

## The Technical Side:

### Portable Augmentation in the Cockpit and Beyond

On August 5<sup>th</sup>, 2009, a small company by the name of ForeFlight announced a new application for the iPhone which would allow pilots to view FAA sectionals, draw a route between airports, display the current location using the phone's GPS, and other rudimentary features. Little did anyone know what this would look like more than a decade and a half later, and the reliance many have on these technologies today. About a year later, the Apple iPad would hit store shelves, and today it seems most every pilot flies with an iPad.



A Screenshot of an Early Version of ForeFlight for iPad

While ForeFlight was the first, they are far from the only option on the market. Garmin released their equivalent, Garmin Pilot, in 2012. Today there are seemingly countless options for electronic flight bags. Whether that be an off the shelf tablet running a mobile application, or a dedicated device such as Garmin's Aera lineup.



Garmin's Aera lineup today includes the Aera 660 and 760. The primary advantage of the Aera over an iPad or other tablet is the fact it's been engineered from the ground up for use in the cockpit. This means using a display that is not easily washed out by sunlight, the device is less prone to overheating in sunlight, and it's built using components which are able to withstand the aviation environment.

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*Just a few years ago it would be unimaginable to check your aircraft's fuel level right on your watch*

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## Pilot Watches:

The very first pilot watches came about during World War I where pilots needed an accurate way to keep track of time while navigating. These were little more than simple wristwatches which could tell time, and little more. Later innovation would introduce watches with slide rules on the bezel mimicking an E6B.

Today the king of pilot watches is Garmin with their D2 lineup. Garmin has managed to fit a GPS, pulse oximeter, barometric altimeter, among other features into these tiny wrist worn devices. The modern D2 lineup has all the capabilities of today's smartwatches with many pilot-minded specialties. With up to 25 days of battery on a single charge, the D2 Mach 1 Pro triumphs over many other smartwatches on the market.



Garmin's D2 watches also integrate extensively with their avionics and mobile apps such as Garmin Pilot. Flight plans can be transferred from Garmin Pilot to the D2 to view the waypoints on a moving map.



### **PlaneSync Connected Aircraft Management:**

This year Garmin announced PlaneSync, their solution to simplifying aircraft management. Many cars are now equipped with system that allow drivers to view the status of their vehicle, lock or unlock doors, and track its location all over Wi-Fi or LTE networks. PlaneSync brings similar capabilities to the aviation market. Flight

planning begins long before you arrive at the airport, PlaneSync allows pilots to manage database updates, along with automatic updates when new data is released. PlaneSync also automatically uploads real-time hobbs, tach, and flight times, fuel quantity, battery voltage, OAT, oil temperature, and GPS location. This feature can be especially useful when leaving the plane at an FBO allowing you to ensure they fuel it up before you arrive. When combined with a Garmin engine information system, postflight logs will be automatically transmitted to flygarmin.com where you can then review your engine data, or share it with your maintenance team.

One of the coolest features of PlaneSync is the ability to view the status of your aircraft directly on your D2 Mach 1 Pro smart watch. A quick glance at your wrist will reveal your aircraft's current fuel level, electrical voltage, and location information.