and +/- 200 ft from the aircraft's actual position.
- After a short period, ForeFlight will recognize the TIS-B target as ownship and suppress it.
- If ForeFlight cannot determine ownship and the aircraft's TIS-B target is detected, the target cannot be removed from the map unless the **Traffic** layer is turned off.

Causes of False Traffic Alerts

Rapid maneuvering or poor GPS accuracy may cause ownship status to be lost, leading the aircraft to appear as a traffic target on the map. Once position data aligns, ownship correlation is re-established.

If ownship is not assigned for the entire flight, it may indicate airframe interference or an issue with the aircraft's configuration or position reporting.

ADS-B WEATHER

The Flight Information Service Broadcast (FIS-B), commonly known as ADS-B weather, is a continuous ground-based broadcast providing weather and NOTAM data. The FIS-B broadcast also includes ground station details such as latitude, longitude, tower type, and status.

ForeFlight Mobile can display ADS-B weather, NOTAMs, and tower information when connected to Sentry, Sentry Mini, or Sentry Plus.

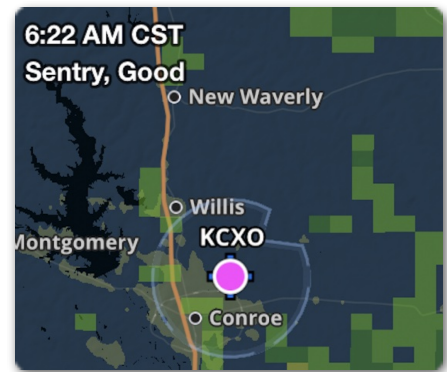
CAUTION: When a cellular-capable iPad or iPhone is connected to Sentry, cellular data is disabled in ForeFlight Mobile. Internet-based weather layers (e.g., Radar Composite) can still be selected but will not display updated internet data while connected to Sentry.

Receiving ADS-B weather requires a direct line-of-sight to at least one ground-based transmitter. Aircraft on the ground or at low altitudes may experience poor reception due to obstructions.

Signal Status Label

When a FIS-B map layer is selected, ForeFlight Mobile displays a status label in the upper-left corner of the map. The label provides:

- The last update time
- The data source (e.g., Sentry)
- The status of the source (e.g., Good)
- The number of towers received (not signal strength).



FIS-B Signal Status

Signal Status Indicators

ForeFlight will display one of the following four statuses:

- **No Towers** - Sentry is not receiving any tower data.
- **No Data** - Sentry is receiving tower data but not weather or NOTAM data.
- **Marginal** - Sentry is receiving FIS-B data from one tower.
- **Good** - Sentry is receiving FIS-B data from more than one tower.

ADS-B WEATHER

ADS-B Ground-Based Towers

Hundreds of towers throughout the United States broadcast FIS-B data. There are four types of FIS-B ground-based towers: surface, low-altitude, medium-altitude, and high-altitude. Each tower type provides a range of aeronautical information (see table in this chapter for additional details). Approximately two-thirds of towers in the United States are low-altitude tier towers.

The amount of information a tower broadcasts is determined by its look-ahead range. ADS-B tower look-ahead range specifies how far and the type of data a tower transmits. For example, a low-altitude tower broadcasts METARs for airports within 250 nm, whereas a medium-altitude tower broadcasts METARs for airports within 375 nm.

Sentry is capable of receiving data from multiple towers simultaneously. What is shown in ForeFlight is a combination of data from all the towers being received.

Tower Location on Map

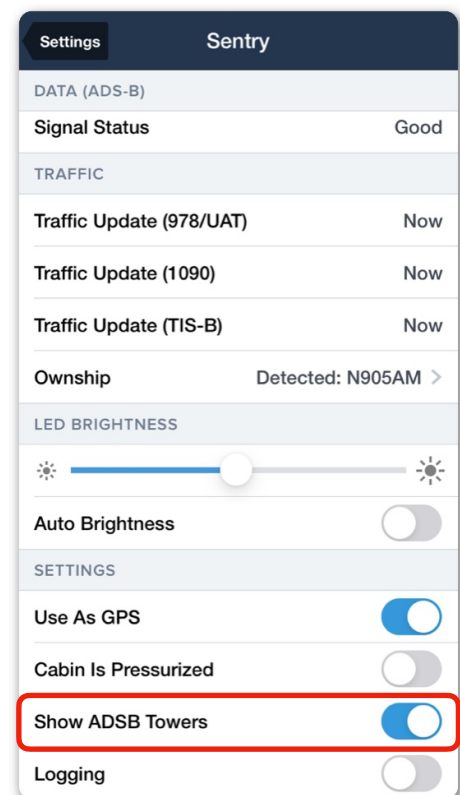
ForeFlight Mobile can display ADS-B towers that Sentry is receiving data from on the map. Any received data, including station data only, will cause the tower to appear on the map.

To enable ADS-B tower display, open **Map Settings** > **Sentry** and enable Show ADS-B Towers. Alternatively, go to **More** > **Devices** > **Sentry** > **Show ADS-B Towers**.

Towers are shown at their approximate location with latitude, longitude, and tower type displayed next to the tower icon. Tapping a tower icon does not provide additional information.

FIS-B Tower Tiers and Look-Ahead Range

ForeFlight Mobile combines data from multiple towers into a single map layer when applicable. Areas outside the broadcast range (look-ahead range) are marked with hash marks and labeled "Data not available."



Show ADS-B Towers

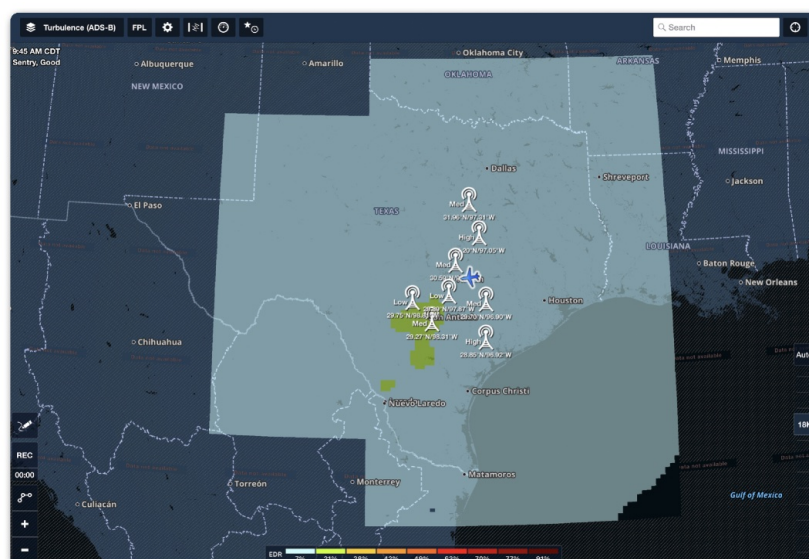
ADS-B WEATHER

ADS-B Tower Tier Look-Ahead Range

Refer to the table below for weather product availability and broadcast range based on ADS-B tower tier.

Weather Product	Surface Towers	Low-Altitude Tier	Medium-Altitude Tier	High-Altitude Tier
CONUS NEXRAD	Not Provided		Entire CONUS	
REGIONAL NEXRAD	150 nm		200 nm	250 nm
METAR	100 nm	250 nm	375 nm	CONUS B & C Airports
TAF				
AIRMET/SIGMET				
Graphical AIRMETs	Not Provided	250 nm	375 nm	500 nm
CWA				
PIREPs				
SUA				
NOTAM	100 nm			
Cloud Tops	Not Provided	150 nm	200 nm	250 nm
Icing				
Lightning				
Turbulence				
Winds & Temp Aloft	500 nm		750 nm	1000 nm

FIS-B Look-Ahead Range by Tower Tier and Weather Product



Weather Replay

All Sentry receivers have an integrated memory chip that stores up to 30 minutes of weather and NOTAM data. When powered on and receiving ADS-B data, Sentry automatically begins storing received information.

Sentry automatically deletes data older than 30 minutes. Weather Replay improves load times by locally storing ADS-B data until a stored weather product is selected in ForeFlight Mobile. Data retrieved from Weather Replay appears the same as real-time data in ForeFlight.

CAUTION: When connected to Sentry, cellular data is disabled in ForeFlight Mobile.

ADS-B Map Layers

When connected to Sentry, the following ADS-B weather products are available in the layer menu:

- Radar (ADS-B)
- Icing (ADS-B)
- Turbulence (ADS-B)
- Cloud Tops (ADS-B)
- Freezing Lvs (ADS-B).

Weather layers can be selected at any time, even if data has not yet been received. If an ADS-B weather layer is selected before data is available, the map will display "No Data Available."

If a weather layer requiring internet data is selected while connected to Sentry (e.g., standard Radar), the map will also display "No Data Available."

