STRATUS

3i

PILOT'S GUIDE

APPAREO

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To view the current pilot's guide, go to stratusbyappareo.com/resources.

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Warnings

Data

- Use of portable electronic devices while in flight may be hazardous. Use of Stratus portable receivers in an operating aircraft is subject to approval by the Pilot in Command.

- Position information provided by Stratus portable receivers should be used for situational awareness only and should not be used as your primary navigation source.

- AHRS (attitude heading reference system) data provided by Stratus portable receivers should be used for supplemental purposes only.

- Stratus 3i does not contain a battery, unlike other Stratus portable receivers. Do not rely on Stratus 3i to be a backup AHRS in the event of aircraft power loss.

Weather

- Weather information provided by Stratus portable receivers is delayed and may not always be available. Do not rely solely on the information provided by the receiver to make tactical decisions.

Traffic

- Stratus portable receivers do not replace the need for collision avoidance systems or see-and-avoid procedures. Many aircraft are not currently ADS-B Out equipped and therefore not detectable by Stratus portable receivers.

Quick Start Instructions

For installation instructions, refer to the Stratus 3i Installation Guide. Stratus 3i is battery-less and requires aircraft power for operation.

NOTE: When Stratus 3i is connected to the power cable, it will automatically power on when aircraft power is applied.

1. Connect your tablet or phone to the Stratus 3i Wi-Fi network from the **Settings** menu.

2. If you're flying with an app other than Stratus Insight, ForeFlight Mobile, or Stratus Horizon Pro, enable Open ADS-B mode in Stratus Horizon Pro.

3. Open a compatible flight app and confirm connection to receiver.

   NOTE: Because ADS-B signals are broadcast by ground stations, Stratus 3i will not receive weather and traffic information while it is on the ground.

About Stratus 3i

Stratus 3i is a portable receiver that works with Stratus Insight, Stratus Horizon Pro, ForeFlight Mobile, and other compatible flight apps. It provides pilots with subscription-free in-flight weather and traffic and is a source of accurate WAAS (Wide Area Augmentation System) GPS position. It receives ADS-B (Automatic Dependent Surveillance-Broadcast) FIS-B (weather information),TIS-B (traffic information), and other related data and broadcasts it to compatible flight apps via a Wi-Fi network.

Stratus 3i also includes AHRS (attitude heading reference system), a flight data recorder, and pressure altitude sensor. See pages 11 and 12 for more information about these features.

Stratus portable receivers are classified as PEDs (Personal Electronic Devices) and complement the instrument panel in your aircraft. If there is a discrepancy between the receiver and the instrument panel, use the readings on your instrument panel.

Product Registration

Your receiver is automatically registered with the retailer after purchase. The Stratus Portable Receiver Limited Warranty is valid two years after the receiver is shipped from the retailer and is non-transferable.

Compatible Flight Apps

Stratus 3 is optimized for Stratus Insight, Stratus Horizon Pro, and Foreflight Mobile, but also offers a GDL 90 interface for third-party apps when Open ADS-B mode is enabled in the settings page of Stratus Horizon Pro.

Stratus Horizon Pro displays AHRS information when connected to Stratus 3. The app also provides ATC audio playback and transcription features to Stratus portable receivers and other devices.

Stratus Insight and ForeFlight Mobile display AHRS, ADS-B weather and ADS-B traffic. Other Stratus 3i compatible features include Synthetic Vision, pressure altitude, and flight data recording. For more information about Stratus Insight, refer to the Stratus Insight Pilot's Guide.

For a list of other compatible flight apps, visit stratusbyappareo.com/stratus-3-compatible-apps.

NOTE: You must download Stratus Horizon Pro to apply Stratus 3i firmware updates and enable open ADS-B mode.

Extending iPad Battery Life

To extend your iPad battery life, enable Stratus Replay in ForeFlight Mobile. This allows the iPad to sleep or switch to a different app. Once you return to ForeFlight Mobile, the receiver will automatically send any missed ADS-B weather information to the app.

Turning Receiver On or Off

If the receiver is connected to the power cable, it will automatically power on when aircraft power is applied. All LED indicators will briefly illuminate red and then green as the receiver powers on and auto-calibrates. If Stratus 3i is moved after being powered on, it must be re-calibrated in Stratus Horizon Pro or ForeFlight Mobile.

