# **AstroFly Robotics FAQ Structure**

## **Internal FAQs**

These articles support operational procedures, escalation paths, and detailed troubleshooting guides for internal teams.

### **Category 1: Operational Procedures**

**Subcategory:** Standard Operating Protocols & Best Practices

1. **What are the standard pre-flight check procedures for all drones?** *Follow the SOP which includes sensor calibration, battery diagnostics, and communication verification.* [Internal SOP: /internal/sop/preflight]
2. **How should flight plans be created and approved?** *Flight plans must be drafted, reviewed, and approved by the operations team using the internal planning tool.* [Flight Planning Guide: /internal/flight-planning]
3. **What are the emergency retrieval protocols?** *In case of an anomaly, activate the emergency return-to-home procedure and notify the operations supervisor.* [Emergency Protocols: /internal/emergency/return-to-home]
4. **How is flight data secured and archived internally?** *Data is automatically encrypted, stored on our secure cloud servers, and backed up as per internal guidelines.* [Data Security: /internal/data-security]
5. **What procedures exist for weather-related flight cancellations?** *Monitor real-time weather data; cancel flights if conditions fall outside the approved parameters.* [Weather SOP: /internal/weather-guidelines]
6. **How should operators handle in-flight anomalies?** *Follow the anomaly response checklist and document the incident in the internal log system.* [Anomaly Response: /internal/anomalies]
7. **What are the guidelines for coordinating multi-drone operations?** *Use the coordination protocol and centralized communication platform to manage simultaneous missions.* [Multi-Drone Coordination: /internal/multi-drone]
8. **How are mission parameters documented?** *All mission details must be recorded in the internal mission log system for review and compliance.* [Mission Logging: /internal/mission-logs]
9. **What is the routine maintenance schedule for drones?** *Maintenance is scheduled based on flight hours and must follow the internal maintenance manual.* [Maintenance Schedule: /internal/maintenance/schedule]
10. **How is compliance with safety regulations ensured?** *Regular audits, training sessions, and real-time monitoring ensure adherence to internal safety standards.* [Safety Compliance: /internal/safety]
11. **What communication protocols are used during emergencies?** *Operators use the dedicated emergency communication channel as defined in the SOP.* [Emergency Comms: /internal/emergency/comms]
12. **How should incidents be logged and reported?** *Incidents must be documented immediately in the internal incident reporting system.* [Incident Reporting: /internal/reporting]
13. **What are the backup procedures for system failures?** *Initiate backup protocols outlined in the contingency manual and alert the technical support team.* [Contingency Plan: /internal/backup]
14. **How do internal audits of drone operations occur?** *Audits are conducted quarterly with a review of flight logs, maintenance records, and compliance checklists.* [Audit Procedures: /internal/audits]
15. **Where can the full internal SOP documentation be accessed?** *All internal operating procedures are available on the secure intranet portal.* [Internal SOP Portal: /internal/sop]