Radar

Radar (ADS-B)

Enhanced Satellite

Color IR Satellite

Icing (US)

Icing (Global)

Icing (ADS-B)

Turbulence (US)

Turbulence (Global)

Turbulence (ADS-B)

Clouds

Surface Analysis

Winds (Temps)

Winds (Speeds)

Cloud Tops (ADS-B)

Freezing Lvs (ADS-B)

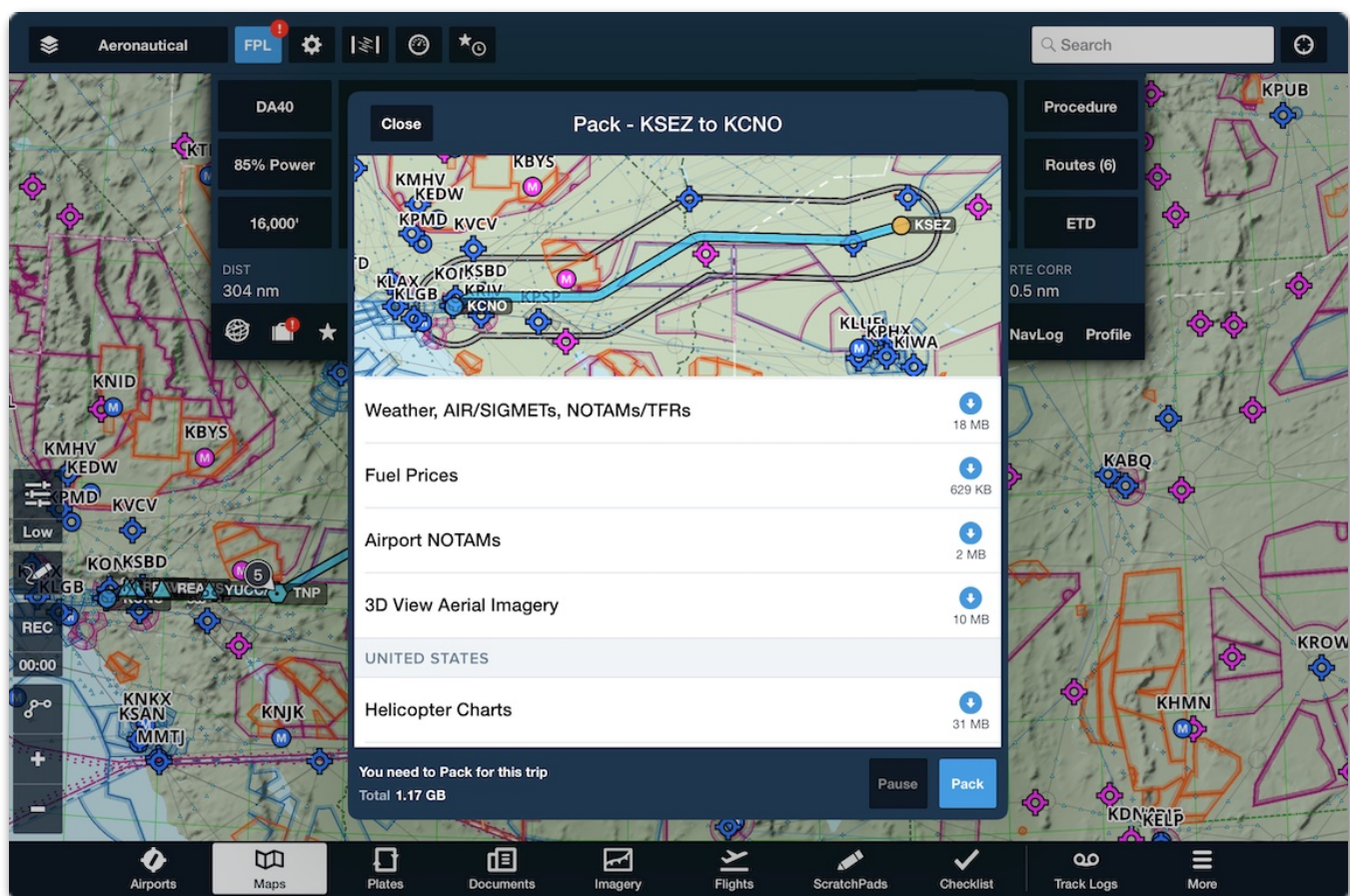
Map Layers

ForeFlight Pack

ForeFlight Mobile can download charts, weather, NOTAMs, and fuel price information for an upcoming flight, allowing access to this data while en route. Packing requires an active internet connection and cannot be completed while connected to Sentry. It is recommended to Pack before heading to the aircraft.

To Pack for a flight, tap the **suitcase button** at the bottom of the **FPL Editor** in the **Maps** view. Alternatively, tap **Pack** at the bottom of the **Flights** view. Packing from either view downloads the same information.

When packing for a flight, ForeFlight downloads the latest weather, charts, NOTAMs, and fuel prices for airports within 25 nm of the route and for departure and destination airports, including a 50 nm radius around each.



ForeFlight Pack

ADS-B WEATHER

Packing with Sentry

When packed for a flight and connected to Sentry, ForeFlight displays the latest available information. If METARs are packed before receiving FIS-B data, ForeFlight will show the stored METARs from the packing process.

Once the flight departs and FIS-B data is received, ForeFlight automatically replaces the packed METARs with real-time FIS-B data from Sentry.

The table below outlines the data sources and subscription plans required to view each product.

Weather Product	Minimum Subscription	Internet	Pack	Sentry (FIS-B)
Radar	Starter	✓		
Radar (ADS-B)	Starter			✓
Cloud Tops (ADS-B)	Starter			✓
Enhanced Satellite	Starter	✓		
Color IR Satellite	Starter	✓		
Icing (ADS-B)	Starter			✓
Icing (US)	Essential / Business Pro	✓	✓	
Icing (Global)	Essential / Business Pro	✓	✓	
Turbulence (ADS-B)	Starter			✓
Turbulence (US)	Essential / Business Pro	✓	✓	
Turbulence (Global)	Essential / Business Pro	✓	✓	
Clouds	Essential / Business Pro	✓	✓	
Surface Analysis	Essential / Business Pro	✓	✓	
Freezing Lvs (ADS-B)	Starter			✓
Winds (Temps)	Premium / Business Performance	✓	✓	
Winds (Speeds)	Premium / Business Performance	✓	✓	
AIR/SIGMET/CWAs	Starter	✓	✓	✓
PIREPs	Starter	✓		✓
Lightning	Starter	✓		✓
METARs/TAFs	Starter	✓	✓	✓
NOTAMs (Including TFRs)	Starter	✓	✓	✓

ADS-B WEATHER

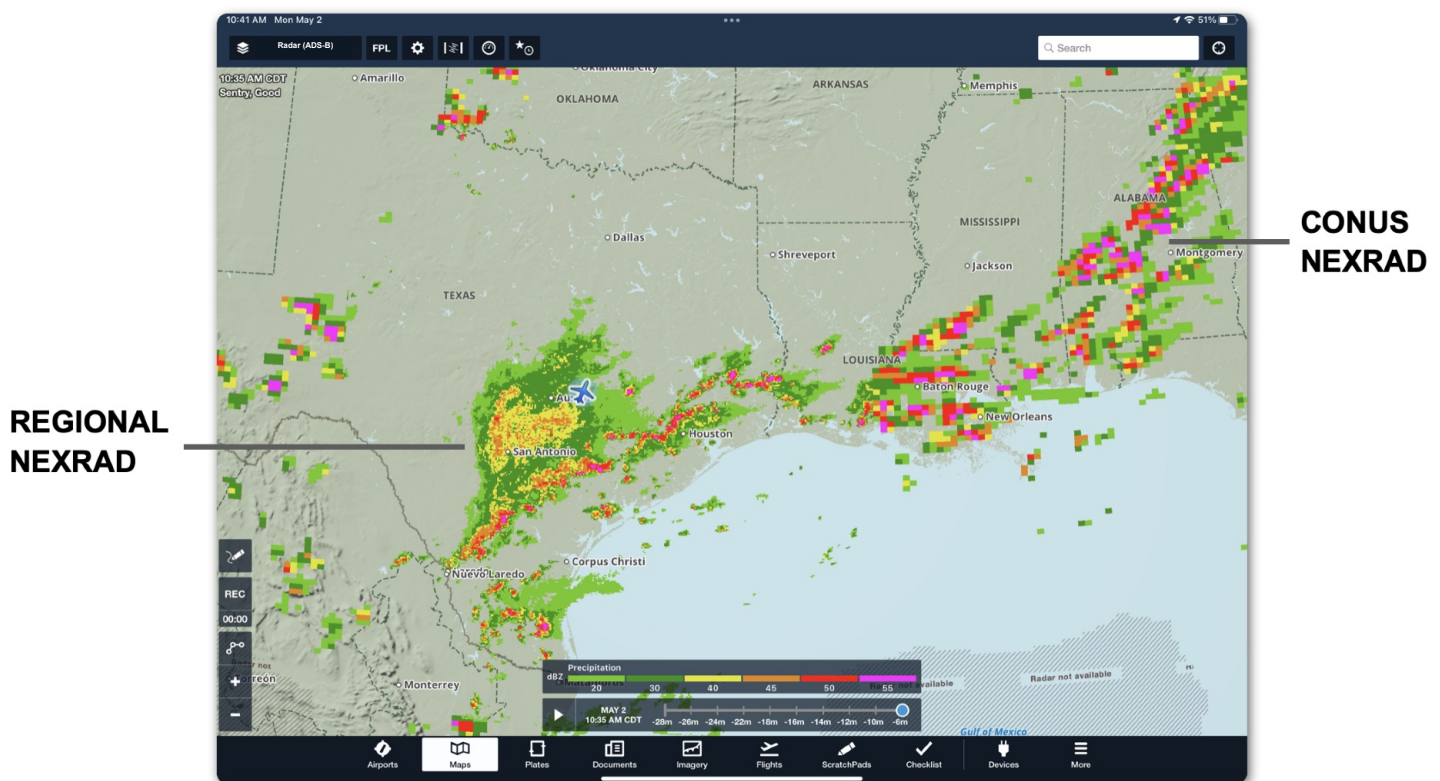
CONUS and Regional NEXRAD (ADS-B)

Medium- and high-altitude FIS-B towers broadcast Next-Generation Radar (NEXRAD) for the Continental United States (CONUS). Regional NEXRAD, broadcast by all tower tiers, provides higher resolution and a faster refresh rate than CONUS NEXRAD. To display ADS-B NEXRAD data, select the **Radar (ADS-B)** map layer.