Reading LED Indicators

Label	LED Color	LED Status	Meaning
GPS	Green	Solid	3-D GPS lock achieved.
	Yellow	Flashing	No GPS lock, searching for signal.
	Off	Off	Receiver is powered off.
Power ⏻	Green	Flashing	Receiver is powered on and operational.
	Off	Off	No external power is being received; receiver is powered off.
ADS-B	Green	Solid	ADS-B FIS-B signal has been received from **multiple** towers in the past three seconds.
	Yellow	Solid	ADS-B FIS-B signal has been received from **one** tower in the past three seconds.
	Off	Off	ADS-B FIS-B signal has **not** been received in the past three seconds.

Label	LED Color	LED Status	Meaning
All indicators	Briefly red then green	Solid	Receiver is powering on and calibrating.
	Red	Flashing	Built-in-test failure. Contact your original retailer for assistance.
	Yellow	Flashing	Installing firmware update.
		Solid	Applying firmware update.
	Green	Solid for two seconds	Firmware update complete.
		Off for five seconds, then flashing	Power button is pressed. After 30 seconds, factory reset process begins.
	Green to yellow to green	Solid	Factory reset is complete.

Connecting to Stratus 3i

Your tablet or phone must be connected to the Stratus Wi-Fi network (not Bluetooth) for the receiver to communicate with the app. Multiple devices in the cockpit may be connected to the receiver at the same time. Receiver Wi-Fi network security can be configured in Stratus Horizon Pro or ForeFlight Mobile.

NOTE: The Stratus Wi-Fi network provides a wireless connection between the receiver and flight apps. It does not provide an internet connection.

1. Tap the **Settings** icon on your tablet or phone's home screen.

2. Tap **Wi-Fi**.

3. Make sure that Wi-Fi is enabled. Tap the Stratus wireless network, displayed under Choose a Network to connect. Your Wi-Fi network name is on the label on the back of your receiver.

   When your tablet or phone is connected to the Stratus wireless network, a checkmark will appear next to the network name.

4. If you're flying with an app other than Stratus Insight, ForeFlight Mobile, or Stratus Horizon Pro, enable Open ADS-B mode in Stratus Horizon Pro.

5. Verify that the receiver is connected in the settings page of Stratus Insight, Stratus Horizon Pro or the Stratus Status page of ForeFlight Mobile.

Adjusting Receiver Settings

The settings page in Stratus Horizon Pro and the Stratus Status page in ForeFlight Mobile display general information about the receiver, such as its serial number, and firmware version. You can also adjust receiver settings such as LED brightness on these pages.

- To access the settings page in Stratus Horizon Pro, tap ⚙ in the lower left corner.

- To access the Stratus Status page in ForeFlight Mobile, tap the **More** tab, then tap **Devices**. Tap the **Stratus Connected** box.

Calibrating Stratus 3i

Stratus 3i is automatically calibrated to its mounting position a few seconds after being powered on.

If your aircraft isn't straight and level, the alignment can be manually adjusted in either app.

Using AHRS

Stratus 3i can be used for backup AHRS (attitude, heading, and reference system) in Stratus Insight, Stratus Horizon Pro, or ForeFlight Mobile to enhance situational awareness.

For the most accurate AHRS information, ensure that the receiver is mounted parallel with the centerline of the aircraft running front to back, and the arrow on the bottom of the receiver points in the direction of flight.

WARNING: AHRS data provided by the receiver should be used for supplemental purposes only.

Using Stratus Insight and ForeFlight Mobile

Using Stratus 3i with Stratus Insight or ForeFlight Mobile allows maximum functionality and features. Some compatible features are listed below.

Weather

Stratus 3i receives ADS-B weather data and relays this information to your app.

Flight Data Recording

Stratus 3i's flight data recorder records position, speed, attitude, and barometric altitude data during each flight. You can manually record a flight or enable automatic flight recording in your app. Flights can be exported from the app and viewed in Stratus Insight or ForeFlight Mobile. About 20 hours of data can be stored in Stratus 3i's built-in memory.

Pressure Altitude Sensing

Stratus 3i has a pressure altitude sensor that sends uncorrected barometric pressure information to your app. This information is viewable while using the app and is also recorded in the flight data log.

