Suroda Field Advisory: Drone Stabilization Failure and Simultaneous Environmental Grid Disruption

Overview

For the past 18 months, Suroda has developed patent-pending software to identify, track, and document complex acoustic environments. During recent field operations, our engineering team recorded repeated instances of commercial drones experiencing a catastrophic loss of stabilization, leading to immediate crashes.

The Observations and Environmental Records

For the past 18 months, Suroda has been developing patent-pending software to identify, track, and document complex acoustic environments, maintaining a continuous CCTV and environmental monitoring baseline of our test area. During recent field operations, our test drones experienced repeated destabilization and crashes within a specific zone. The aircraft could not successfully take off from within this area, and when piloted into the zone from the outside, they immediately crashed. When we restricted the flights to approximately 100 feet outside the perimeter of this disruption, the same aircraft operated normally and completed sustained 20-minute test flights.

At the exact moment of these drone failures, Suroda's continuous CCTV monitoring grid experienced a simultaneous, localized disruption. Immediately following the events, the environmental grid resumed normal operation. The combination of the drones' recorded failure to operate within the zone, the simultaneous disruption of our environmental grid, and the subsequent recovery of both systems prompts us to ask whether these localized acoustic conditions are relevant to drone stability.

Context and Prior Research

Previous academic research has established that specific drone sensors are vulnerable to acoustic interference, including targeted field demonstrations. What distinguishes this advisory is the pairing of physical drone failures with a simultaneous environmental sensor disruption. Suroda successfully documented the 18-month baseline of the environment, the localized blackout of the monitoring equipment at the moment of the crashes, and the immediate recovery of the grid.

Strategic Assessment

Suroda's primary focus remains the continued development of our software infrastructure to make invisible acoustic data verifiable and actionable. We are publishing this advisory to bring the documented drone failures and corresponding environmental disruptions to the attention of the defense and drone manufacturing communities for independent investigation.

We are sharing these findings because they raise a practical question: could existing acoustic equipment—including Long-Range Acoustic Devices (LRADs)—help protect people and infrastructure from drone attacks in Ukraine, the Middle East, and elsewhere?

That possibility is the reason for this release. A summary of these findings is available for preliminary review. Suroda is selectively coordinating further technical reviews with qualified research institutions on an individual basis under appropriate evaluation agreements.