CONUS NEXRAD updates over ADS-B every 5 minutes and via FIS-B towers every 15 minutes. It is displayed beyond the Regional NEXRAD look-ahead range.

Regional NEXRAD updates every 2 minutes but refreshes every 10 minutes on clear days with no radar returns.

When flying across the country, radar returns will automatically transition from CONUS to higher-resolution Regional NEXRAD when within range.

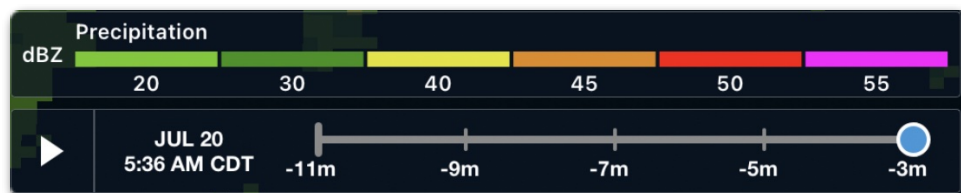


ADS-B Radar (Composite)

ADS-B WEATHER

Animated ADS-B Radar

When **Radar (ADS-B)** is selected, the animate (play) button appears to the left of the time slider at the bottom of the Maps view. ForeFlight will animate up to 15 frames of NEXRAD data, but the time slider and play button are removed if fewer than two radar frames are available.



NEXRAD Animation Time Slider with Play Button

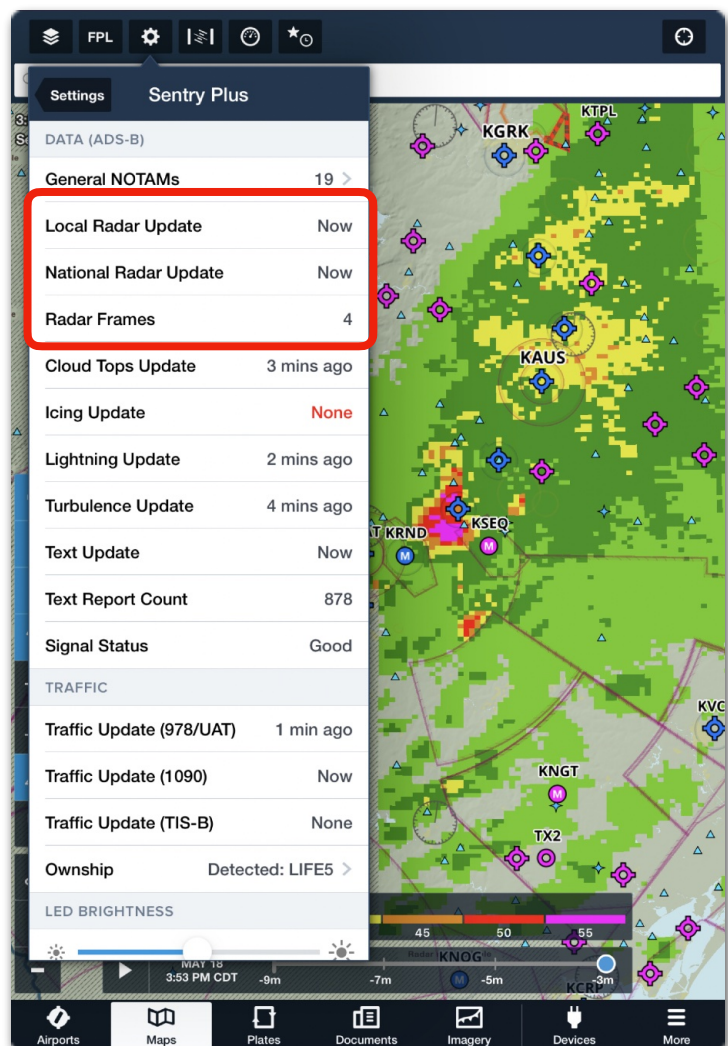
To see how many radar frames are stored:

1. Open the **Map Settings** (gear button).
2. Select **Sentry** near the bottom.

Radar animation is available if two or more frames have been received.

The Local Radar Update line shows when Regional NEXRAD was last updated.

The National Radar Update line shows when CONUS NEXRAD was last updated.



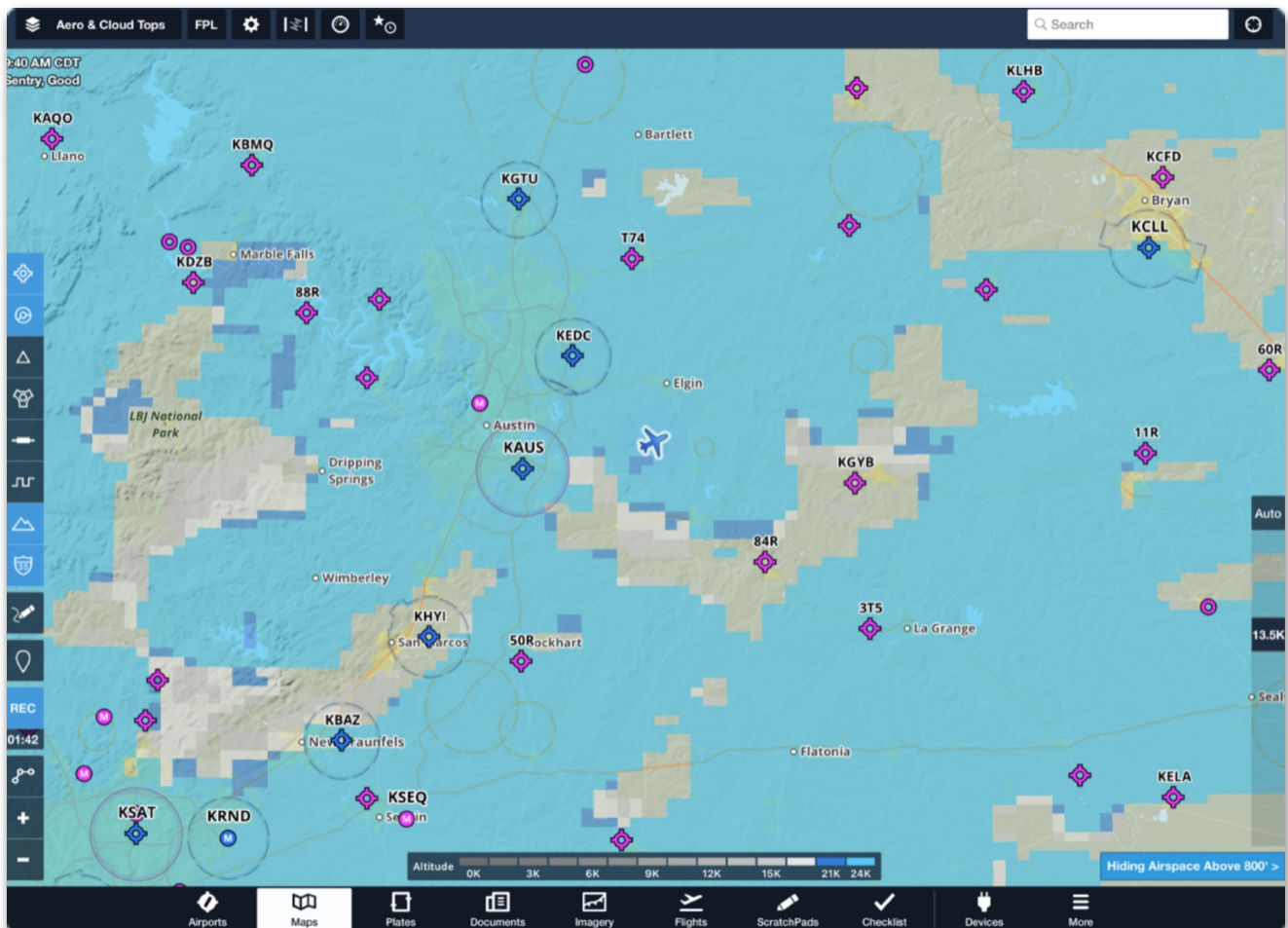
ADS-B Radar Update Times

Cloud Tops (ADS-B)

The Cloud Tops (ADS-B) weather layer is included with all subscriptions when connected to Sentry. This NWS forecast map layer derives cloud top estimates from satellite temperature sensors using the High-Resolution Rapid Refresh (HRRR) model. It is useful for determining whether a flight can be conducted in visual conditions above the clouds.

