The Sky Is Falling, The Sky Is Falling
Adam White

We all know that training and practice are paramount to being prepared for situations we may encounter while flying. It doesn't matter what our skill level is we still need to train. This principle holds true for the military too. One situation our military in conjunction with our "coalition partners" train for during the Red Flag exercises is the denial of GPS.

Unfortunately, the reality is, GPS is so integrated into our daily life that most of us don't think about all the ways it has changed our world. GPS is not just for navigation. Cell phones, commercial radio stations, the power grid, weather radars, ADS-B, video/audio integrations in the media and even financial institutions rely on GPS data for critical timing algorithms. So when the military needs to train in the way they anticipate fighting it can have unintended consequences far beyond their exercise.

Hence the GPS Interference Testing NOTAMs we have seen here in Alaska. For a long time I have called these the "Chicken Little NOTAM" because when you read it and look at the map of the projected area, it seems like a massive overreaction. The military has a very well thought out plan for their training. They also have an excellent idea of what the impact will be because of detailed computer modeled maps of the predicted areas affected. However, the military is not generating the NOTAMs the FAA is.

So here is the deal, the FAA "out of an abundance of caution" takes the worst possible scenario and warns us about that. If the plan is to use a directional radio beam the FAA plans for an omnidirectional test if the transmitter is only going to use a low power setting but can be high power, the FAA plans for the highest potential possible. The FAA also doesn't look at how terrain could alter the propagation of the jamming signal, and they assume a flat earth model. Should we expect to not have GPS at 50' AGL on the other side of the Alaska Range from the testing, or is this an overreaction?

For many years the Alaska Airmen Association, other industry partners, and even the military have advocated for a more accurate representation of the actual affected areas of GPS Jamming in the NOTAMs. But the FAA has stuck to their guns in having an abundance of caution. The Airmen Association agrees that there are unknown, unintended consequences to this testing, but are we crying wolf with these vast areas in the NOTAMs? Because of these questions we and others have pushed the FAA to collect data on actual, real world, impacts this testing causes. Until recently the FAA only wanted to know if civilian aircraft had GPS issues if it caused an emergency.

If you encounter problems with GPS, even if it doesn't result in an emergency, the FAA now wants to know. Please let ATC or Flight Service know ASAP over the radio and when you get on the ground go to https://www.faa.gov/air_traffic/nas/gps_reports/ and fill out a GPS interference report.

The military will continue to test and research how GPS jamming can obstruct their mission. There are two more testing periods scheduled this year in Alaska that coincide with the military's Red Flag exercises.

9-24 Aug 2018
5-19 Oct 2018

For more information on the specifics of the Interference Testing check NOTAMs before you fly and for information on the Red Flag exercises visit:
http://www.jber.jb.mil/Info/Alaskan-Airspace-Info/

GPS Interference Testing should serve as a reminder to not become lax in your piloting. You should not rely on GPS as your sole source of navigation. Brush up on your skills and have a chart easily assessable with your location and route marked. If you ever needed an excuse to train and practice this is a good one. By the way, when was the last time you used your E6B to calculate a wind correction angle?

Adam is a Past President, and currently heads up the Government and Legislative Affairs programs of the Alaska Airmens Association. He has lived in Interior Alaska for 23 years where he continues flying a 206 and a Maule, specializing in off-airport operations on floats, wheels, and skis.