

# **Object Following Drone Use Model**

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*Revision 1.1*

## **1. INTRODUCTION**

This is the Use Model for Object Following Drone project. This Use Model describes how Drone Unit could be operated.

## **2. HARDWARE AND EQUIPMENTS**

- Drone Unit
- Laptop

## **3. SETUP**

- The operation of this drone unit must be in an open field with minimum dimension 150ft by 100ft.
- Drone Unit, laptop and object/person always be on the same vector with Drone as starting and object/person is ending point.
- Front of the drone is facing the direction of moving.
- During operation, object/person has to be 5ft to 20ft with respect to the drone.
- If drone follows an operator/person, the laptop has to be either with the operator or in accessible place for controlling the drone.

## **4. OPERATION**

- Power on Drone (plug in drone battery)
- Communicate with Drone using laptop via Wi-Fi/Bluetooth.
- Once the communication is done, have an object or a person, that will be tracked, at 10ft away from drone.
- Input: Image of an object or person that will be tracked and the height of that object/person.
- Initialization – Drone will hover at input height and start tracking.
- Movement/Tracking – Object can only move in one direction. The direction of moving is the direction of drone facing in Setup section.
- Finish – Use laptop to stop Drone from tracking. Drone now will return to its starting point.
- Lost tracking – Drone hovers and looks for an object. If object doesn't appear within 10 seconds, Drone returns to starting point. If object appears, Drone resumes to operation.

## 5. USE MODEL DIAGRAM