Cloud Tops data is only available for the continental United States and is not provided for Alaska, Hawaii, Guam, or Puerto Rico. The forecast is generated by the NWS every hour and transmitted over ADS-B every 15 minutes.

To view Cloud Tops (ADS-B), select Cloud Tops (ADS-B) from the layer selector. Use the **altitude slider** on the right side of the map to filter clouds with tops below the selected altitude. Tap **Auto** above the altitude slider to automatically display cloud tops at and above the GPS altitude of the Sentry.



Cloud Tops ADS-B

ADS-B WEATHER

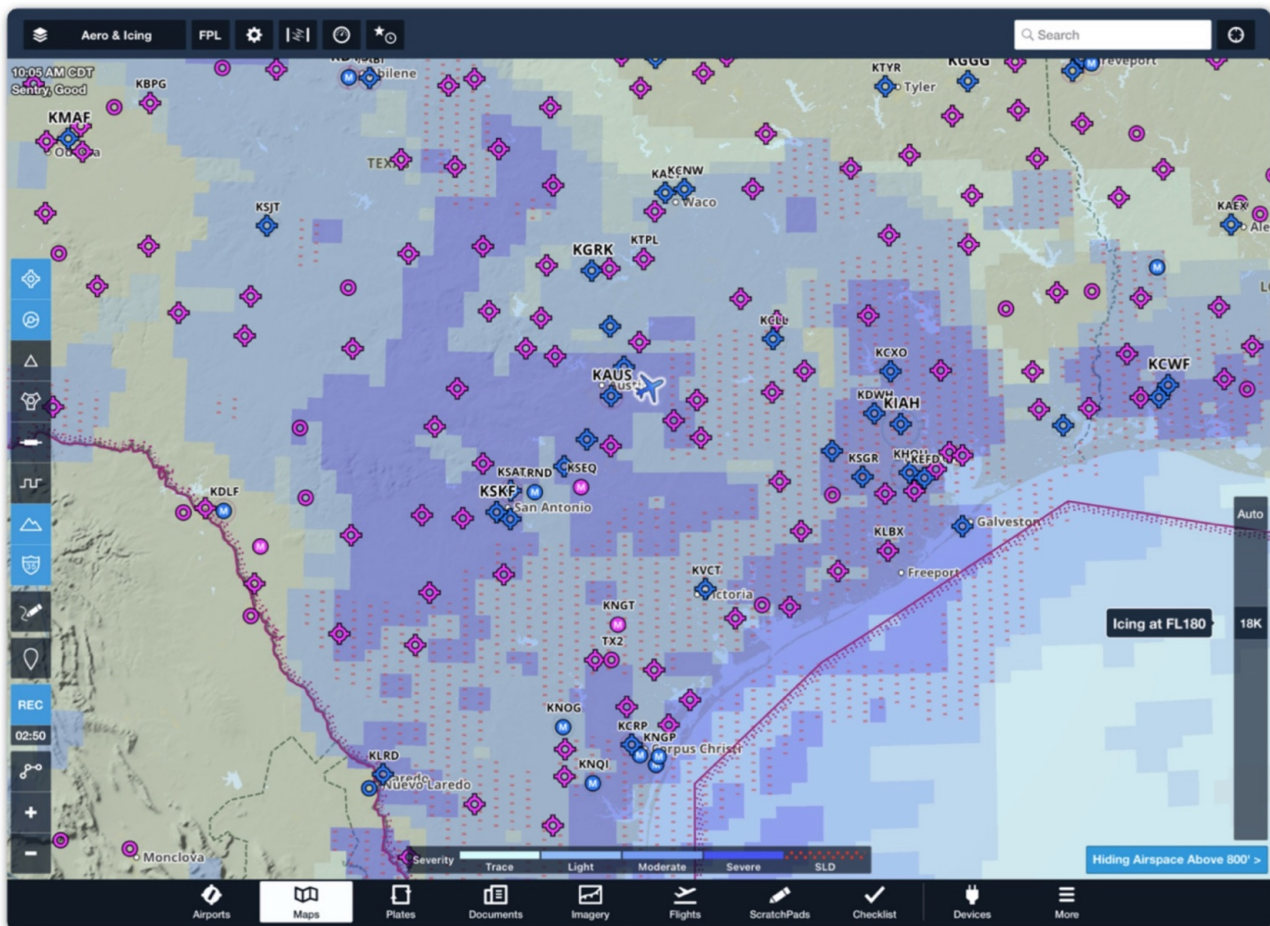
Icing (ADS-B)

The Icing (ADS-B) weather layer is included with all subscriptions when connected to Sentry. This NWS graphical forecast provides a look-ahead range of 150 to 250 nm and is available only in the continental United States. Forecast icing information is not available for Alaska, Hawaii, Guam, or Puerto Rico.

Forecast icing severity and the anticipated presence of super-cooled large droplets (SLD) are provided at 2,000 ft intervals up to 24,000 ft MSL. The altitude slider on the right side of the map allows for viewing icing data at different altitudes.

This forecast is generated using the NWS Forecast Icing Potential model, which updates hourly and is transmitted every 15 minutes.

To view icing forecasts, select **Icing (ADS-B)** in the map layer menu. Use the **altitude slider** to display forecast icing severity and SLD presence at different altitudes. Tap **Auto** above the slider to automatically display icing information at the GPS altitude of the Sentry.



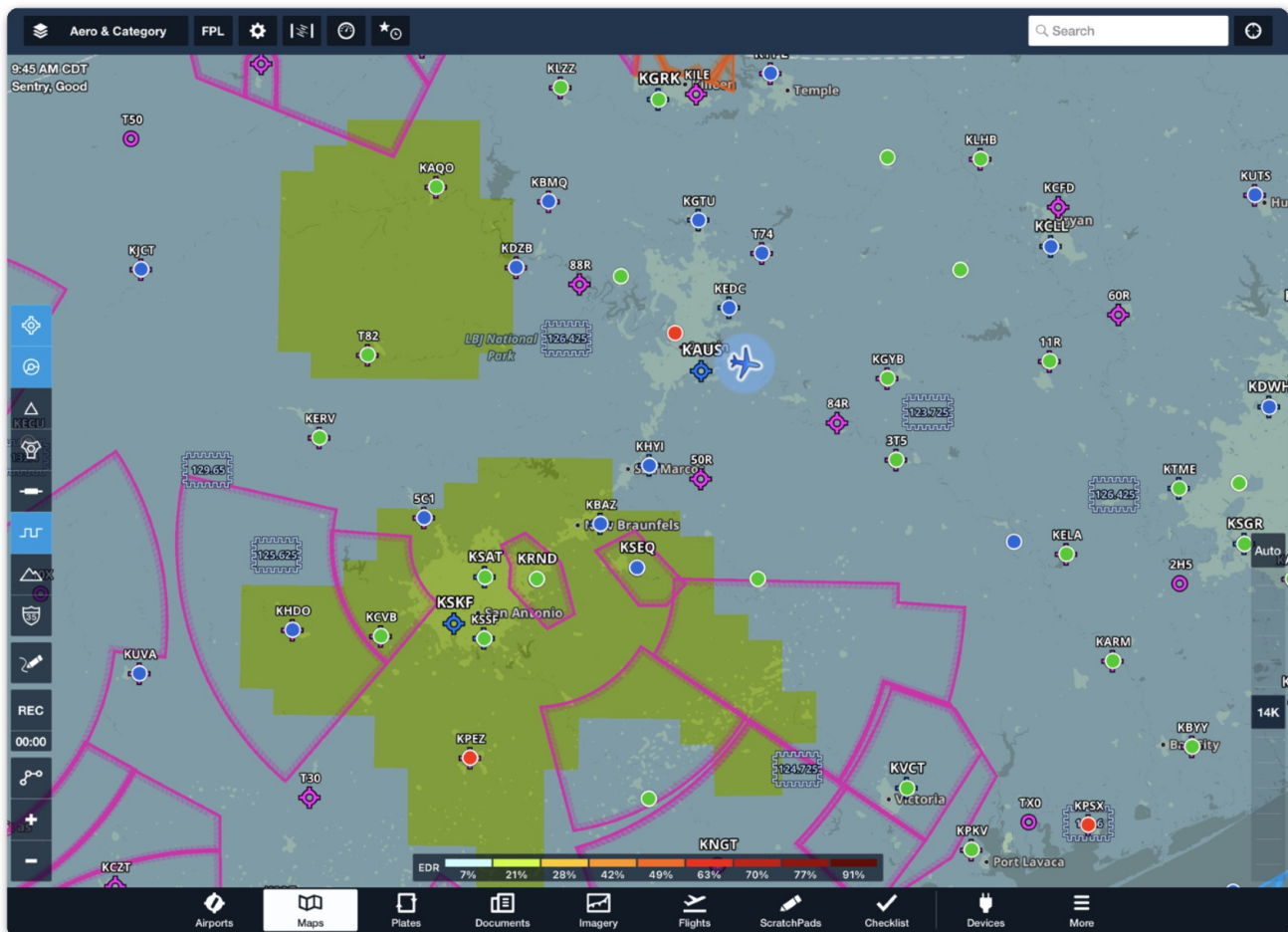
ADS-B WEATHER

Turbulence (ADS-B)

The Turbulence (ADS-B) weather layer is included with all subscriptions when connected to a Sentry ADS-B receiver. This NWS forecast map layer provides a look-ahead range of 150 to 250 nm and is available only in the continental United States.