Synthetic Vision

Using the altitude information provided by Stratus 3i, Synthetic Vision shows a 3-D picture of terrain and obstacles where you are flying.

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Viewing ADS-B Traffic

Stratus 3i receives 978 MHz and 1090 MHz traffic information from ADS-B ground stations and ADS-B Out-equipped aircraft and relays it to Stratus Insight and other compatible apps.

If air traffic data is detected by the receiver, it will display in your app relative to your aircraft.

Air-to-Air Traffic

Stratus 3i will only receive air-to-air broadcasts from other aircraft if they are ADS-B Out equipped and within range of the receiver. Air traffic that is not equipped with a UAT ADS-B Out or Mode S Extended Squitter transmitter will not be detected by the receiver air-to-air.

Rebroadcast Traffic

Using its network of ADS-B ground stations, the FAA can rebroadcast a custom traffic report to ADS-B Out equipped aircraft that are within a 15 nautical mile radius and within 3500 feet in altitude of the ADS-B Out aircraft. If your aircraft is not ADS-B Out equipped, it will not receive rebroadcast traffic unless it is within range of an ADS-B Out equipped aircraft that triggers it. If your aircraft is ADS-B Out equipped but is not in contact with an ADS-B ground station, it will not receive rebroadcast traffic.

The FAA can rebroadcast traffic information about aircraft equipped with the following transponder types: Mode C, Mode S, Mode ES, and UAT. Mode A transponders and primary radar targets detected by the FAA are not included in rebroadcasted traffic reports.

Since not all aircraft are ADS-B Out equipped and not all traffic is rebroadcast, the use of the receiver does not eliminate the need for "see-and-avoid" procedures.

Stratus 3i is not an active traffic interrogation system or ADS-B Out device.

NOTE: Stratus 3i is not likely to receive weather or rebroadcast traffic information on the ground because ADS-B information is broadcast by ground stations. The altitude at which Stratus 3i begins to receive weather and rebroadcast traffic information will vary depending on the distance to nearby towers and terrain and other obstacles that may be between the receiver and a tower.

Updating Firmware

WARNING: Do not attempt to apply firmware updates while in flight.

Receiver firmware updates will be released through Stratus Horizon Pro in-app updates. These updates may enable new capabilities or address known issues. When you are connected to your receiver and open the Stratus Horizon Pro app, a message will alert you that there is a firmware update.

To apply the update, follow the on-screen instructions. It may take several minutes to update the receiver's firmware. During the update, do not power off your receiver or device running the app, and do not close the app. You may need to reconnect to the app after the update is complete.

Resetting to Factory Settings

Press and hold the power button for 30 seconds while the receiver is on to return it to its default factory settings. When the factory reset is complete, all of the LED indicators change from green to yellow to green. The factory reset auto-calibrates Stratus 3i and reconfigures it to its default settings. If you're flying with an app other than Stratus Insight, ForeFlight Mobile, or Stratus Horizon Pro, re-enable Open ADS-B mode in Stratus Horizon Pro.

NOTE: Resetting to factory settings will **not** delete flight data recorder logs.

FCC Declaration

This device complies with Part 15 of the FCC limits for Class B digital devices. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Furthermore, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference, the user is encouraged to try to correct the interference by relocating the equipment or connecting the equipment to a different circuit than the affected equipment. Consult an authorized dealer or other qualified avionics technician for additional help if these remedies do not correct the problem.

Operation of this device is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Servicing

Stratus 3i is not field-serviceable. If you believe your receiver requires repair or maintenance, contact the retailer you purchased your receiver from for further instruction.

Repairs made outside of a Stratus-approved repair center could void the warranty and may result in further damage to the device.

Warranty

The Stratus Limited Warranty is valid two years after your receiver is shipped from the retailer. To view the full warranty, visit stratusbyappareo.com/resources.

Support

For product support, contact your dealer or original retailer.

Appareo
support@appareo.com
stratusbyappareo.com/support

FAQs & Troubleshooting
Answers to frequently asked questions and troubleshooting are found at
stratusbyappareo.com/receiver-faqs.

This system incorporates elements of the UBR technology developed by the Mitre Corporation on behalf of the U.S. Government. **MITRE**® TECHNOLOGY APPLIED

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