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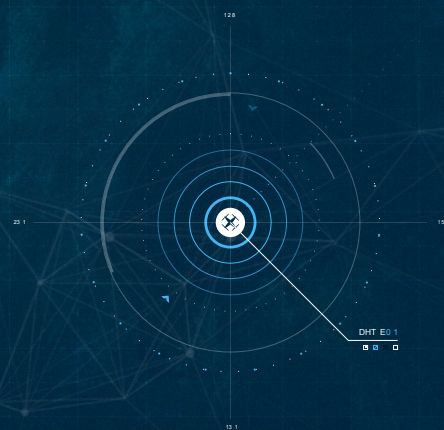
SkySafe WhitePaper

# DRONE SEIZURE & RECOVERY

## How to Handle a Downed Aircraft

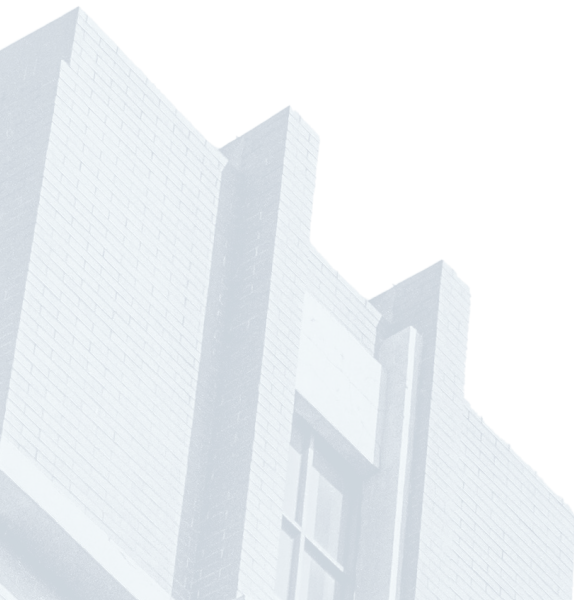
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## Introduction

Criminal use of drones is driving the need for sophisticated detection and counter-drone systems. Getting this technology into the hands of those who need it most – stadiums, prisons, airports, border patrol, critical infrastructure facilities – is only one piece of the solution. In the Detection -> Mitigation -> Recovery -> Forensic Investigation lifecycle, it is often an organization's front-line workers who are left to handle the Recovery portion, but with little support or training around best practices for doing so. If the Recovery phase is mishandled, this can lead to a breakdown of the potential for follow-on examination. We should be empowering first responders with the knowledge needed to ensure proper seizure and recovery of a downed drone and enable them to lay the essential groundwork for a successful prosecution.



## Safe Seizure & Recovery

Once an organization's responders have arrived on scene in the vicinity of a downed drone, they should take note of the state of the device. In particular, note if any portion of the device appears to be damaged or missing. If using a system such as SkySafe Cloud that allows for tracking the location of the pilot, responders should ensure that they disable the connection between the drone and its associated remote controller. However, they should not alter the power state of the downed drone at this time.

Once the link communications have been disabled, responders should photograph the drone and its surroundings, being sure to include wider shots that provide a point of reference for fixing the drone's location to a permanent object. Make a note of any visible markings on the drone, such as make, model, and/or serial number. Note the date and time of the incident, the power state of the device at time of recovery, the weather conditions, the names of those on scene, and any other pertinent details. Note that everything described here should take place prior to physically touching the device.

### Chain of Custody

Chain of custody is one of the first items that comes under scrutiny in a legal proceeding, which means responders need to be mindful of appropriate handling, packaging, transport, and documentation procedures before, during and after the incident and seizure. Any handling of the downed aircraft should be done with proper Personal Protective Equipment (PPE). If the device has a removable battery, it should be removed prior to transport. If not, simply power the device down and make a note of the time at which this occurred.

Package the recovered materials in a way that prevents altering or manipulation of the devices by sealing any connection ports like USB ports or SD card slots. The aircraft, battery, remote controller, and any other components recovered should be packaged separately with identifying labels. If possible, components should be stored in RF shielded bags.

### Safe Short and Long-Term Storage

If local law enforcement or an organization's digital forensics response team is unable to arrive on scene at the time of the incident, requiring the organization to store the recovered device(s) until a later date, it is essential to be mindful of the storage considerations around drones and their components. Any moving parts should be immobilized, including but not limited to propellers, gimbals, cameras, and additional add-ons. They should be packaged in a way as to prevent any damage due to drops or bumps during handling. Finally, the recovered components should be stored in a cool, dry space that is not magnetic and is climate-controlled. Ideal storage temperatures for electronic components are between 68 and 77°F (20-25°C).

## Battery Handling

As most drones today contain Lithium-Polymer (LiPo) batteries, all batteries should be removed and stored separately in a fire-proof container. The container should be kept away from direct sunlight and stored at a temperature of 77°F (25°C). It is preferable that any storage facilities for batteries or other components contain redundancy in the event of a power failure. If there is a need to transport any components via air travel, organizations should be aware of TSA and FAA regulations around batteries.

## In-Depth Training

For those curious to know more about topics like these, SkySafe has designed a certification program around Unmanned Aerial Vehicle (UAV) forensics and incident response. We are extremely passionate about educating organizations on best practices surrounding drone seizure and response, and seek to empower organizations with the tools they need to preserve the foundation for a successful examination and follow-on prosecution. This course is taught by our Senior UAS Forensic Specialist who has over 20 years of experience in the field of digital forensics and investigations. We also have an incident response team available to deploy to your site to assist with forensic recovery in the event of a downed drone.

If you'd like to know more about this training program or this topic, in general, please visit [www.skysafe.io/drone-forensics](http://www.skysafe.io/drone-forensics) or reach out to [training@skysafe.io](mailto:training@skysafe.io); we would love to hear from you!

## About SkySafe

Based in San Diego, CA, SkySafe was founded in 2015 and is a world leader in drone detection and airspace awareness. SkySafe is building the world's first wholly owned and operated drone detecting network. As the only company who can perform deep data extraction on recovered drones, SkySafe is also the world's leading drone forensics company.

[www.skysafe.io](http://www.skysafe.io)