Turbulence (ADS-B) displays the forecast Eddy Dissipation Rate (EDR), indicating turbulence intensity based on a medium-weight aircraft category. Turbulence is shown at 2,000 ft intervals up to 24,000 ft MSL using the altitude slider on the right side of the map.

Tap **Auto** above the altitude slider to automatically display forecast turbulence intensity at the GPS altitude of the Sentry.



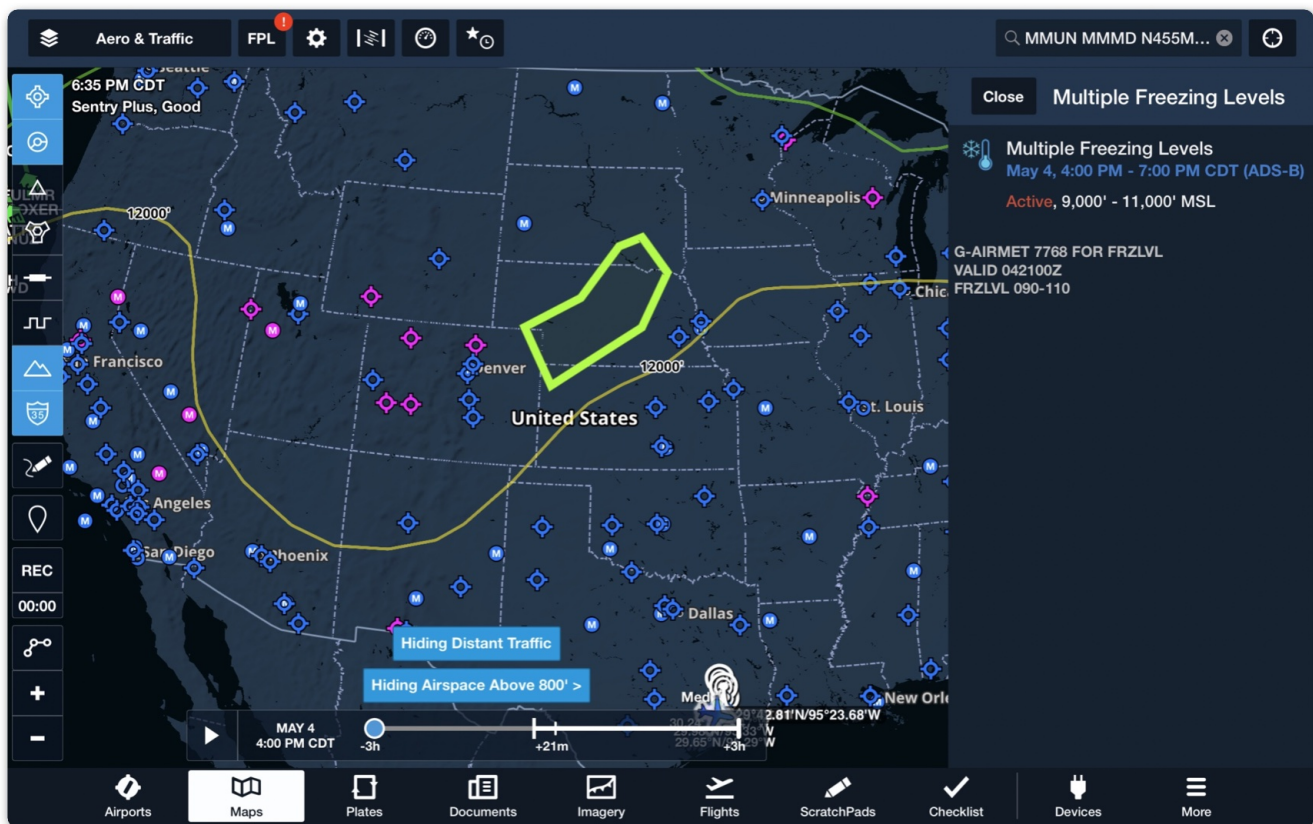
Turbulence (ADS-B)

Freezing Lvs (ADS-B)

The Freezing Level (ADS-B) layer is included with all subscriptions when connected to Sentry. This map layer provides a graphical representation of freezing levels across North America, delineated by color-coded lines at 4,000 ft intervals (MSL) up to 24,000 ft (MSL).

If a region has multiple freezing levels, a shaded polygon appears on the map. Tap the polygon to view additional details.

Freezing level forecasts are generated every three hours and automatically updated in ForeFlight.

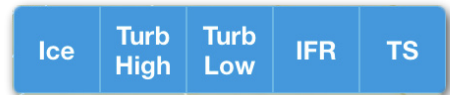


Freezing Lvs (ADS-B)

AIRMETs, SIGMETs, CWAs

ForeFlight combines AIRMETs, SIGMETs, and Center Weather Advisories (CWA) into a single map layer. When the **AIR/SIGMET/CWAs** map layer is selected, the individual weather products can be filtered with the buttons near the bottom of the map.

Selected buttons (highlighted in blue) display the relevant advisories graphically on the map during their active period.

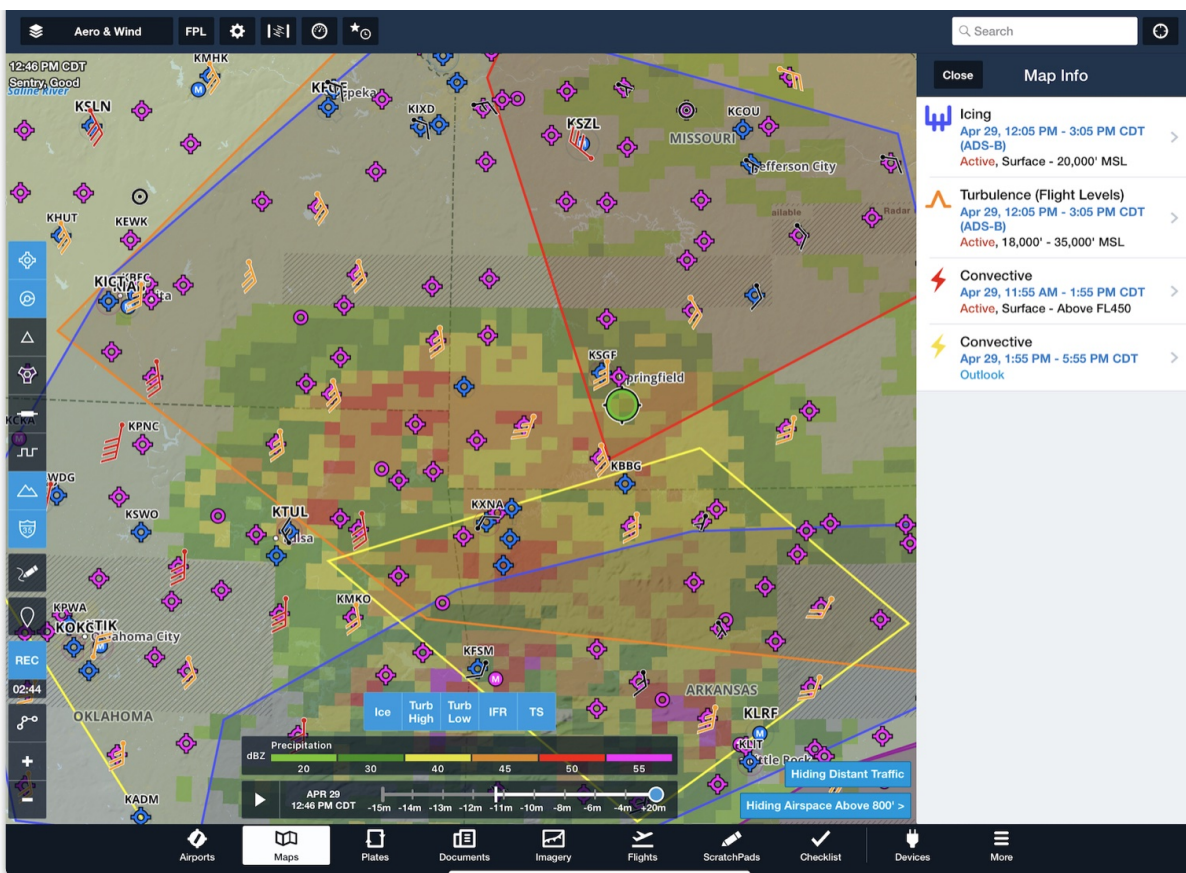


AIR/SIGMET/CWA Filters

AIRMETs, SIGMETs, and CWAs are updated every six hours and refresh automatically every five minutes in ForeFlight. Use the time slider to view future forecast periods.

If an observed weather product (e.g., Radar) is selected along with the AIR/SIGMET/CWA layer, the time slider reflects historical data, not forecasts.

To view details, tap an AIRMET, SIGMET, or CWA to open a textual pop-up. If multiple advisories are active in the tapped area, they will appear in a list view. Select an individual advisory to display its full text.



