

Standard Operating Procedure

Electronic Monitoring & Surveillance Drone Operations

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1. Purpose and Scope

This Standard Operating Procedure (SOP) establishes guidelines for the safe and compliant operation of unmanned aircraft systems (UAS) for electronic monitoring and surveillance activities. It applies to all personnel involved in drone surveillance operations.

2. Personnel Requirements

2.1 Training Checklist

| Training Requirement | Completed | Date | Instructor |
|----------------------------------|--------------------------|------|------------|
| FAA Part 107 Certification | <input type="checkbox"/> | | |
| Company UAS Safety Training | <input type="checkbox"/> | | |
| Equipment-Specific Training | <input type="checkbox"/> | | |
| Surveillance Techniques | <input type="checkbox"/> | | |
| Data Privacy Protocols | <input type="checkbox"/> | | |
| Evidence Handling Procedures | <input type="checkbox"/> | | |
| Emergency Response Training | <input type="checkbox"/> | | |
| Airspace Regulations | <input type="checkbox"/> | | |
| Weather Assessment | <input type="checkbox"/> | | |
| Night Operations (if applicable) | <input type="checkbox"/> | | |

2.2 Operator Qualifications

- Primary Remote Pilot: [NAME], Certificate #: [NUMBER]
- Secondary Remote Pilot: [NAME], Certificate #: [NUMBER]

- Visual Observer: [NAME]
- Data/Evidence Specialist: [NAME]

3. Equipment Inventory

3.1 UAS Equipment Checklist

| Equipment | ID Number | Last Inspection | Next Inspection Due |
|------------------------|-----------|-----------------|---------------------|
| Primary Drone | | | |
| Backup Drone | | | |
| Controller | | | |
| Primary Batteries (x4) | | | |
| Charging Station | | | |
| Tablet/Control Display | | | |
| Transport Case | | | |
| SD Cards | | | |
| IR/Thermal Camera | | | |
| Zoom Camera | | | |

3.2 Surveillance Equipment Checklist

| Equipment | ID Number | Last Calibration | Next Calibration Due |
|---------------------------|-----------|------------------|----------------------|
| RF Signal Detector | | | |
| Thermal Imaging System | | | |
| Video Transmission System | | | |
| Audio Recording System | | | |
| GPS Tracking Module | | | |

4. Pre-Mission Planning

4.1 Authorization Checklist

- ☐ Mission approval from supervisor
- ☐ Verification of legal authority for surveillance
- ☐ FAA airspace authorization (LAANC or manual)
- ☐ Property owner notification/consent (if required)
- ☐ Privacy impact assessment
- ☐ Weather conditions acceptable

- ☐ B4UFLY app check completed
- ☐ NOTAMS checked for restrictions
- ☐ Risk assessment completed

4.2 Flight Planning

- ☐ Mission objectives clearly defined
- ☐ Flight area mapped and reviewed
- ☐ Takeoff/landing zones identified
- ☐ Hazards identified and mitigated
- ☐ Emergency landing areas identified
- ☐ Communications plan established
- ☐ Weather forecast reviewed

5. Operational Procedures

5.1 Pre-Flight Checklist

- ☐ Equipment inspection completed
- ☐ Batteries charged and condition verified
- ☐ Propellers inspected and secured
- ☐ Camera/sensors functioning properly
- ☐ Data storage media installed and formatted
- ☐ Controller paired and functioning
- ☐ GPS signal acquired and strong
- ☐ Compass calibrated
- ☐ Flight control surfaces tested
- ☐ Return-to-home point set
- ☐ Takeoff area cleared of obstacles and people

5.2 In-Flight Procedures

- ☐ Maintain visual line of sight at all times
- ☐ Adhere to planned flight path
- ☐ Monitor battery levels continuously
- ☐ Maintain minimum safe distance from subjects
- ☐ Record only authorized subjects/areas
- ☐ Communicate with team using established protocols
- ☐ Document observations in real-time when possible
- ☐ Monitor weather conditions
- ☐ Adjust operations for changing conditions

- ☐ Maintain situational awareness of airspace

5.3 Post-Flight Checklist

- ☐ Land safely in designated area
- ☐ Power down system properly
- ☐ Secure all data storage media
- ☐ Inspect drone for damage
- ☐ Document flight time in logbook
- ☐ Note any issues or concerns
- ☐ Debrief team on mission outcomes
- ☐ Secure all equipment

6. Data Handling Procedures

6.1 Data Collection

- ☐ Verify correct recording settings before flight
- ☐ Use designated, encrypted storage media
- ☐ Label all media with case/mission information
- ☐ Maintain uninterrupted recording during critical operations
- ☐ Back up data at first opportunity

