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Gaining FAA Authorization for UAS Operations

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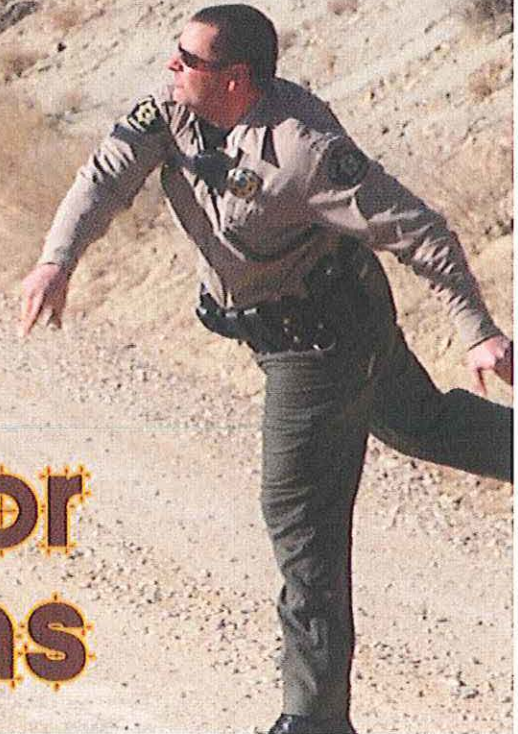
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Aerial Toolbox:



Gaining FAA Authorization for UAS Operations

By Alan S. Frazier, Assistant Professor, University of North Dakota John D. Odegard School of Aerospace Sciences

The aviation community is full of acronyms: FAA, IFR, VFR, ILS, ATC—the list goes on and on. The unmanned aircraft portion of the aviation community is also well-stocked with acronyms—UAS (unmanned aircraft system), UAV (unmanned aerial vehicle), RPV (remotely piloted vehicle).

If you are considering establishing an unmanned aircraft systems unit, one very important acronym you should be familiar with is “COA.” Certificates of authorization or waiver are multi-page documents that provide your organization with Federal Aviation Administration authorization to fly unmanned aircraft within the National Airspace System.

COAs were initially introduced to provide a process that would allow

airshow performers to receive a waiver of certain federal aviation regulations during their performances in the vicinity of large crowds. With the advent of public agency use of UAS, the FAA employed the process as a method for granting the aircraft, which lacked airworthiness certificates and had limited “see and avoid” capability, access to the National Airspace.

Several years ago, the COA process could be summed up in one word: obstructionist. However, it has improved significantly and is now much more user friendly and efficient. This is partly because of UAS-related clauses within the *FAA Modernization and Reform Act of 2012*, which became law on Feb. 2, and partly because of the efforts of two individuals assigned to FAA’s Unmanned Aircraft

Program Office, Steve Pansky and Dave Morton, who have been integral in implementing the intent of the legislation.

Starting the Process

The COA process should begin with the requesting agency conducting a significant amount of research. Most of this research can be performed via the internet. However, attendance at UAS seminars presented at venues such as the recent Airborne Law Enforcement Association Annual Conference and the Association of Unmanned Aircraft Systems International annual expositions can be informative. Attendance at UAS-related seminars during the 2012 ALEA Annual Conference quadrupled in comparison to similar seminars at the 2011 conference.

Research and preparation should include gathering the following:

- The proponent's contact information, including the name of the agency chief executive (usually the police chief or sheriff).
- The model and manufacturer of the selected UAS.
- A concept of operations (what you plan to do with the UAS).
- Level of aviation experience of the involved personnel.
- Whether the program is being developed in-house or utilizing a consultant.
- Obtaining a letter from your state's attorney general verifying your agency's host government is a "political subdivision" of the state in which the UAS will be operated. The letter should state the host government is a political subdivision of the state as specified within Title 49 USC Section 40102 and that the UAS will only be operated for non-commercial purposes pursuant to Title 49 USC Section 40125. If you work for a county or city, you may think that it is self-evident that your organization is a political subdivision. However, the FAA is adamant about the requirement to submit the letter.

Once the initial research has been completed, the agency should contact the FAA to apply for an online COA application account. Currently, the appropriate FAA contact is Steve Pansky. In your initial email to Pansky, provide the information listed above and attach the political subdivision letter. Upon review of your account request email, Pansky will either provide you with account access or work with you to fine tune your plan to meet account access requirements.

The online COA application link is intuitive and well-designed. Information that must be provided includes:

- Types of missions to be flown.
- Launch, operations and recovery locations.
- Altitudes to be utilized.
- Flight procedures.
- Communication procedures.
- Lost communications and lost-link procedures.
- Pilot-in-command/visual observer minimum qualifications.

Many of the questions provide a free-form text box in which the applicant has an unlimited text field available to write an answer. In addition, many of the queries have attachment links which allow the applicant to upload documents. This can be especially useful when answering questions regarding equipment specifications. The attachment links will accept a variety of documents, including Microsoft Word, Excel and PDFs.

"After an agency completes initial and law enforcement mission-oriented training and feels competent to perform actual law enforcement missions, the FAA will schedule an operational demonstration and records review."


The radio frequency segment of the application may require additional documentation. If the selected UAS does not communicate within the portion of the radio spectrum assigned to remote control aircraft, the applicant must provide documentation of Federal Communications Commission approval to utilize the command and control and data transmission frequencies used by the selected UAS.

The FAA strives for a 60-day turnaround on COA applications. However, many require 90-120 days. The current FAA model for COA issuance results in the initial authorization to operate for the purpose of training. After the agency completes initial and law enforcement mission-oriented training and feels competent to perform actual law enforcement missions, the FAA will schedule an operational demonstration and records review. This phase will require the agency to successfully complete a simulated law enforcement UAS mission while being observed by FAA personnel.

The FAA will also review the agency's policies and procedures related to UAS operations. Upon successful completion of this demonstration and review, the FAA will issue an operational COA. These operational COAs will generally include the entire jurisdictional area of the applicant

agency. The agency will then be able to deploy its UAS during daytime VFR conditions at and below 400 feet AGL with as little as one hour notification to FAA. The one-hour notification time is a significant improvement over the former minimum 48-hour notice requirement. In reality, if the agency makes the notification as soon as it believes it may need to deploy a UAS, response time, pre-flight and launch times will quickly use that hour.

Be aware that the FAA has its own vocabulary. The administration refers to the "applicant" as the COA "proponent." When you are ready to forward your online application to the FAA, you probably will consider that "submitting" the application. The FAA calls that step "committing."

Finally, when conducting UAS operations, a copy of the COA must be on-site. It is essential that all operators are fully aware of and comply with all COA conditions. 

Alan Frazier is an assistant professor within the University of North Dakota's John D. Odegard School of Aerospace Sciences. He teaches aviation management and pilot training courses, including "Public Safety Aviation." Alan is an ALEA member and the former officer-in-charge of the Glendale (CA) Police Air Support Unit. Questions or comments may be directed to him at afrazier@aero.und.edu.

COAs Online

The following links will be helpful when working on your UAS certificate of authorization:

- FAA's Interim Guidance Document 08-01 will provide valuable information on UAS COAs. It is available online at www.faa.gov/about/initiatives/uas/.
- Steve Pansky, the appropriate FAA contact for UAS COAs, can be reached at steven.ctr.pansky@faa.gov.

