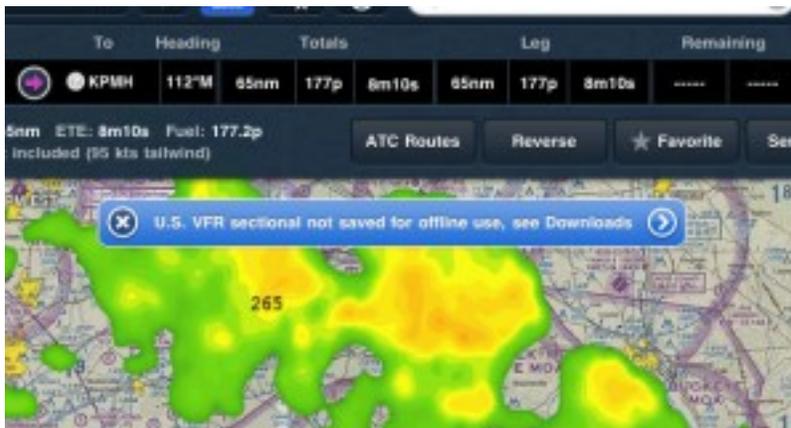


Top 12 iPad Tips

- 1 January 2012
- [Featured](#)
- [64 comments](#)

The iPad is a reliable and easy-to-use addition to the cockpit, perfect for charts, moving maps and even in-flight weather. But there's a lot to understand to make sure you're getting the most out of your investment. Over the past few years, we've learned a lot through trial and error flying with the iPad in general aviation aircraft, and have assembled our top 12 tips:



Verify your charts are downloaded before flight.

1. Pre-flight your iPad (and verify your charts are downloaded)

What's our number one recommendation for iPad pilots? Always, always, always pre-flight your iPad!

Sure, the iPad is easy to use and awfully reliable. But just like with your airplane, you want to find out about any issues with your iPad while you're on the ground (and have an internet connection). This could take 30 seconds or 10 minutes, depending on how you use your iPad and how comfortable you are with the technology.

You'll want to create a checklist that works for your apps, accessories and your airplane. Customize it so that you'll actually use it before every flight. With that in mind, though, here's a basic checklist to consider that applies to most apps:

- Battery charged on iPad—it's a good habit to always take off with a full charge (it takes 4-6 hours to charge a drained battery)
- Battery charged on [external GPS](#) or [Stratus weather receiver](#)—these have about the same life as iPad, so charge alongside your iPad
- [Backup power](#) or [charging cables](#) available—make sure you have a plan B if the battery dies
- Run the application once—especially if you've updated the app, check to make sure it won't crash or lock up on initial start-up
- Load routes and favorite airports—doing this on the ground saves a lot of heads-down time in the cockpit

- Databases installed and current–check your charts without an internet connection ([see this important tip](#))
- Turn off wireless functions that aren't needed–turn off Bluetooth, 3G and WiFi unless you'll need them in flight, as they drain the battery (keep in mind that using airplane mode disables the 3G/4G model's internal GPS)



Securing the iPad in the cockpit is essential.

2. Secure it in the cockpit

To maximize usability in the airplane (especially in turbulence), you'll want to secure the iPad either to your leg or use a cockpit mount. Using a kneeboard designed for the iPad is a great option for aircraft renters who want a simple option that easily transfers between multiple airplanes. There are several features you'll want to pay attention to:

- Allows for iPad to rotate between landscape and portrait views
- Allows angle adjustments toward you to minimize glare
- Size – make sure it will not interfere with the yoke or throttle quadrant
- Protection – many kneeboards also double as cases for the iPad outside of the airplane

(check out a variety of [iPad kneeboards here](#))

Another option is to use Ram Mounts to temporarily secure the iPad in the cockpit. Here are some options:

- Yoke Mount – works well in Cessna and Piper aircraft, and can be used on the co-pilot's yoke if it blocks the pilot's panel

- When finished with the flight, go back into the “Photos” app and delete the screen capture photo by clicking the “Garbage Can” icon at the upper right.

