

Aircraft Security Devices and Procedures

Keeping your aircraft safe and secure in a more dangerous world

By Mike Gamauf

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Aircraft security has always been a major concern, but after 9/11 our thinking changed.

Years ago, the concern was about thieves breaking into aircraft and stealing radios and personal gear. Most airfields had a fence, but not much else in terms of security. The threat of terrorism is very real, but there is a growing, and perhaps more realistic, threat from criminals and vandals. How could someone steal a corporate jet you may ask? Well, with super-realistic flight simulator computer games, just about anyone can learn the start sequence of any jet. Add some basic flight training and you have a ready-made pool of aircraft thieves.

For years, professional aircraft thieves have made the lives of aircraft owners across the Southern United States a living hell by stealing aircraft for use in drug smuggling and other illegal activities. As the criminals have become bolder and the stakes higher, smugglers have targeted larger and faster aircraft to evade law enforcement. Perhaps the most disturbing trend is coming from thrill-seeking criminals who steal aircraft just for the “fun” of it, or to aid in their escape. In June 2005, a young man with some flight training stole a Cessna 172 from Danbury (Conn.) Municipal Airport (DXR) with two of his friends for a drunken night flight to nearby Westchester County Airport (HPN), where he proceeded to land on the taxiway.

In July 2010, a young man was arrested in the Bahamas after leading law enforcement officials on a nationwide chase after he fled the Pacific Northwest, stealing aircraft as he went. Each aircraft was locked, and some were even hangared. Do not think that this problem is limited to small general aviation aircraft: In



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October 2005, a young man stole a Cessna Citation VII from St. Augustine (Fla.) Airport (SGJ) and flew it to Briscoe County Airport (ZLU) near Atlanta. Apparently this was not his first escapade — a few years previously the same young man rented an aircraft for a 1-hr. flight and flew it to Tennessee, where he abandoned it.

Vandalism and sabotage also are very real security concerns. Keeping your aircraft locked with the covers in place is helpful, but you may want to install a security and surveillance system, especially for aircraft that spend time parked

at airports in foreign countries.

Of course you have insurance for these types of things, but you could face a long and painful claims resolution process. Your aircraft could be down for months awaiting the final answer. Even more insidious is that there may someone out there meaning to do harm to your passengers. The safety and security of your passengers and aircraft are still your top priority; you should take appropriate measures to protect them. So with that in mind, we have gathered up some best practices and technologies to help you keep your aircraft safe and secure.

Common-Sense Security

For most business and charter operators, the TSA's proposed Large Aircraft Security Program (LASP) will create an administrative nightmare that could be costly and burdensome. While this program is just another example of good intentions gone bad, we still must treat aircraft security seriously to prevent harm to our passengers and crews, and keep our aircraft secure. "Security, like winter clothing, is done in layers and is dependant upon the environment," said Brad Bertele, manager of flight operations for a Northeastern U.S.-based flight department. "Simple actions like locking the doors, closing the blinds and stowing items of interest — iPod, luggage, etc. An aircraft that appears empty is less tempting," Bertele added.

If your aircraft is equipped with emergency escape hatches, lock them and add "Remove Before Flight" streamers. Lock all external hatches or apply tamper tape to indicate unauthorized access. Whenever the aircraft is being serviced — fuel, catering and cleaning — a team member should be present. If you have security vetted service providers, periodically audit their procedures and check identification versus access lists. Check all compartments and access areas prior to flight.

Inside the hangar, establish key/swipe access control procedures with both authorization and permissions. This includes aircraft keys as well. Have a plan on what to do if a security threat is discovered, and include whom to call if an unauthorized person or object is discovered. Post emergency phone numbers for airport police/security/fire so they are easily visible. Determine what type of inspections to perform on the aircraft if it looks like an unauthorized person has accessed it. Perhaps the most important procedure is to train and keep all team members up to speed on good security procedures.

