Civil Aviation Authority

SAFETY NOTICE
Number: SN–2018/008

Issued: 26 October 2018

Small Unmanned Aircraft
DJI Matrice 200 Series In-Flight Power Failures

This Safety Notice contains recommendations regarding operational safety.

Recipients must ensure that this Notice is copied to all members of their staff who need to take appropriate action or who may have an interest in the information (including any ‘in-house’ or contracted maintenance organisations and relevant outside contractors).

<table>
<thead>
<tr>
<th>Applicability</th>
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<tbody>
<tr>
<td>Aerodromes:</td>
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<tr>
<td>Not primarily affected</td>
</tr>
<tr>
<td>Air Traffic:</td>
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<tr>
<td>Not primarily affected</td>
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<tr>
<td>Airspace:</td>
</tr>
<tr>
<td>Not primarily affected</td>
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<tr>
<td>Airworthiness:</td>
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<tr>
<td>Not primarily affected</td>
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<tr>
<td>Flight Operations:</td>
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<tr>
<td>All Small Unmanned Aircraft Operators</td>
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<tr>
<td>Licensed/Unlicensed Personnel:</td>
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<td>Not primarily affected</td>
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1 Introduction

1.1 This Safety Notice applies to operators of the DJI Matrice 200 series multi-rotor small unmanned aircraft.

1.2 A small number of incidents have been recently reported where the aircraft has suffered a complete loss of power during flight, despite indications that there was sufficient battery time still remaining. In each case, this resulted in the aircraft falling directly to the ground due to the immediate loss of lift with the remote pilot unable to control its subsequent flight path. The small unmanned aircraft (SUA) were damaged upon impact, but the CAA has not received any reports of injuries to people or property.

1.3 The full details of the occurrences are still being investigated by the manufacturer.

1.4 The purpose of this Safety Notice is to highlight the requirement for the SUA operator and/or remote pilot to be reasonably satisfied that the flight can be safely made (Air Navigation Order 2016 (ANO) article 94(2)) and to temporarily limit the scope of any operational authorisations, issued to operators of the DJI Matrice 200 series where ‘reduced distances’, and ‘extended visual line of sight’ (EVLOS) have been permitted.
Compliance/Action to be Taken

2.1 This Safety Notice requires the following actions to be taken:

a) Battery firmware updates

i) Updating the SUA to the latest manufacturer's firmware should be completed using the "DJI Assistant 2" software. The software will identify the firmware version of every component and prompt the "update message" if any component is not with the latest version. This can also be identified if there is a "-" (dash symbol) next to the aircraft firmware version number.

ii) The TB50 and TB55 batteries need to be updated using DJI Assistant 2 and can only be updated in pairs. This means that if the user has 10 batteries, he/she will need to perform the update five times, plugging the batteries into the aircraft, and running DJI Assistant 2 every time.

iii) After any software or firmware updates, the aircraft must be flight tested in sterile conditions away from uninvolved third parties, to ensure it is working correctly. It is recommended that each pair of batteries is flight tested. This must be recorded in the operator's maintenance log book as applicable.

b) Provisional Suspension of Operations

i) In accordance with Air Navigation Order article 257 and 257(2)(c), operators of a DJI Matrice 200 are hereby directed not to fly or permit any flight that involves overflight of any persons at any height until further notice.

ii) In accordance with Air Navigation Order article 253, any element of a permission based on an Operational Safety Case (OSC), issued by the CAA to an SUA operator which permits the operation of a DJI Matrice 200 series SUA to be operated:

- within 50 metres of any persons;
- within 50 metres of any, vessel, vehicle or structure which is not under the control of the SUA Operator or remote pilot of the SUA;
- over or within 150 metres of an open air assembly of more than 1,000 persons; or
- using EVLOS

is provisionally suspended until further notice.

iii) These limitations will be subject to regular review. As soon as further updates are obtained from the manufacturer, and the CAA is satisfied that the current issues have been satisfactorily addressed, the CAA will issue a further update via the SkyWise alerts portal on the CAA website.

c) Emergency Services Operations

i) Due to the unique nature of emergency services operations, the privileges contained within General Exemption E 4506 (ORS4 No. 1233) may continue to be exercised whilst using the Matrice 200 series, provided that the potential risks highlighted in this Safety Notice have been considered within the decision to proceed and the overflight of uninvolved persons is minimised.
3 Queries

3.1 Any queries or requests for further guidance as a result of this communication should be addressed to the following e-mail address: uavenquiries@caa.co.uk, with the subject line ‘Safety Notice - DJI Matrice 200 Series In-Flight Power Failures’.

3.2 Anyone experiencing technical issues with the firmware update process should contact their DJI dealer immediately or DJI directly.

4 Cancellation

4.1 This Safety Notice will remain in force until further notice.