Use your imagination on this one — you can save any screen from any application. Use it to store official weather briefings, TFR maps, or a screen from any other app that requires an internet connection to display data.



Invert the colors on your iPad for a “night mode.”

4. Enable Night Mode for viewing approach charts at night

The iPad has a built-in feature that allows you to invert the colors on the screen — this is very useful when viewing approach charts at night by showing white text and graphics on a black background. Here’s how to enable it:

- Go to the Settings icon on the iPad.
- You’ll be at the “General” selection on the left by default; scroll down on the right side and select “Accessibility”.
- Select the “Triple-click Home” option now at the bottom of the list.
- Select “Toggle White on Black” from the list (you’ll see a check mark at the right when it’s selected).

Now, when viewing an approach chart and you click the home button three times quickly (circular button on the lower front of the iPad), you’ll invert the colors of the screen. This makes for a much better low-light viewing experience at night in the cockpit.

5. Use GoodReader for document management

Using an app called GoodReader ([\\$4.99 from the App Store](#)), you can store and organize a wealth of free PDFs and other aviation electronic documents. The options are almost endless, but here are a few recommendations:

- FAA Aviation Manuals
- Aircraft Flight Manuals
- Avionics Pilot's Guides
- FAA Practical Test Standards
- Custom Aircraft Checklists and Limitations

6. Know that you are legal

For Part 91 VFR & IFR flying (the section of the regulations that most of us fly under in general aviation) you are completely legal to use the iPad for electronic charts, provided that the data is current and is a functional replacement of the paper version. For complete details and regulations, see our [iPad Legal Briefing](#).

7. Bring a backup

When using the iPad loaded with current charts, you're not legally required to have a backup source of data for Part 91 flying. However, it's still smart to have a plan B. The type of backup depends on the type of flying you're doing and the conditions of the day. VFR pilots might consider tossing a Sectional chart in their flight bag, while IFR pilots should consider having a few approach charts nearby. During IFR flights, we recommend printing out the following for the departure and destination airports: Airport Diagrams, appropriate ILS or RNAV approach chart based on the winds, and SIDs/STARs if going to a large terminal airport (having said this, we've never had the iPad fail on us).

You might also consider carrying a second iPad, or use your smartphone loaded with current charts. Many aviation iPad apps are also compatible with the iPhone, so it can be helpful to download charts there as well in the unlikely event the iPad has a bad day.



An external GPS guarantees accuracy and reliability.

8. Use an external GPS for reliable position data

Many pilots are confused by this. Having GPS on your iPad allows you to view a moving map display on popular apps like ForeFlight, Garmin Pilot or WingX. But how do you get the GPS information?

The 3G/4G model of the iPad includes an internal GPS. The GPS is completely separate from the cellular radio, so you don't even have to have an active data plan for the GPS to work. And while the on-board GPS does work with all popular aviation apps, it was made for ground use and it's not always reliable in the air. It has a tendency to drop offline, especially when switching between apps or sleeping the screen. It's not necessarily a question of accuracy, but of reliability. For this reason, most iPad pilots—even those with a 3G/4G iPad—opt for an external GPS. At around \$100, it's cheap insurance.

So which external iPad GPS to buy? There are three options: the [Bad Elf](#), the [Garmin GLO](#) and the [Dual Electronics XGPS150](#). They range from \$99.95 to \$129, and they offer the roughly the same performance. The choice is really personal preference—do you want to plug in the GPS directly to your iPad (Bad Elf) or do you want to put the GPS on the glareshield and connect wirelessly (Dual/Garmin)? The advantage to the Bad Elf is that you don't have to charge its battery, as it runs off the iPad. The advantage to the Dual/Garmin is that you can place it out of the way, but you do have to charge a battery. The Dual is \$30 less than the Garmin, and works very well, but the Garmin does have the longest battery life and also works with the Russian GLONASS satellite system for the fastest lock-on time.

Another option would be to purchase a combination ADS-B weather and GPS receiver. Options here include the [Stratus](#) (works with ForeFlight) and the [Garmin GDL 39](#) (works with Garmin Pilot). These are more expensive, but add the major feature of in-flight weather.