### **Category 2: Escalation Paths**

**Subcategory:** Reporting and Resolving Critical Issues

1. **Who is the first point of contact for operational issues?** *Operators should contact their immediate supervisor or the on-call support coordinator.* [Escalation Contact: /internal/escalation]
2. **What is the protocol for critical system failures?** *Immediately escalate to the technical support manager via the internal alert system.* [Critical Failure Protocol: /internal/escalation/critical]
3. **How are issues with the control dashboard escalated?** *Report dashboard failures to IT support and log the incident in the internal issue tracker.* [Dashboard Issues: /internal/escalation/dashboard]
4. **What is the chain of command for emergency incidents?** *Follow the internal escalation matrix which outlines reporting lines from operators to senior management.* [Escalation Matrix: /internal/escalation/matrix]
5. **How are inter-departmental issues handled?** *Inter-department issues should be reported to the operations manager for coordination and resolution.* [Inter-Departmental Issues: /internal/escalation/interdept]
6. **What is the process for escalating software issues to the development team?** *Submit a detailed report via the internal bug tracker and notify the software lead.* [Software Escalation: /internal/escalation/software]
7. **Who should be notified in case of hardware malfunctions?** *Notify the hardware support team and log the incident as per internal protocol.* [Hardware Escalation: /internal/escalation/hardware]
8. **What is the expected response time for escalated issues?** *Critical issues are acknowledged within 30 minutes; non-critical issues within 4 hours.* [Response Times: /internal/escalation/response]
9. **How are escalated issues tracked internally?** *All escalations are logged in the internal issue management system with status updates.* [Issue Tracker: /internal/escalation/tracker]
10. **What are the escalation contacts for network connectivity problems?** *Contact the network support team using the dedicated escalation hotline listed in the internal directory.* [Network Contacts: /internal/escalation/network]
11. **How should maintenance issues be escalated?** *Report maintenance concerns to the maintenance supervisor with full diagnostic logs attached.* [Maintenance Escalation: /internal/escalation/maintenance]
12. **What is the protocol for battery and power issues escalation?** *Escalate power concerns immediately to the technical support manager and document in the internal system.* [Battery Escalation: /internal/escalation/power]
13. **How are unresolved issues escalated to management?** *If issues remain unresolved after 24 hours, escalate directly to the department head.* [Management Escalation: /internal/escalation/management]
14. **What role does the quality assurance team play in escalations?** *The QA team reviews unresolved issues and ensures compliance with internal standards.* [QA Escalation: /internal/escalation/qa]
15. **Where is the full escalation path documented?** *Access the comprehensive escalation guide on the internal support portal.* [Full Escalation Guide: /internal/escalation/guide]

### **Category 3: Detailed Product Troubleshooting Guides**

**Subcategory:** Step-by-Step Diagnostic Procedures

1. **How do I conduct a full diagnostic of the AstroGuard X1?** *Run the built-in diagnostic tool via the control dashboard and review sensor logs for anomalies.* [X1 Diagnostic Guide: /internal/troubleshooting/astroguard-x1]
2. **What are the procedures for sensor recalibration?** *Follow the sensor recalibration procedure outlined in the troubleshooting guide for each drone model.* [Sensor Recalibration: /internal/troubleshooting/calibration]
3. **How should firmware issues be diagnosed?** *Use the internal firmware diagnostic tool and compare logs against known issues in the repository.* [Firmware Diagnostic: /internal/troubleshooting/firmware]
4. **What is the procedure for analyzing flight logs?** *Access flight logs via the dashboard and use our analysis tools to identify performance deviations.* [Flight Log Analysis: /internal/troubleshooting/logs]
5. **How do I troubleshoot connectivity issues in the field?** *Follow the connectivity troubleshooting checklist and document any deviations for review.* [Connectivity Troubleshooting: /internal/troubleshooting/connectivity]
6. **What diagnostic tools are available for internal use?** *Internal diagnostic tools include sensor analyzers, firmware checkers, and network monitors.* [Diagnostic Tools: /internal/tools]
7. **How are software glitches addressed in the field?** *Restart the affected module, run a system diagnostic, and report persistent issues via the internal tracker.* [Software Troubleshooting: /internal/troubleshooting/software]
8. **What is the process for resetting communication modules?** *Use the emergency reset procedure outlined in the communication troubleshooting guide.* [Communication Reset: /internal/troubleshooting/reset]
9. **How should battery performance issues be evaluated?** *Review battery diagnostics, log power consumption data, and consult the battery performance guide.* [Battery Diagnostics: /internal/troubleshooting/battery]
10. **How are system error codes interpreted?** *Refer to the error code reference document which details codes and corresponding actions.* [Error Code Reference: /internal/troubleshooting/error-codes]
11. **What documentation is available for advanced troubleshooting?** *The full troubleshooting manual is available on the internal portal with detailed procedures for each product.* [Advanced Troubleshooting Manual: /internal/troubleshooting/manual]
12. **How do I perform a manual override during an emergency?** *Follow the manual override procedure, ensuring you notify your supervisor before execution.* [Manual Override: /internal/troubleshooting/override]
13. **What steps should be taken if obstacle avoidance fails?** *Immediately activate emergency protocols and consult the obstacle avoidance troubleshooting guide.* [Obstacle Avoidance: /internal/troubleshooting/obstacles]
14. **How are hardware failures isolated and fixed?** *Run hardware diagnostics to isolate the failure and refer to the repair procedures for replacement parts.* [Hardware Repair: /internal/troubleshooting/hardware]
15. **Where can the full internal troubleshooting guide be accessed?** *Access the complete troubleshooting guide via the secure internal support portal.* [Internal Troubleshooting Guide: /internal/troubleshooting]

