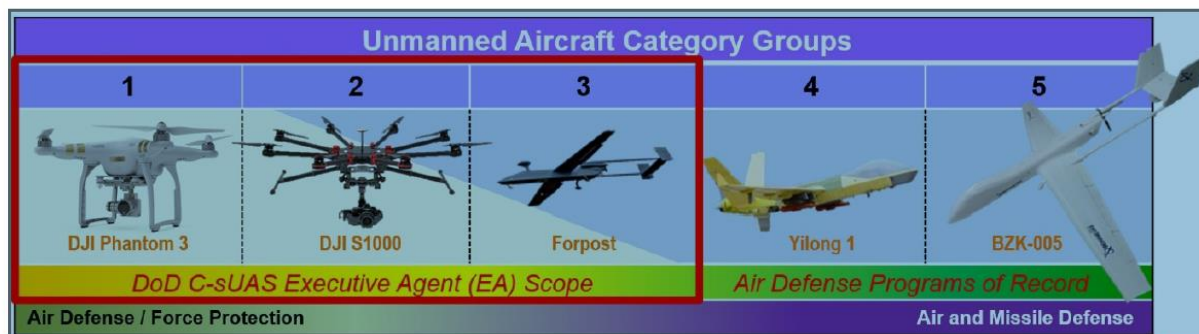




Air Force Small-Unmanned Aircraft Systems Guide & Reporting Procedures

Unmanned Aircraft Systems (also known as UA, UAS, UAV, & Drone) are categorized as Group 1 (mini and micro systems) through Group 5 strategic-level assets. Groups are based on speed, operating altitude, and weight. In general, the larger the platform the more robust the capabilities. The Department of Defense defines sUAS as the first three groups, as highlighted in red below. The sUAS category encompasses most commercial/recreational use sUAS available to the public.



sUAS Type

The most commonly seen sUAS airframes are multirotor or fixed wing/rotary wing (FW/RW) configurations and include systems that are Commercial Off-The-Shelf (COTS) and purpose-built (modified or scratch-built from parts or kits for specific missions). sUAS may be powered by internal combustion engines or electric motor.

Examples sUAS Type:




How to identify a sUAS

Sound: sUAS can be loud due to their rotors cutting through the air, the rotors cause a distinct, high-pitch buzzing noise.

- Sound is a good indicator that the drone is close enough to see. This noise can be heard within a couple hundred meters of your location.

Visually: sUAS are usually visible from the ground, they look like small light aircraft with blinking lights that are minimally visible during the day and quite visible at night.

- **Day:** The body of a drone may look like a small light aircraft, or a dark silhouette depending on its altitude.
- **Night:** Lights are an effective way to spot a drone at night. Some sUAS emit both blinking and non-blinking lights.
 - **Navigation Lights:**
 - All hobbyist drones are required to have a set of four navigational lights (two red and two green).
 - These lights shine in a straight line and **DO NOT** flicker.
 - **Anti-Collision Lights:**
 - Commercial drone pilots are required to have anti-collision (powerful strobe) lights that are visible out to a minimum of three status miles.

sUAS during the day	sUAS At Night
	

Why being able to identify sUAS is important

sUAS are a continuous and evolving threat to the security and mission of military installations and Air Force personnel. sUAS (especially groups 1 and 2) are difficult to detect and are abundant due to their low cost. In CONUS, sUAS can be used by criminal organizations (including transnational organizations), terrorists, and lone actors to achieve specific objectives. sUAS have been weaponized and are used by adversaries in multi-mission roles. Some examples of sUAS threats are listed below.

1. **Flight Safety/Hazards to Flight Operations:** Various airports and AF installations have reported sUAS that have impacted operations by congesting airspace.
2. **Intelligence, Surveillance, and Reconnaissance (ISR):** Using mounted cameras, sUAS can provide the operator with contemporary ISR capability in real time.
3. **Domestic Terrorism:** Terrorist organizations could use a sUAS as a weapon system by using it as an airborne guided bomb/claymore type device or with a mission payload using homemade/improvised munitions that can be dropped from above.

These examples represent the growing and sophistication of sUAS threats. Your assistance in identifying these threats is essential for the safety and security of all personnel and guests on Air Force installations.

sUAS AID

Raising awareness of a sUAS incident on an Air Force installation is the same as giving an oral or written account of any other suspicious activities around or on a base. It is recommended that all individuals are familiar with the D.R.O.N.E. template and apply it as an AID for sUAS incidents.

Suspicious sUAS flight activities include:

1. flying near the flight-line of an installation
2. flying near aircraft
3. flying near or over the fence line of an installation
4. flying over or near installation buildings/ on base housing
5. flying over groups of people

DRONE Template Tailored to sUAS

D.R.O.N.E.:

- **D Direct Attention** – outward and upward to attempt to locate individuals who are holding a controller or device that appears to be operating a UAS (look at windows, balconies/rooftops)
- **R Report Incident** – Report immediately via radio/telephone or voice and request Supervisor response. If operator is located off-base, notify LE immediately.
- **O Observe** - Observe the sUAS and maintain visibility of the device (if safe to do so), look for damage or injured individuals, note that sUAS battery life is limited – typically 30-40 minutes.
- **N Notice** – Notice features of the sUAS. Type of device (fixed wing/multi rotor/tilt rotor), size/shape/color/payload/camera equipment/activity of device – What did it do?
- **E Execute** – Execute appropriate action, if practicable locate operator, stop, ID and interview (if permissible). Treat sUAS on the ground as a suspicious package.

***Taking photographs or video of the sUAS-**

Would be helpful for Air Force security forces IF you can safely do so

Air Force personnel have *two* options when providing an account of a suspicious sUAS. The first option is to call the installation's Security Forces Base Defense Operations Center (BDOC 856-7676).

Mistakes in identifying sUAS

Mistakes in identifying sUAS happen and generally it is from a lack of understanding on what to look for. At night misidentified objects include satellites, aircraft (manned), and small meteors.

- **Satellites:** Do not have navigational lights and are solely lit by the reflection of the sun. This appears in the night sky as a bright star moving and slowly fading as it passes into the earth's shadow.
- **Aircraft (manned):** Have contrails (seen in daytime) and utilize red/green navigational lights.
- **Small meteors:** Extremely fast, quick flash, and seen only momentarily.

What do you do if you find a downed drone?

DO NOT seize a downed drone. If you find a downed drone, you should immediately call the Law Enforcement Desk or BDOC. If neither of those options are available, the next recommendation for personnel is to call local civilian law enforcement as necessary.

Image References:

1. <https://safe.menlosecurity.com/doc/docview/viewer/docN8B429300C6F3d0cabcce3219f07744c31922dfd97539b50e1fe28cdef9d813aab5638a92b87f>
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