9. Maximize iPad battery life

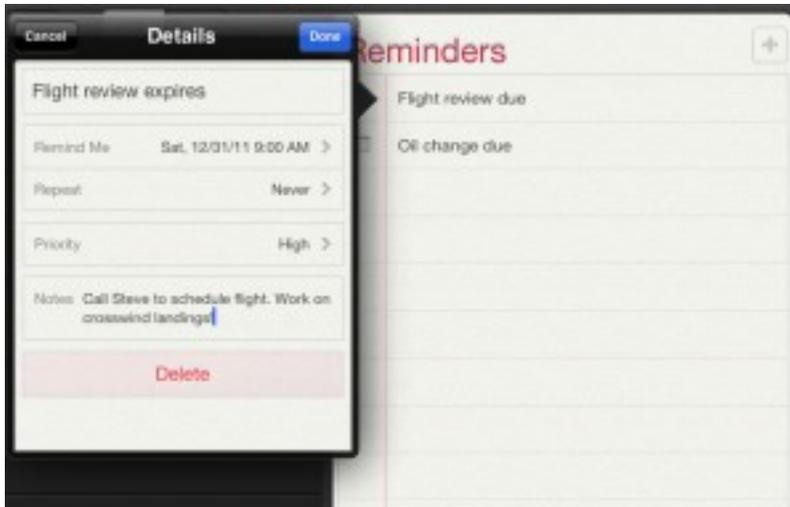
Apple states that the iPad battery should last a full 10 hours when fully charged. This is a pretty long time, considering the typical endurance of most airplanes is less than 5 hours. With that being said, there are some simple things you can do to maximize the charge:

- Turn off 3G cellular data (this is also the most likely source of interference with panel mount avionics)
- Turn off Wi-Fi and Bluetooth (provided a GPS or weather accessory doesn't require one of these services)
- Set the screen brightness to the lowest viewable level
- Close unneeded apps that are running in the background: double-click the home button, press and hold the app icon until it wiggles, and then press the red circle to close it out.
- Let the iPad go into standby mode during the times when the iPad is not needed

As a side note, we've seen about a 30% decrease in iPad battery life when using a wireless accessory accessory.

10. Don't leave the iPad on the glareshield during the day

After a flight and when organizing the cockpit, many find it convenient to temporarily store charts, kneeboards, etc. on the glareshield. Don't accidentally do this with your iPad though – it will overheat in direct sunlight, and will be unusable until it cools down. It's worth noting that, other than this scenario, we have not had any issues with the iPad overheating.



Using the built-in iPad Reminders app is a great way to track maintenance.

11. Use the iPad's Reminders app for maintenance tracking

Being a pilot or aircraft owner often means keeping up with lots of currency issues, like flight reviews, annual inspections and medical expirations. Fortunately, the iPad has a built-in feature that makes it easy to stay current. If you are using iOS 5, you'll see a Reminders app on your home screen. This very easy-to-use app allows you to make a to-do list, and specify dates and times to remind you. You'll even get a pop-up alert at your pre-determined time, no matter what app you're using.

12. Use Multi-Touch Gestures for easy multitasking

An overlooked feature that Apple included with iOS 5 is Multi-Touch Gestures. These allow you to quickly perform routine tasks without relying on the bottom Home button. To activate this functionality, go to Settings -> General, and towards the bottom you'll see the Multitasking Gestures On/Off switch. Here's a brief summary of each function:

- *Pinch to the Home Screen* – Use this instead of pressing the home button to access the home screen from within any app. Place 4 or 5 fingers spread out on the screen, and pinch together.
- *Swipe Up to Reveal the Multitasking Bar* –Use this instead of pressing the home button twice to access the multitasking bar. Place 4 or 5 fingers spread out on the screen, and move your hand upward.
- *Swipe Left or Right Between Apps* –This allows quick movement between applications that are currently running. With an app running, place 4 or 5 fingers spread out on the screen. Now, move your hand to the left to switch to the last opened app. With the same motion, move your hand back to the right to switch back to the previous app.