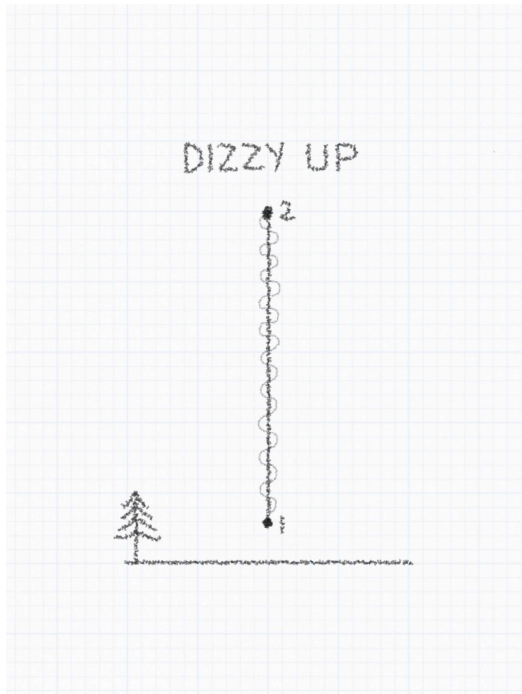




Bode Aviation
sUAS Maneuvers
Edition 1.0

Dizzy Up

- Takeoff and climb to an altitude of 5 feet.
- Climb straight up while rotating clockwise to an altitude of 100 feet.
- Descend straight down while rotating counterclockwise to an altitude of 5 feet.
- Land at the starting point.
- Standards:
 - Maintain a constant climbing turn or descending turn.
 - Land within 3 feet of the starting point.

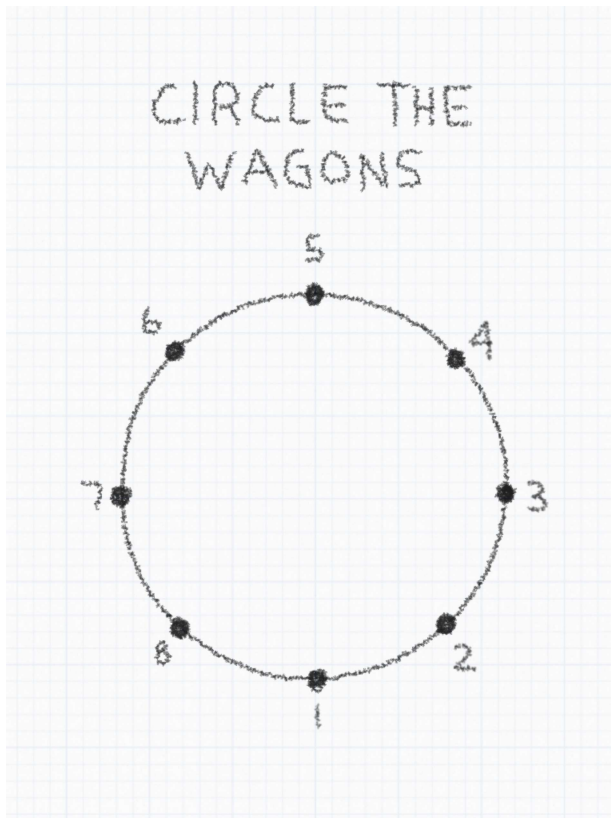


Turn around a Point

- Take off and climb to an altitude of 5 feet.
- Fly towards a reference point until you are 5 feet away from the reference point.
- Fly a 360-degree circle around the point while maintaining an altitude of 5 feet, a constant radius of 5 feet, and the reference point centered up in your camera.
- Once the circle is complete, return to your starting point and land.
- Standards:
 - Maintain altitude +/- 3 feet.
 - Maintain radius +/- 3 feet.
 - Maintain a constant sight picture with the camera.
 - Land within 3 feet of the starting point.

Circle the Wagons

- Take off and climb to an altitude of 5 feet.
- Fly towards a reference point until you are 5 feet away from the reference point.
- While maintaining forward flight, fly a 360-degree circle around the point while maintaining an altitude of 5 feet and a constant radius of 5 feet.
- While maintaining a constant heading, fly a second 360-degree circle around the point while maintaining an altitude of 5 feet and a constant radius of 5 feet.
- Once the second circle is complete, return to your starting point and land.
- Standards:
 - Maintain altitude ± 3 feet.
 - Maintain radius ± 3 feet.
 - Maintain a constant heading ± 10 degrees.
 - Land within 3 feet of the starting point.

