



**SRKR**  
ENGINEERING COLLEGE  
AUTONOMOUS

# **A DRONE BASED AERIAL PESTICIDE SPRAYING SYSTEM**

**UNDER THE SUPERVISION OF :**

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**BATCH NUMBER : B13**

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# OBJECTIVE OF THE PROJECT WORK

- Drone has capacity to visit the location Automatically once the plan is fixed.
- Connects with satellite to keep track of drone.
- Monitors every second to record the locations visited by drone.
- Has Multiple Functions which helps to sustain in multiple locations.
- Some functions include RTL, AUTO, ALT HLD, STB, AUTO TUNE, Etc.

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# INTRODUCTION

- In the view of farming activities, we see many people(farmers) spending their time for spraying pesticides in their fields, spraying manually to cover the entire area of farm.
- some times when farmers are spraying poisonous spray, their eyes are getting affected and their health is being damaged and also requires lot of manual work and labor.
- This drone comes with a special function in such a way that, it has a capability of spraying.
- This helps to reduce Human Effort and save lot of time and money. This Drone also helps to spray in all the Locations, where human can't go and spray.



## EXISTING SYSTEM

- In the existing system, the activity of spraying pesticides is an effort by a person and is done by a spray bag on the farmer and spraying is done non-uniformly using such manual methods wherein it takes up a lot of time.
- This conventional method can also affect health due to contamination by contact with the pesticides.



## PROPOSED SYSTEM

- In the proposed system a drone quadcopter is used to automate the above process with minimal interaction with humans and uses IOT to perform the activity.
- A remote using radio waves is used for sending and receiving signals in a wireless transmission mode (radio controller), it has features of live tracking using GPS module and the facility to make a plan of the travel of the drone, it can also be done in autopilot mode which doesn't require radio controller to go and return.
- It provides a much safer, time saving and efficient way for performing this activity.