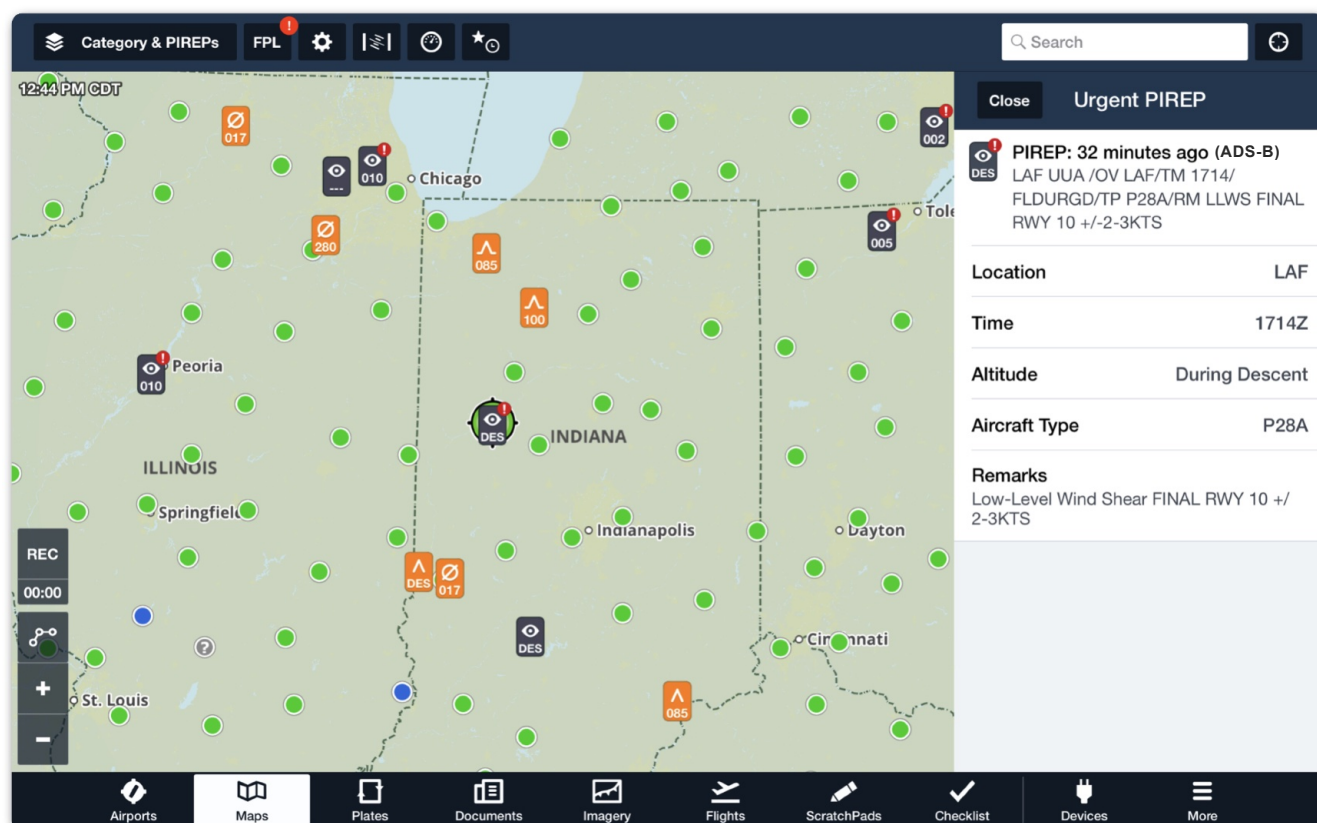
AIRMET/SIGMET/CWA

ADS-B WEATHER

PIREPs

Pilot reports (PIREPs) are broadcast over ADS-B with a range of 250 nm, 375 nm, and 500 nm for low-, medium-, and high-altitude towers, respectively. PIREPs refresh automatically every 10 minutes in ForeFlight.

When the **PIREPs** layer is active, reports are displayed graphically on the map. Tap a PIREP icon to view the coded and decoded text. The age of the PIREP and its source (ADS-B) appear at the top of the PIREP menu.



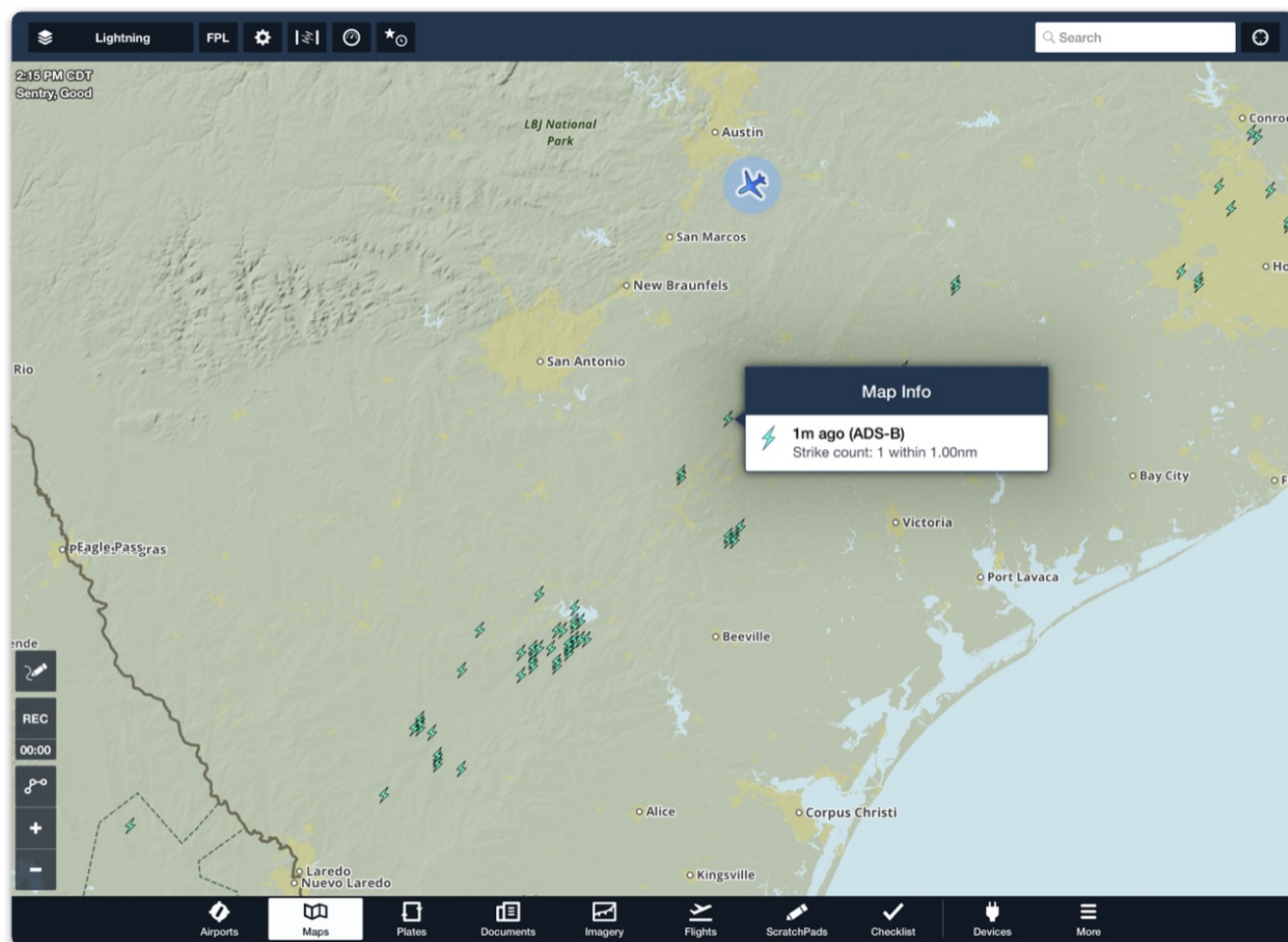
FIS-B PIREPS

NOTE: Improperly formatted PIREPs are not displayed on the map.

Lightning

The Lightning layer is included with all subscriptions when connected to Sentry. It provides a graphical representation of observed cloud-to-ground lightning strike location and density, updated every five minutes from the U.S. national lightning detection network.

Lightning data is transmitted over FIS-B with a 150 to 250 nm look-ahead range. Tap a lightning icon to view the number of strikes within the given radius.



Lightning Data from Sentry

ADS-B WEATHER

METARs

All tower types transmit METARs, but low-altitude towers provide METAR data only for airports within 250 nm. When receiving data exclusively from low-altitude towers, ADS-B METAR data will not be available for airports beyond this range.

METARs received via ADS-B can be viewed the same way as when connected to the internet. To view a METAR, tap an airport icon and select **Weather > METAR**. The airport pop-up shows the METAR update time (e.g., *36m ago*) and the source (ADS-B).

Selecting a map layer that uses METAR data (Flight Category, Surface Winds, Dewpoint Spread, Temperature, Visibility, Ceiling, and Sky Coverage) will display relevant weather information on the map.

METARs received via ADS-B are also available on the Airports view and refresh automatically every five minutes or when the layer is first selected.