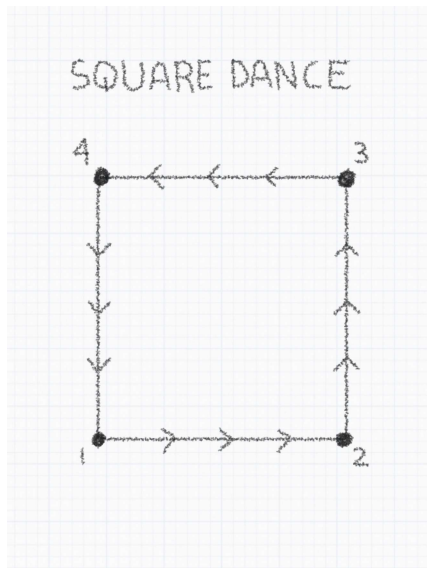


Rectangular Course

- Mark four points of a large square on the ground with roughly 10-20 feet on each side and roughly parallel and perpendicular to the wind.
- Takeoff and climb to an altitude of 10 feet.
- Fly to a point on the windward side and fly a straight line to the point that is downwind from your starting point.
- Make a 90 degree turn over that point and fly crosswind to the next point.
- Make a 90 degree turn over that point and fly upwind to the third point.
- Make a final 90 degree turn over that point and fly crosswind to the final point.
- Return to your starting point and land.
- Standards:
 - Maintain altitude +/- 3 feet.
 - Maintain a constant heading +/- 10 degrees.
 - Land within 3 feet of the starting point.

Square Dance

- Mark four points of a large square on the ground with roughly 10-20 feet on each side and roughly parallel and perpendicular to the wind.
- Takeoff and climb to an altitude of 10 feet.
- While maintaining a constant heading, fly to a point on the windward side and fly a straight line to the point that is downwind from your starting point, then crosswind to the next point, then upwind to the third, and finally crosswind to the final point.
- Standards:
 - Maintain altitude ± 3 feet.
 - Maintain a constant heading ± 10 degrees.
 - Land within 3 feet of the starting point.

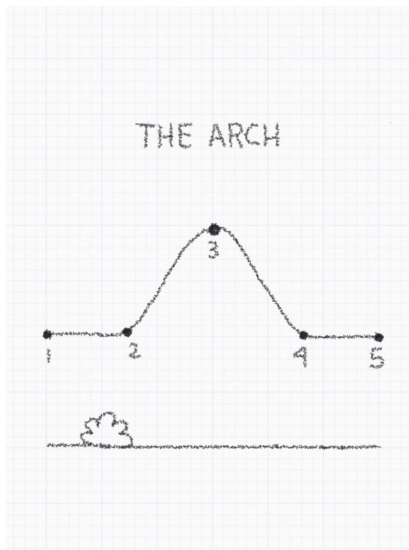


T-Course

- Put the sUAS into atti mode or disable the GPS in some other way.
- Take off and climb to approximately 5 feet.
- Hover facing away from you for approximately fifteen seconds.
- Fly forward 10 feet.
- Turn right 90 degrees and fly 5 feet.
- Turn 180 degrees and fly forward 10 feet (the UAV traces the top of the T from right to left).
- Turn 180 degrees and fly 5 feet (the UAV traces the top left of the T from left to right, back to the middle).
- Turn 90 degrees and fly back to the take-off point.
- Hover facing you for fifteen seconds.
- Land on the take-off point.
- Standards:
 - Maintain altitude +/- 3 feet.
 - Maintain a constant heading +/- 10 degrees.
 - Land within 3 feet of the starting point.
 - Must be completed within 2 minutes.
 - Visual Line of Sight Only (No FPV).

The Arch

- Takeoff and climb to an altitude of about 10 feet.
- Fly forward and begin a climb to an altitude of 50 feet.
- At an altitude of 50 feet, continue flying forward begin a descent back to 10 feet.
- At an altitude of 10 feet, begin flying backward and climb to an altitude of 50 feet.
- Once reaching 50 feet, continue flying backward and descend back to an altitude of 10 feet.
- Return to the takeoff location and land.
- Standards:
 - The climbs and descents should be roughly symmetrical.
 - Maintain a constant heading +/- 10 degrees.
 - Land within 3 feet of the starting point.



Boomerang

- Takeoff and climb to an altitude of 10 feet, in front of you, and facing away.
- Fly a course 45 degrees to your right while climbing.
- Once the sUA is approximately 30 feet away from you, begin a climbing arc to the left.
- As the sUA passes directly in front of you, begin descending on the arc.
- Once the sUA is 45 degrees to your left, fly straight to the starting point while continuing the descent back to 10 feet.
- Standards:
 - In the straight portions, maintain heading +/- 10 degrees.
 - In the turn, keep a constant radius.
 - Altitude should be constantly changing.
 - The two sides of the maneuver should be symmetrical.
 - Land within 3 feet of the starting point.