# MATERIALS USED

1. PROPELLERS \*4



2. 1000KV BLDC MOTORS \* 4



3. ESC 30 A \* 4



4. F450 FRAME



5. FEMALE TO FEMALE JUMPERS



6. XT-60  
FEMALE TO MALE CONNECTOR



7. APM 2.8



8. GPS COMPASS



9. 4200mah 4S BATTERY





10. 6 CHANNEL TRANSMITTER  
AND RECIEVER



11. 6v DC WATER MOTOR



12. WATER PIPES

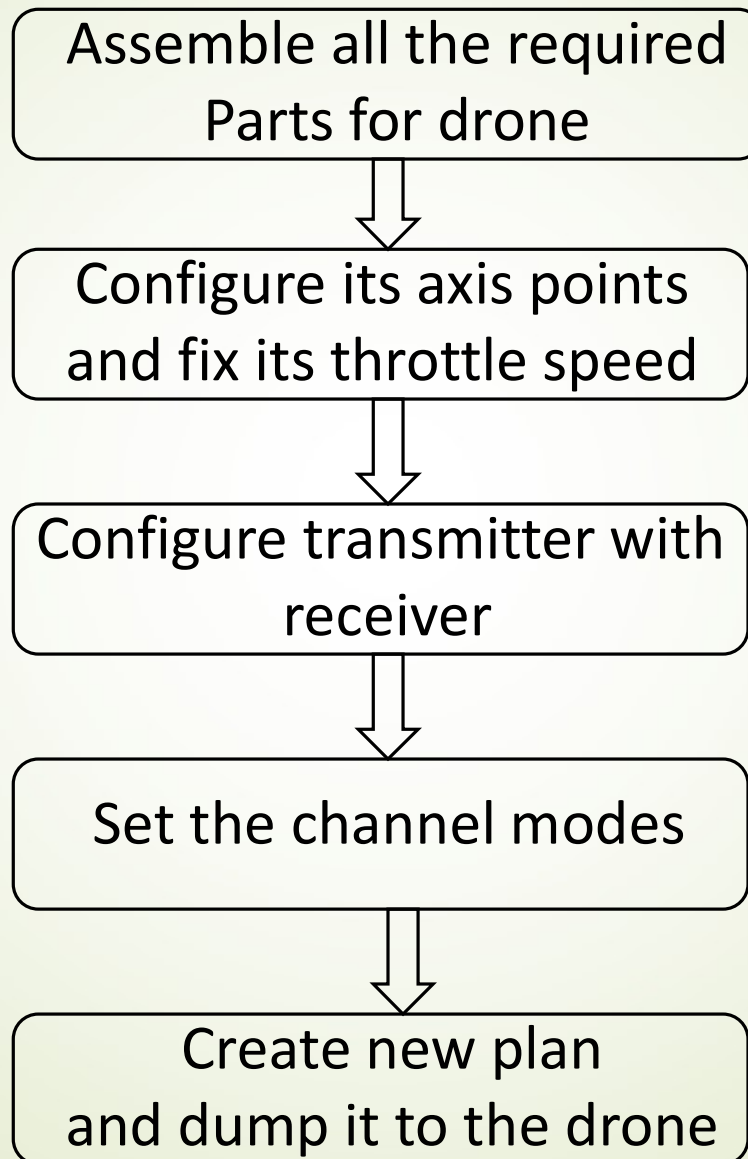


13. MINI WATER STORAGE TANK

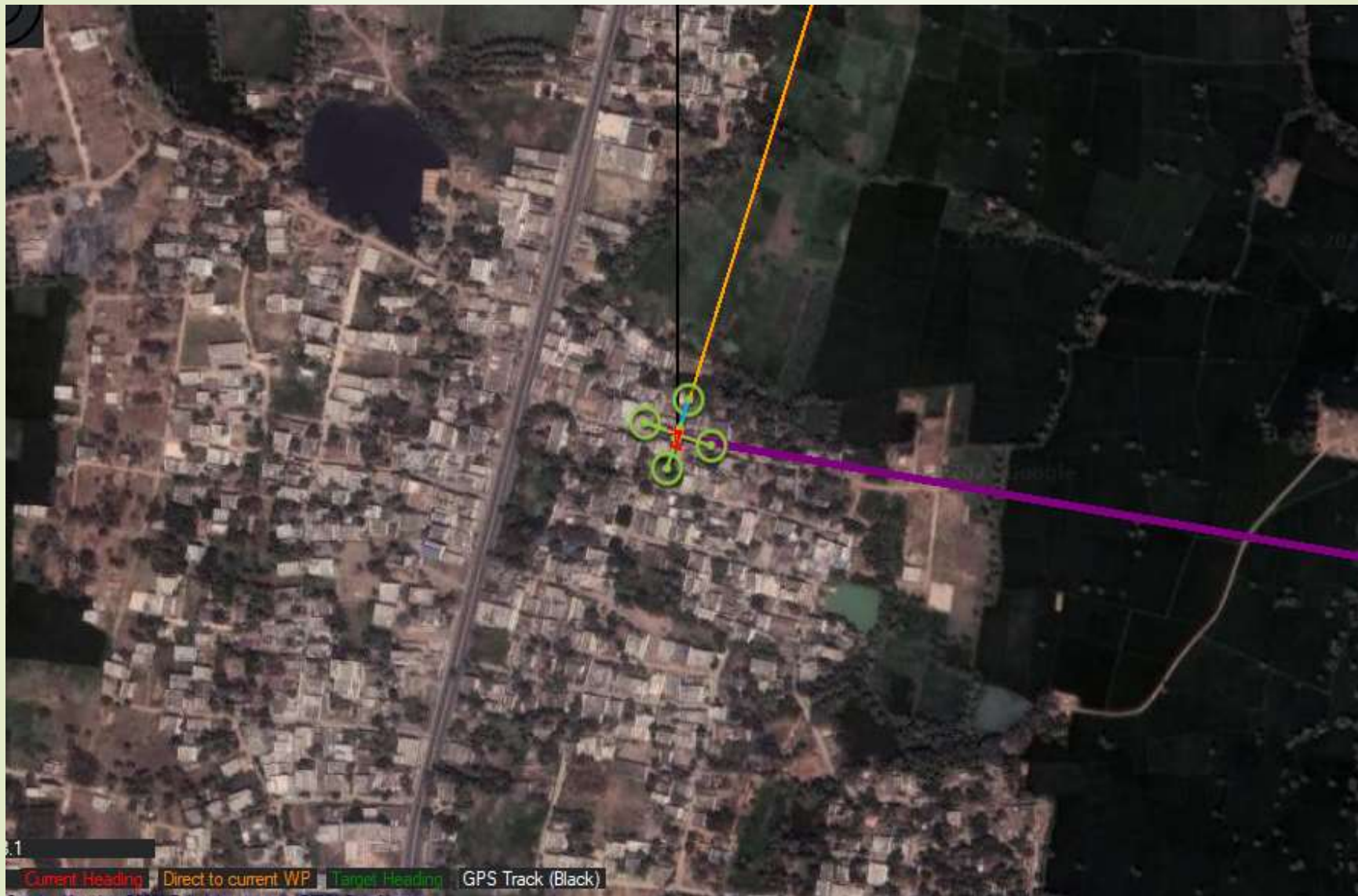
# **SOFTWARE REQUIREMENTS**

1. Windows 10
2. Mission Planner Application