The screenshot shows a mobile application interface for the City of Colorado Springs Municipal Airport. At the top, it displays the airport name, location (Colorado Springs, Colorado, US), and elevation (6,187'). Below this, there are buttons for '3D View', 'Taxiways', 'FBOs', and 'Comments'. A navigation bar includes 'Info', 'Weather' (selected), 'Runway', 'Procedure', and 'NOTAM'. Under the 'Weather' tab, there are sub-tabs for 'METAR' (selected), 'TAF', 'MOS', 'Daily', and 'Winds'. The main content area shows a 'VFR' status with a '36m ago (ADS-B)' timestamp. Below this is the full METAR text: 'METAR KCOS 041954Z 35026G41KT 10SM FEW030 SCT050 07/M04 A2978 RMK AO2 PK WND 34043/1903 SLP084 T00671044 \$'. A list of weather parameters follows: Time (1954Z), Wind (350° at 26 - 41 kts), Visibility (10 sm), Clouds (AGL) (Few 3,000' Scattered 5,000'), Temperature (7°C (45°F)), Dewpoint (-4°C (25°F)), Altimeter (29.78 inHg), Humidity (45%), and Density Altitude (6,929').

ADS-B METAR

TAFs

TAFs are broadcast via FIS-B with the same look-ahead range as METARs and can be viewed the same way as when connected to the internet. To view a TAF, tap an airport on the map and select **Weather > TAF**.

TAFs are updated by the National Weather Service every six hours or as conditions change. ForeFlight retrieves the latest TAFs when the layer is first selected and refreshes every 10 minutes. Due to the update frequency, TAF timestamps may be up to six hours old.

Special Use Airspace (SUA)

SUA includes designated areas for operations that may restrict non-participating aircraft, such as:

- Alert Areas
- Controlled Firing Areas
- Military Operations Areas
- Prohibited Areas
- Restricted Areas
- Warning Areas.

SUA status is broadcast via the FIS-B NOTAM-D feed and displayed textually in ForeFlight Mobile under **More > Devices > Sentry > NOTAMs**. SUA NOTAMs are not shown graphically when ADS-B is the sole NOTAM source.

SUA status NOTAMs have a 100 nm look-ahead range and refresh automatically every 10 minutes in ForeFlight Mobile.

Sentry	NOTAMs
NOTAM-D KZFW.06/088 030249Z !FTW 06/088 ZFW OBST WIND TURBINE FARM WI AN AREA DEFINED AS 4.2NM RADIUS OF 315825N1024859W (20.5NM SE E26) 4161FT (364FT AGL) NOT LGTD 2106030249-2106182359	
NOTAM-D KZFW.06/456 040100Z !SUAC 06/456 ZFW AIRSPACE AR113(E) ACT FL190-FL230 2106040100-2106040500	
NOTAM-D KZFW.06/457 040100Z !SUAC 06/457 ZFW AIRSPACE AR113(W) ACT FL190-FL230 2106040100-2106040500	

Special Use Airspace (SUA) Status NOTAMs

NOTAMs

Flight Data Center (FDC) and domestic NOTAMs are broadcast via FIS-B but are limited to the past 30 days and do not include all NOTAMs from a standard preflight briefing.

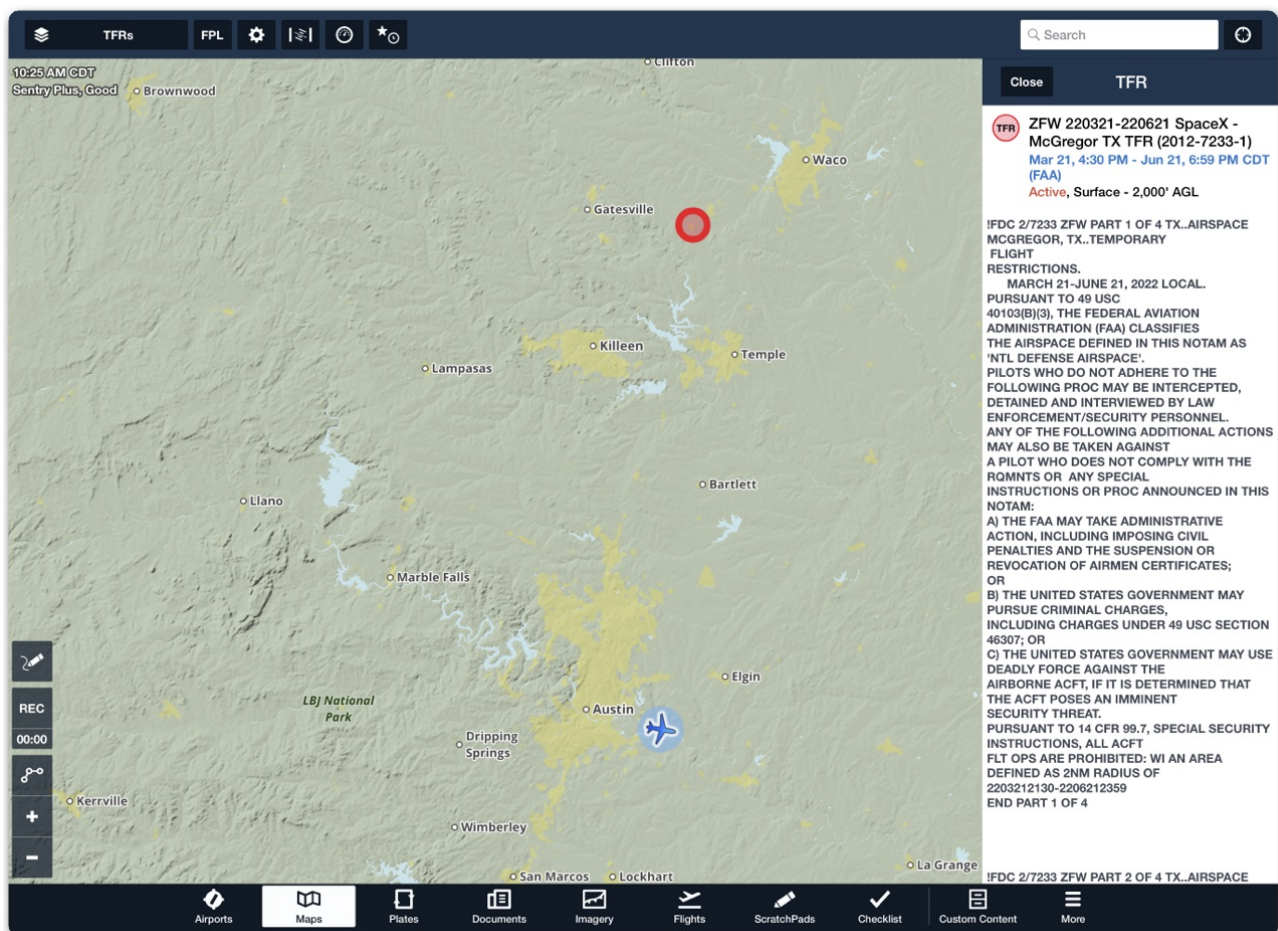
FDC NOTAMs include regulatory updates, such as Temporary Flight Restrictions (TFRs) and instrument approach amendments. FIS-B NOTAMs have a 100 nm look-ahead range and refresh automatically every 10 minutes in ForeFlight. They can be viewed under **More > Devices > Sentry > NOTAMs**.

Stadium TFRs are not broadcast over FIS-B and must be viewed online or **Packed** for a flight.

Temporary Flight Restrictions (TFR)

TFRs are issued via FDC NOTAM and temporarily restrict non-participating aircraft from specific airspace. TFRs from the past 30 days (with properly formatted graphical data) appear on the Maps view when the TFRs map layer is selected.

- **Red** TFRs are active or will be active within 8 hours.
- **Yellow** TFRs are published but more than 8 hours from activation.
- Tap a TFR shape to view the associated FDC NOTAM text.



FIS-B Temporary Flight Restriction - NOTAM (FDC)