One device that can help deter would-be thieves is the Ground Lock, manufactured by the JMR Earl Inc. of Hopewell Junction, N.Y. (www.jmrearl.com). The device isolates the main aircraft battery from the electrical system by preventing the disconnect fitting from being connected. "After 9/11, there was a pilot program in Morristown, N.J., where wheel boots were installed. We had them on our aircraft and they were difficult to use. I thought that there had to be a better way," said Ron Earl, vice president of JMR Earl Inc., and inventor of the Ground Lock. "Our Ground Lock is made from

high-strength, heat-treated steel and is precision machined for durability. The lock assembly is encapsulated in Delrin as an insulator for electrical safety," Earl added.

The lock mechanism is a Medeco aircraft lock that can be custom pinned to match the aircraft lock. The Ground Lock is compliant with the TSA "Security Guidelines for General Aviation Airports" Information Publication A-001, as well as one part of the New Jersey DOT's "two-lock system." The Ground Lock costs about \$350 and comes with a "Remove Before Flight" streamer.

Super High Tech

Even with heightened security awareness, many companies require security measures above and beyond the prescribed minimums, and additional layers of security at the aircraft are required. Kidnapping and other specific threats against company executives make the aircraft a prime target. For those who routinely fly overseas to developing countries, many flight departments have to hire local security guards to protect the aircraft, and finding a reputable firm can be challenging.

Aircraft alarms and surveillance systems have been around for years, but the problem has always been that to be truly secure, it needs to be closely monitored. Most cars are now equipped with some type of security system that can detect an intruder and set off an alarm. We have all seen cars beeping and honking forlornly in a busy parking lot, barely raising any attention. The same can be said for aircraft systems. What

happens if the alarm does go off? Video surveillance helps you keep a watchful eye on the aircraft, but many systems are only as good as the person watching the screen.

One high-tech means of providing surveillance is the PreFlite system made by Tucson, Ariz.-based Securaplane Technologies Inc. Its system provides detection on all access panels with the ability to capture intrusions via airborne video cameras with real-time alerts and system access being performed remotely from a smartphone. "The ability to access the aircraft security system via cell phone is a new feature with aircraft security systems," said John Gattasse, vice president of sales and marketing at Securaplane. "Corporate flight departments like the ability to monitor their airplanes remotely with little effort," Gattasse added.

The system uses motion detection in the wheel wells and video surveillance from cameras on the vertical fin as well as the aircraft belly. Alerts are sent to a mobile device so that pilots or security managers can interrogate the system. It also has the ability to record all intrusions to its digital video recorder. The event can then be reviewed to ensure that the aircraft is safe to enter as well as fly. "Real-time alerts are something our legacy system was missing and with our new PreFlite system we have answered the voice of the customer," said Gattasse.

Securaplane works with all OEMs and service centers around the globe that hold STCs for many business jets. Older devices like its System 500 are forward compatible to PreFlite with the addition of a GSM antenna, newly patented wheel well sensors and a power control unit. The cost to upgrade your system can vary due to installation but even then it is well below six figures. The idea is not just about protecting the aircraft, which can be replaced, but protecting your passengers and crews from harm.

Keeping your aircraft safe on the ground and in the air is an important responsibility. Pilots and technicians need to be aware of the possible threats and be trained to keep a watchful eye on the aircraft. Keeping the aircraft locked and secure, especially when parked away from home, should be part of your normal routine. Train your team to use common-sense security practices and have a plan if there is a breach. The days of keeping your house key under the doormat are long gone. Flight department members must be vigilant and prepared at all times in order to keep your passengers, crew and aircraft safe and secure. **BCA**

Security Smarts

Looking for additional help in developing your security program? The NBAA has information and guidance on its website to help you start or refine your capabilities. Protecting your passengers, crews and aircraft is always a top priority, especially in today's world where keeping the keys in the sun visor is a distant memory.

Visit the NBAA's website at www.nbaa.org/ops/security/ and www.nbaa.org/ops/security/best-practices/