Unmanned Aircraft Systems (UAS)

Also known as unattended aerial systems, unmanned aerial vehicle, drones, quadcopters, RC aircraft, etc.

Seems like a great idea for research applications and for build competitions!!

Headlines 2014

Man fined for crashing drone into Yellowstone hot spring

By: YELLOWSTONE GATE | September 26, 2014

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A visitor to Yellowstone National Park crashed a drone into Grand Prismatic Spring in August.

A Dutch visitor to Yellowstone National Park has been fined more than $3,000 after crashing a drone into Grand Prismatic Spring in August.

An NTSB judge dismissed the $10,000 fine the FAA levied against Raphael Pirker for flying the Ritewing Zephyr for hire. (Photo: Ritewing RC)

Why The Confusion?

Pilot wins case against FAA over commercial drone flight

By **Mike M. Ahlers**, CNN
updated 10:07 PM EST, Thu March 6, 2014

STORY HIGHLIGHTS

- Raphael Pirker remotely piloted model plane for commercial purposes
- The FAA said he needed to get authorization beforehand
- But federal administrative judge sides with pilot, dumps fine

(CNN) -- In a David vs. Goliath battle that pitted the Federal Aviation Administration against the operator of a small model airplane, a federal administrative judge has sided with the aircraft's pilot.

The judge has dismissed a proposed $10,000 fine against businessman Raphael Pirker, who used a remotely operated 56-inch foam glider to take aerial video for an advertisement for the University of Virginia Medical Center.

MTSGC's Journey
(still hoping to turn this into an excellent adventure)

- Step 1: What are the regulations?
  https://www.faa.gov/uas/

- Step 2: How do we interpret the regulations?

My Favorite Response So Far

"As far as a UAS competition - you have envisioned an exciting concept that will certainly attract the attention of many . . . and drive you crazy!

Its worth a shot, but it is not recommended for the faint of heart . . .

Misery loves company . . .

Good luck - it is worth looking in to. . .", Geoff Bland, Research Engineer, NASA/Goddard Space Flight Center, Wallops Flight Facility

The Email

Jennifer,

Thank you for your questions. I have attached an
[Advisory Circular on Public Aircraft requirements](#).   If NASA owns or leases (for a minimum of 90 days) all the aircraft, then you can use the Public Aircraft route and NASA would submit the COA. Otherwise, each college/ university would need to meet the Public Aircraft standards, with a letter from the state attorney General's office certifying that they are a state entity. If you decide on that route, there is additional information we can send you.

Additionally, you can find more information at http://www.faa.gov/uas/

I have also cc'd the NASA rep that oversees some of the NASA UAS operations that may be able to assist.

If you still have questions after that, please let me know.

Thank you.

Scott.Gardner@faa.gov

The Phone Call

- Space Grants/public universities are a public entity; i.e. we need a Certificate of Authorization (COA)
- NASA follows the FAA guidance regarding COA application and use to operate in the National Airspace System.
- Options:
  - Fly indoors
  - Fly under NASA or Grantor Organization COA
  - Fly under own COA

Certificate of Authorization (COA)

- Private Institutions cannot obtain a COA.

- COA is for a specific aircraft in specific airspace and is non-transferrable.

- Main certifications do not have clear, standard guidelines or procedures. (Airworthiness Certificate, Visual Observer Training for Flight Crew, and FAA Registration)

How to Get a COA?

Sample COA application on the FAA website

1. Understand your project: what is your purpose, when are you flying, where are you flying.

2. Understand your aircraft: what is the system, how does it communicate, what is it's performance characteristics, does it have detection and avoidance capability, can it log data?

3. Obtain an airworthiness certificate: see FAA order 8130.34C - Airworthiness Certification of Unmanned Aircraft Systems and Optionally Piloted Aircraft

4. Outline emergency procedures.

5. Obtain flight crew qualifications.

6. **Safety is top priority!**

Update As Of Last Two Weeks

FAA Issues Requirement for All UAS to Show Aircraft Registration Number

The FAA UAS Integration Office issued an email to the industry outlining the requirement for all commercial UAS to bear an aircraft registration number when applying for a COA:

UAS, other than those owned by the Armed Forces, intended to operate under a new COA must be registered and marked prior to COA application. The aircraft registration number (N-number) must be entered into the "Aircraft Registration" field, of the System Description section in COA on-line.

What is your story?

Please please please share any tips or helpful advice on this process!