

# INSPIRE 1

## Maintenance Manual



V1.0 2015.2

To ensure that your aircraft continues to offer optimal performance and to ensure flight safety, it is recommended that **comprehensive maintenance be performed after every 200 flights or 50 flight hours**. This manual is intended to help users maintain their aircraft and maximize its continued reliability.

### I. Checking the Battery

1. Check the battery for damage and deformities. If there are any signs of damage to the battery, stop using it and discharge the battery to 10% or below for disposal. Do not disassemble the battery for any reason.
2. Check the battery pins and rub them clean with an eraser if any residue is observed. This will help to ensure a more reliable connection.
3. Check the metal battery power connectors for damage. If the connectors appear burnt, try to clear them. This can be done by inserting a piece of sandpaper (1mm thick) into the connectors to polish the metal.
4. Check the contact pins in the battery compartment to ensure that the pins are clear. They should be able to establish easy contact with the battery connectors and should not be bent.
5. Check the electrodes on the battery. If they appear burnt, polish them with sandpaper. If there is serious erosion, send the battery in for repairs.
6. Check the plastic components of the battery bracket to see it is in good condition and that all screws are secure. This prevents the battery from becoming loose during flight.
7. Check the power cables between the arms and the center plate, if the cables are worn, contact DJI to arrange repairs.
8. For long term storage, please refer to the "Intelligent Flight Battery Safety Guidelines" and check the battery once a month to prevent the battery cell from being damaged.
9. Run the DJI Pilot App to confirm that all battery cells are at similar voltage levels and stay at the same level when the battery is fully charged. If all cells maintain voltage levels above 3.7V but any cell is 0.2V higher or lower than the others, contact DJI for analysis. You can also check the battery cell warning history. If any warning are reported, contact DJI.

### II. Checking the Transformation System

1. Check the servomotor cables for wear. Also confirm that the connection points are still in good condition.
2. Check the lead screws and contact DJI Support to arrange repairs if any bending or damage is discovered. Clean the lead screws with WD-40 spray if they show signs of rust.
3. Listen to the servomotors during the transformation, if there is abnormal noise, it may indicate that the servomotors worn.
4. After the landing gear rises, check the lead screws and bearings. If any dirt or dust is found, clean and grease the bearings.
5. Check the lead screws. If there is any scratches, dents, or plastic particles underneath them, contact DJI Support to arrange repairs.

### III. Checking the Aircraft

1. Confirm that all the screws are still adequately tightened.
2. Check the aircraft for breaks or damage. If there is any reason to believe that detectable damage might affect flight safety, consult with DJI Support.
3. Check the carbon tubes of the arms for damage.
4. Check the dampers on the landing gears. If they are loose, secure them with 502 glue.
5. Ensure that there are no obstacles on or around the GPS module or around the antennas on the landing gear. Remove any obstacles (such as tapes with conductive material) that might affect or block the signal.
6. Check that the right and left landing gear rest at the same tilt angle.

#### **IV. Checking the Motors**

1. Check the rotors to confirm that they have not become loose.
2. Detach the propellers and start the motors. Listen carefully. If there is any abnormal noise, please replace the motors. This may be a sign that the bearings have been worn out.
3. Detach the propellers and start the motors. Carefully examine the edge of the rotor and confirm that the shaft is perfectly centered on the motor. Check for any abnormal or excessive vibration. If any problems are detected, contact DJI Support to order replacement motors.
4. Check for deformities by confirming that the gap between the motor and motor base is even. If not contact DJI Support to order replacement motors.
5. Ensure that the screws used to secure the motor base are tight and the plastic components around the motors are in good condition. If not please tighten the screws and contact DJI to repair any broken plastic components.

#### **V. Checking the Propellers**

1. Check the propellers. If there is any bending, breakage or cracking on a propeller, do not use it.
2. Attach the propeller to the motor, turn on the aircraft, and place it on the ground. Stand 1 meter away from the aircraft and observe the rotating propellers. If you can see two distinct propeller outline layers, when looking at a spinning propeller from the side, this propeller is damaged and should not be used.

#### **VI. Checking the IMU**

1. Open DJI Pilot app to check the condition of the IMU and perform an advanced IMU calibration. Please place the aircraft in a cool environment and on a flat, stable surface (if the landing gear is damaged, support the aircraft with four objects of equal height). Do not touch the craft during the calibration.
2. Turn on the aircraft and listen for any abnormal noise or vibration from the fan located on the front of the aircraft. If any irregularity is detected, replace the fan.

#### **VII. Checking the Control and Video Transmission System**

1. Check the 4 antennas on the landing gear to ensure that they are secure. Also check for any bending or damage.
2. Check the antennas of the remote controller for damage
3. Check the neck strap for damage or wear, replace if necessary.

#### **VIII. Checking the Gimbal and Camera**

1. The quick-mount connector for the camera is a particularly vulnerable component. If the gimbal fails to initialize when turned on, fails to work after initialization, or fails to transmit video to the app (while OSD data is displayed), the quick-mount connector may be worn. In this case, replace the rubber mat, circuit board, and/or connector on the gimbal quick-mount.
2. Check the metal contacts on the quick mount connector board, if any contact is bent, replace the quick-mount connector.
3. Check the contact pins on the quick-mount connector board, if there is any dirt, rub it clean with an eraser. If any contact pins are worn out it should be replaced.
4. Confirm that the gimbal is able to properly stabilize itself. If its stabilizing performance deteriorates, contact DJI to arrange repairs.
5. Listen for any abnormal noise from the fan when the gimbal is turned on. This may indicate unusual vibration and the fan should be replaced.

#### **IX. Checking the Vision Positioning System**

1. Check the lens of the camera. If any dirt or residue is detected, gently clean the lens.
2. Check for and remove objects that might block the sensors.
3. Ensure that the Vision Positioning System is securely installed on the aircraft.
4. Detach the propellers and turn on the aircraft. Hold the aircraft 1-2 meters above a surface with rich patterns, under good lighting conditions. Change the Flight Mode switch to P Mode on the controller and check the DJI Pilot app. If the app displays an altitude value and indicates that P-OPTI mode is active, the Vision Positioning System should function normally.

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#### **Support Center Contact Info:**

<http://www.dji.com/support>

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