# METHODOLOGY



# GPS TRACKING VIEW OF DRONE



# SETTING PLAN TO LAUNCH DRONE AND SPRAY AUTOMATICALLY



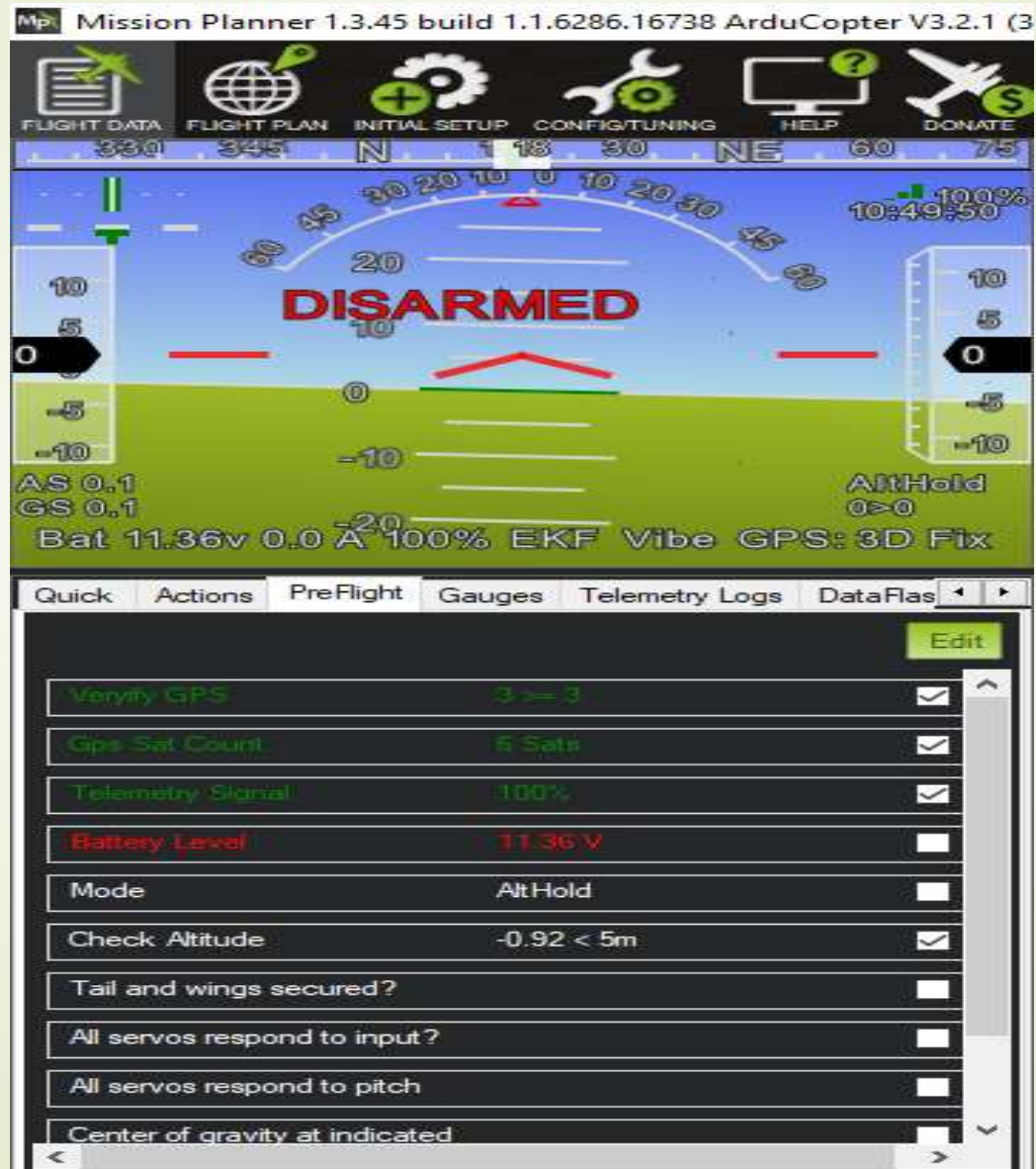
## Waypoints

WP Radius 2 Loiter Radius 45 Default Alt 100 ☐ Verify Height  Alt Warn 0 ☐ Spline

	Command	Del			Lat	Long	Alt	Delete	Up	Down	Grad %	Angle	Dist	AZ	
9	WAYPOINT ▾	0	0	0	0	16.7970536	81.5259844	100	X			0.0	0.0	30.9	358
▶ 10	WAYPOINT ▾	0	0	0	0	16.7971101	81.5254909	100	X			0.0	0.0	52.9	277



# DRONE STATUS MONITORING





# Thank You