### **Category 4: Maintenance & Diagnostics**

**Subcategory:** Routine Procedures & Health Assessments

1. **What is the recommended schedule for routine maintenance?** *Maintenance schedules are defined by flight hours and outlined in the internal maintenance manual.* [Maintenance Schedule: /internal/maintenance/schedule]
2. **How should maintenance logs be maintained?** *All maintenance activities must be recorded in the internal log system and reviewed quarterly.* [Maintenance Logs: /internal/maintenance/logs]
3. **What diagnostic procedures are recommended before each flight?** *Perform pre-flight diagnostics including sensor calibration, battery checks, and communication tests.* [Pre-Flight Diagnostics: /internal/maintenance/preflight]
4. **How are sensor calibrations scheduled and recorded?** *Sensor calibrations are scheduled automatically and logged in the system; refer to the calibration schedule guide.* [Calibration Schedule: /internal/maintenance/calibration]
5. **What are the maintenance protocols for battery systems?** *Batteries must be inspected, tested, and replaced based on usage metrics defined in the battery maintenance guide.* [Battery Maintenance: /internal/maintenance/battery]
6. **How should unexpected maintenance issues be documented?** *Document all unexpected issues in the internal incident log and notify the maintenance supervisor immediately.* [Incident Documentation: /internal/maintenance/issues]
7. **What indicators signal hardware wear and tear?** *Regular diagnostics and visual inspections help identify wear; refer to the hardware health checklist.* [Hardware Health: /internal/maintenance/health]
8. **How often should firmware and software be updated?** *Follow the update schedule provided by the development team, typically every quarter or as needed.* [Update Schedule: /internal/maintenance/updates]
9. **What diagnostic reports are generated after each flight?** *Flight diagnostics include sensor performance, battery usage, and error logs, all available via the dashboard.* [Flight Diagnostic Reports: /internal/maintenance/reports]
10. **How is the overall health of each drone assessed?** *Drone health is reviewed using periodic maintenance reports and in-field diagnostic tools.* [Drone Health Assessment: /internal/maintenance/assessment]
11. **What are the procedures for emergency maintenance?** *Emergency maintenance protocols are activated when critical failures are detected, as detailed in the contingency guide.* [Emergency Maintenance: /internal/maintenance/emergency]
12. **How should diagnostic data be analyzed for trends?** *Use the internal analytics tool to review diagnostic data and identify recurring issues over time.* [Data Analysis: /internal/maintenance/data-analysis]
13. **What tools are used for maintenance diagnostics?** *Internal teams utilize a suite of diagnostic tools including software analyzers and hardware testers.* [Diagnostic Tools: /internal/maintenance/tools]
14. **How do internal maintenance procedures differ from external guides?** *Internal procedures include additional checkpoints and escalation steps not shared externally for security and quality control.* [Internal vs. External: /internal/maintenance/differences]
15. **Where can the comprehensive maintenance manual be found?** *The full maintenance manual is available on the secure internal portal for authorized personnel.* [Maintenance Manual: /internal/maintenance/manual]