6.2 Chain of Custody

- ☐ Document all transfers of data media
- ☐ Use evidence bags when applicable
- ☐ Maintain completed chain of custody forms
- ☐ Secure data in authorized storage location
- ☐ Restrict access to authorized personnel only

6.3 Data Retention and Security

- ☐ Apply appropriate data classification level
- ☐ Store in accordance with retention policy
- ☐ Implement access controls
- ☐ Create secure backup copies
- ☐ Document destruction of data when retention period expires

7. Drone Operations Logbook

7.1 Required Documentation for Each Flight

Each mission must be thoroughly documented in the Drone Operations Logbook, which should include:

- Date and time of operation
- Location (GPS coordinates and physical address)
- Mission purpose and objectives
- Remote PIC name and certificate number
- Aircraft registration number
- Flight duration
- Battery cycles used
- Weather conditions
- Maximum altitude achieved
- Incidents or anomalies
- Maintenance issues identified
- Data collected and storage location
- Witnesses present (if any)
- Approvals and authorizations

7.2 Logbook Template

| Date | Mission ID | Location | Pilot | Aircraft ID | Start Time | End Time | Flight Time | Battery # | Max Alt | Weather | Incidents | D L |
|------|------------|----------|-------|-------------|------------|----------|-------------|-----------|---------|---------|-----------|-----|
| | | | | | | | | | | | | |

8. Maintenance Procedures

8.1 Routine Maintenance Schedule

| Maintenance Task | Frequency | Last Completed | Next Due | Responsible Person |
|----------------------|------------|----------------|----------|--------------------|
| Propeller inspection | Pre-flight | | | |
| Motor testing | Weekly | | | |
| Firmware updates | Monthly | | | |
| Battery cycling | 25 cycles | | | |
| Calibration | Monthly | | | |
| Full system check | Quarterly | | | |

8.2 Equipment Repair Protocol

- ☐ Document all equipment malfunctions
- ☐ Remove damaged equipment from service
- ☐ Follow manufacturer repair guidelines
- ☐ Use only approved parts and technicians
- ☐ Test equipment thoroughly after repair
- ☐ Document repair in maintenance log
- ☐ Update equipment status in inventory

9. Emergency Procedures

9.1 In-Flight Emergencies

- Loss of control: Activate return-to-home or land immediately
- Flyaway: Note direction and contact relevant authorities
- Battery failure: Execute controlled landing at nearest safe location
- Aircraft collision: Document incident and assess damage
- Injury or property damage: Report to supervisor immediately
- Law enforcement contact: Provide documentation of authorization

9.2 Incident Reporting

- ☐ Complete incident report within 24 hours
- ☐ Notify appropriate management personnel
- ☐ Report to FAA if criteria met (serious injury, damage > \$500)
- ☐ Preserve all data related to incident
- ☐ Conduct post-incident analysis
- ☐ Implement corrective actions

10. Privacy and Ethical Considerations

10.1 Privacy Protection Measures

- ☐ Minimize data collection to only what is necessary
- ☐ Avoid recording non-targeted individuals when possible
- ☐ Blur or redact non-relevant individuals in footage
- ☐ Establish clear justification for all surveillance
- ☐ Follow all applicable privacy laws and regulations
- ☐ Conduct regular privacy impact assessments

10.2 Ethical Guidelines

- ☐ Use surveillance only for legitimate purposes
- ☐ Avoid operations that could cause undue concern
- ☐ Consider public perception and community impact
- ☐ Operate with transparency when security allows
- ☐ Respect dignity and privacy of all individuals
- ☐ Balance security objectives with civil liberties

11. Compliance and Auditing

11.1 Regulatory Compliance Checklist

- ☐ Current FAA regulations reviewed quarterly
- ☐ State and local drone laws reviewed quarterly
- ☐ Industry best practices incorporated
- ☐ Regular compliance audits conducted
- ☐ Policy updates communicated to all personnel
- ☐ Training updated to reflect regulatory changes

11.2 Internal Auditing Schedule

| Audit Type | Frequency | Last Conducted | Next Due | Responsible Party |
|-------------------------|---------------|----------------|----------|-------------------|
| Documentation Review | Quarterly | | | |
| Operational Observation | Semi-annually | | | |
| Equipment Inspection | Quarterly | | | |
| Training Verification | Annually | | | |
| Policy Compliance | Quarterly | | | |

12. Approval and Authorization

This SOP has been reviewed and approved by:

[NAME]

Director of Security Operations

Date: [DATE]

[NAME]

Compliance Officer

Date: [DATE]

Revision History

| Version | Date | Description of Changes | Author | Approved By |
|---------|--------|------------------------|--------|-------------|
| 1.0 | [DATE] | Initial SOP Release | [NAME] | [NAME] |