The Falcon UAV is intended to be operated from 0'AGL to no greater than 400'AGL. The procedure for a typical Launch and Recovery is described below:

**Aircraft Launch:**

1. Physically inspect aircraft to ensure air worthiness.
2. Select an open area clear of immediate obstacles
3. Clear the area of any unnecessary/unauthorized personnel
4. Pilot in Command (PIC) and Observer complete the Falcon preflight checklist and enables Take Off Mode.
5. Pilot in Command (PIC) and Observer scan the area and sky to confirm take-off conditions are clear.
6. The Observer holds the Falcon by the bottom of the fuselage at the aircraft center of gravity with his arm extended and cocked back.
7. When the Observer is ready to launch he/she will state “READY”
8. The PIC will confirm that the Falcon is in preflight mode and that critical telemetry and communications are within limits.
9. Observer and PIC once again recheck the immediate area and sky
10. If clear for take-off, the PIC clearly announces "TAKEOFF" at which time the Observer will throw the Falcon forward.



1. Once the autopilot registers acceleration above the launch threshold the motor will be engaged and the autopilot will stabilize the Falcon while climbing to a preset takeoff altitude and takeoff waypoint at which point the Falcon will begin to loiter..
2. PIC will verify telemetry and communications are within limits and enter the desired flight mode.
3. PIC and Observer fly the mission.

During flight, both the observer and PIC scan the sky and note any aircraft, aerial obstacles or weather that could cause a safety hazard. PIC constantly scans telemetry data from the aircraft monitoring battery voltages, RF signal quality, altitude, attitude and GPS data.

**Aircraft Recovery:**

Typical recovery occurs at the location that the PIC and Observer are stationed.

1. The PIC and observer clear the area of any unnecessary people
2. PIC and observer discuss the approach and scan the area
3. PIC inputs GPS coordinates for the prelanding rally location and the desired landing point ensuring that the distance and altitude between those two waypoints meets the glide slope criteria of the Falcon.
4. The PIC clearly announces "LANDING" and selects the Land mode at the GCS
5. The Falcon will transit to the rally location and loiter as it descends to the approach altitude.
6. Once the Falcon has reached the transition altitude it will break from the loiter to the landing point while descending, maintaining airspeed and a level approach.
7. At 10ft AGL the Falcon will execute a flare which will reduce speed for the final descent to the surface.
8. After landing the PIC will ensure the Falcon is in Safe mode (disables the motor)
9. The Falcon is recovered and powered down.
10. The PIC and Observer will complete a postflight checklist and fill out mission/flight logs.

At this point the Falcon is either put away completing the mission or a new battery pack is installed and the same procedure is followed for take-off and continuation of the mission at hand.