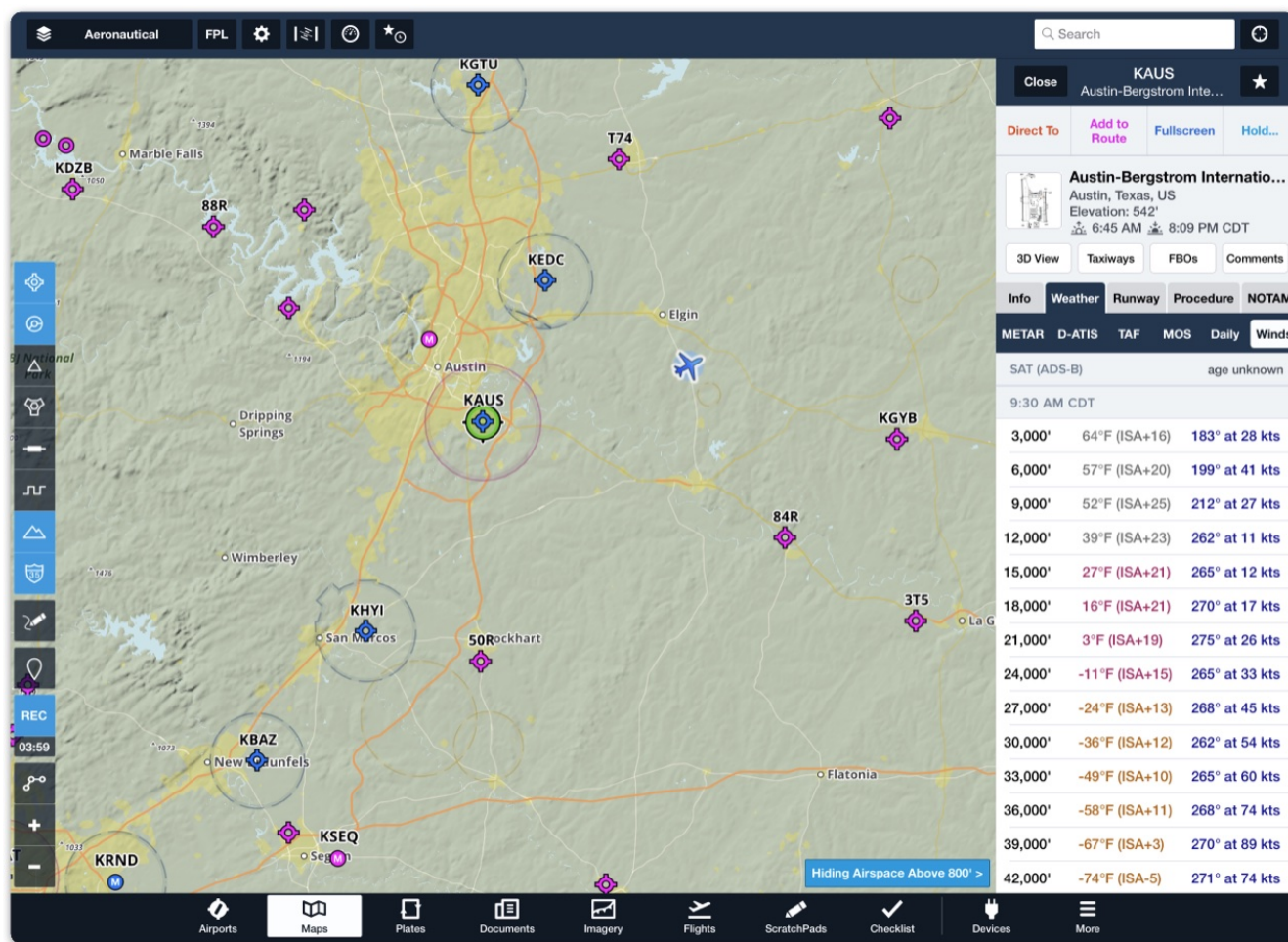
WARNING: FIS-B data alone does not constitute a complete preflight briefing. Non-TFR NOTAMs are not displayed graphically when ADS-B is the data source.

ADS-B WEATHER

Winds & Temperatures Aloft

Winds & Temperatures Aloft are broadcast via FIS-B with a look-ahead range of up to 1,000 nm and are available with all subscriptions when connected to Sentry.

To view Winds & Temperatures Aloft, tap an airport icon and select **Weather > Winds**.



FIS-B Winds & Temperatures Aloft

NOTE: The Winds Aloft map layer is not available over FIS-B. To view it in flight, use the ForeFlight Pack feature.

CARBON MONOXIDE

Sentry and Sentry Plus feature an electronic CO sensor that continuously monitors CO levels. If dangerous levels are detected, in-app visual and audible alerts are triggered. The sensor has a 10-year lifespan and is non-replaceable.

CO LEDs

Sentry and Sentry Plus have three LEDs, with the middle LED indicating CO concentration:

-  **Normal:** CO level is below 75 PPM.
-  **Caution:** CO level is between 75 and 200 PPM.
-  **Danger:** CO level is greater than 200 PPM.



ForeFlight Mobile Alerts

ForeFlight warns of elevated CO levels with an in-app audible and visual notification:

- **Audible alert** plays on the iOS device or connected headset, stating the CO level (e.g., *"Caution, Sentry carbon monoxide level is seventy-five parts per million."*).
- **Visual pop-up** appears on all ForeFlight views (Maps, Flights, Documents, etc.) and displays the CO concentration.

Tap the notification to hide it for five minutes. If CO levels remain elevated, the alert reappears. If CO levels reach dangerous levels, a new audible and visual alert is triggered, even if the previous one was muted.

Caution, Sentry CO level is 75 ppm

Tap to Hide

ForeFlight Mobile CO Caution Notification

CARBON MONOXIDE

Alarms

Sentry and Sentry Plus have built-in carbon monoxide alarms. When CO levels become dangerous:

- The CO LED turns red.
- An in-app notification appears.
- An audible alert plays on the iOS device.
- The Sentry alarm activates.

Press the Sentry power button to mute the alarm for five minutes.



**Sentry CO LED
Danger Status**

Danger, Sentry CO level is 200 ppm

Tap to Hide

ForeFlight Mobile CO Danger Notification

CO Alarm Test

Activate the built-in alarm for testing by selecting **More > Devices > Sentry (Plus) > Test CO Alarm**. The alarm sounds until manually disabled. Press the Sentry power button to stop the alarm.

NOTE: The alarm test checks the alarm function only, not the CO detector.

WARNING: Do not hold Sentry near an ear when testing the alarm.

TROUBLESHOOTING

Sentry Plus

Refer to the table below for troubleshooting issues with the Sentry Plus.

Symptoms	Solutions
Will not acquire GPS signal	• Place in a location with a clear view of the sky for a few hours to acquire a signal. • Perform a factory reset.
Yellow or red GPS LED (poor accuracy)	• Move Sentry Plus within the cockpit for better satellite reception. • If indoors, place Sentry Plus closer to a window for improved visibility to satellites.
GPS accuracy exceeds 100 meters (ownship not displayed on map)	• Reposition Sentry Plus for a clearer view of the sky.
Not charging or unable to power on	• Check if the blue LED lights up when plugged into a charger. If it lights up but then the device powers off or can't be powered on when unplugged, the charging circuit may be damaged.
Will not charge to 100%	• Allow up to 15 hours for a full charge. • If stuck at 65-70%, unplug for 15 minutes, then reconnect to resume charging. • If the battery shows 95%, it is considered fully charged.
Powers off after 25-30 minutes	• Perform a factory reset. • Disable Shutdown After Inactivity mode.
Frozen or unresponsive	• Leave the device on to drain the battery until it powers off, then recharge to 100%. • Check for firmware updates.
False CO readings	• Clean with isopropyl alcohol and carefully blow out front vents to remove contamination (e.g., oil/gas). • Relocate from direct sunlight/heat to avoid false readings.

TROUBLESHOOTING

Sentry

Refer to the table below for troubleshooting issues with the Sentry.

Symptoms	Solutions
Will not acquire GPS signal	• Place in a location with a clear view of the sky for a few hours to acquire a signal. • Perform a factory reset.
Yellow or red GPS LED (poor accuracy)	• Move Sentry within the cockpit for better satellite reception. • If indoors, place Sentry closer to a window for improved visibility to satellites.
GPS accuracy exceeds 100 meters (ownship not displayed on map)	• Reposition Sentry for a clearer sky view
Not charging or unable to power on	• Use the factory-provided USB-A to USB-C cable with a 2A, 5V power source (no fast chargers). • Check if the blue LED lights up when plugged into a charger. If it lights up but then the device powers off or can't be powered on when unplugged, the charging circuit may be damaged.
Will not charge to 100%	• If the battery shows 95%, it is considered fully charged.
Powers off after 25-30 minutes	• Perform a factory reset.
Frozen or unresponsive	• Leave the device on to drain the battery until it powers off, then recharge to 100%. • Check for firmware updates.
False CO readings	• Clean with isopropyl alcohol and carefully blow out front vents to remove contamination (e.g., oil/gas). • Relocate from direct sunlight/heat to avoid false readings.

TROUBLESHOOTING

Sentry Mini

Refer to the table below for troubleshooting issues with the Sentry Mini.

Symptoms	Solutions
Will not acquire GPS signal	• Place outside with a clear sky view for a few hours to acquire a signal. • Perform a factory reset.
Yellow or red GPS LED (poor accuracy)	• Move Sentry Mini within the cockpit for better satellite reception. • If indoors, place Sentry Mini closer to a window for improved visibility to satellites.
GPS accuracy exceeds 100 meters (ownship not displayed on map)	• Reposition Sentry Mini for a clearer sky view
Device will not power on	• Use the factory-provided USB-A to USB-C cable with a 2A, 5V power source (no fast chargers). • Try a different power source to rule out issues with the current one.

CHANGE HISTORY

Version	Date	Change Summary
1.8	December 2025	• Updated logos and copyright
1.7	June 2025	• Subscription plan names updated
1.6	March 2025	• General content review and revision • Addition of troubleshooting tables
1.5	September 2024	• Updated warranty information page • Updated features table • Updated Sentry dimensions • Minor edits and chapter reorganization
1.4	August 2023	• Updated Universal USB-C Charging section • Updated Local Network Setting section
1.3	June 2023	• Updated Battery, Universal USB-C Charging, and Auto Power sections • Added Shutdown After Inactivity section • Updated Carbon Monoxide section
1.2	October 2022	• Updated ADS-B Map Layers section
1.1	June 2022	• Minor edits
1.0	January 2022	Original release



ForeFlight

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