|  |  |
| --- | --- |
|  | **Pre-Flight Checklist** |
| Procedures to complete before each flight and/or flight session.  Tasks run in order left to right and top to bottom |

**Aircraft Information, Specifications and Limitations**

|  |  |  |  |
| --- | --- | --- | --- |
| Aircraft Make | DJI | Maximum Range | 100 m |
| Aircraft Model | Robomaster TT | Maximum Height | 30 m |
| Aircraft Identifier |  | Maximum Speed | 8 m/s (29 km/h) |
| Operating Temperature | 0 – 40oC | Maximum Flight Time | 13 mins (8.5 all acc) |
| Maximum Wind Speed | 8 m/s | Maximum Take Off Weight | 160 g |

**Before Leaving STEM**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Check NOTAM’s/No Fly Zones |  | Mission plan understood |  | Pack equipment |  |
| Equipment to take | | | | | |
| Aircraft |  | Battery bags and boxes |  | Warning signs |  |
| Batteries |  | Clipboards |  | Aviation Radio / iPad with flight apps |  |
| Controllers |  | Landing pads |  | Cones |  |
| Screen/iPad |  | Anemometer |  | Whistle |  |

**At the Flight Site**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Clipboards are distributed |  | Check wind speed against specs |  | Check temperature against specs |  |
| Check other weather (rain etc) |  | Set out signage at entry points |  | Site survey / obstacle / interference check |  |
| Prepare landing sites |  | Put out cones for flight zones |  |  |  |

**Immediately Before Flight**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Inspect aircraft for damage  Propellers, fuselage, motors, Visual positioning sensors, collision sensors |  | Ensure battery is fitted properly |  | Place aircraft on landing pad |  |
| Turn on controller |  | Turn on aircraft |  | Connect drone and controller to relevant flight app |  |
| Check radio/flight apps for approaching aircraft |  | Check immediate area for people |  |  |  |

**Take-Off**

You will be working in teams when flying the aircraft,

* one person will be the pilot and will stay close to the take off/landing area
* the other person will stay a safe distance from, and monitor the aircraft. They will have the stop sign and signal the pilot if a hazard arises.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Check the area is clear, stand no closer than 3 m to the aircraft |  | Announce “take off” |  | Get the aircraft to take off to approximately 3m height |  |
| Hover the aircraft for 10 seconds, monitor for behaviour and sound |  | Check controls are responsive  Climb, pitch, roll, yaw |  |  |  |

|  |  |
| --- | --- |
|  | **Post-Flight Checklist** |
| Procedures to complete at the end of each flight and/or flight session.  Tasks run in order left to right and top to bottom |

**Landing**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Check the landing area to check it is safe to land |  | Announce “landing” |  | Land the aircraft in the landing area |  |
| Turn off the aircraft |  | Turn off the controller |  | Remove the battery |  |
| Store the aircraft appropriately |  | Complete the flight log |  |  |  |

**Leaving the Flight Site**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Recover all gear from the flight zone |  | Pack the gear appropriately |  | Return to STEM |  |

**When Getting Back to STEM**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Put batteries and controllers on charge |  | Pack away and store equipment |  | Complete post mission tasks |  |

**Maintenance Tasks**

These tasks do not need to be completed each flight, however they will be updated when more thorough checks are done on the aircraft.

|  |  |  |
| --- | --- | --- |
| Flight apps last updated | Aircraft firmware last updated | Last mechanical and battery check |
| / / | / / | / / |

Mechanical, battery and safety check tasks

|  |  |  |  |
| --- | --- | --- | --- |
| Cleaning fuselage |  | Inspect propeller condition |  |
| Cleaning sensors |  | Inspect motor spin |  |
| Cleaning Camera |  | Check for battery leakage or bulging |  |
| Check for cracks |  | Hover test check aircraft stability |  |
| Check for loose or damaged wiring |  | Check charger condition |  |
| Check for loose screws |  |  |  |

If any of the checks fail then the aircraft must be repaired or taken out of service