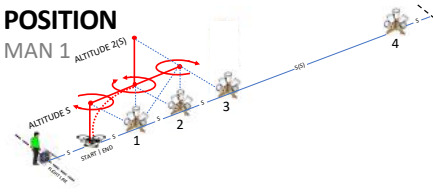
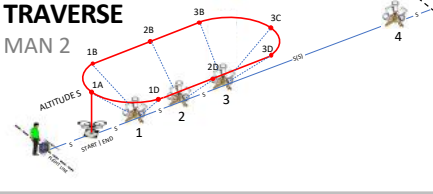
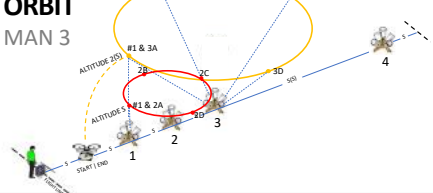
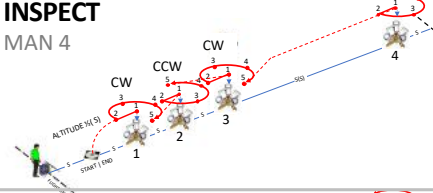
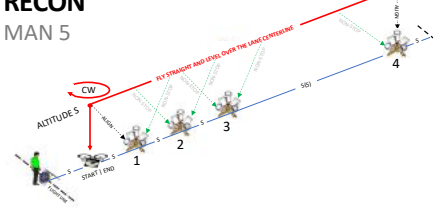


M LEVEL 2 | OPEN LANE
MANEUVERING ONLY

Perform 5 different flight paths around the omni bucket stands. Each flight path includes as sequence of alignments with one or more buckets. Capture a SINGLE IMAGE of the inscribed ring inside each bucket and land accurately.

- Score ALIGNMENT POINTS after trial from images with UNBROKEN RINGS (5 pts) or BROKEN RINGS (1 pt).
- Land CENTERED (5 pts) with the aircraft center inside the designated 60 cm (24 inch) diameter circle, or OFFSET (1 pt) with at least one propeller motor inside the circle.
- Start timer at launch and end after the last task is completed. Trial time limits are typically 5 minutes each (25 minutes to complete all 5 tests) although organizations may set their own trial time limits and passing scores.
- Extreme deviations from the intended flight path, or contact with any object, ends the trial to ensure safety.

<p>POSITION MAN 1</p> 	<ul style="list-style-type: none"> • Demonstrate basic flight maneuvers between designated hover positions, orientations, and altitudes along the lane centerline at altitudes 5 and 2(S). • Climb, descend, yaw, pitch, and roll to simultaneously align with downward buckets to check position then forward buckets to check altitude. • Complete 10 positions along the lane centerline with 18 alignments and 1 accurate landing (counts double) to score up to 100 points.
<p>TRAVERSE MAN 2</p> 	<ul style="list-style-type: none"> • Fly sideways parallel to objects while looking forward to identify features as if along a road, truck, bus, building, fence, tree line, etc. • Maintain altitude 5 flying leftward and rightward around the first three bucket stands to align with all the designated buckets. • Complete 1 lap leftward then 1 lap rightward with 18 alignments and 2 accurate landings to score up to 100 points.
<p>ORBIT MAN 3</p> 	<ul style="list-style-type: none"> • Fly circular orbits around designated bucket stands while looking inward to identify features on all four sides. Fly altitude 2(S) leftward and rightward around stand #3 (white), then altitude 5 leftward and rightward around stand #2 (black). • Each orbit has 5 bucket alignments starting with 1 downward radius check then 4 altitude checks around the orbit looking inward at the angled buckets. • Complete 4 orbits with 20 alignments to score up to 100 points.
<p>INSPECT MAN 4</p> 	<ul style="list-style-type: none"> • Fly in closer proximity around objects to inspect detailed features on top and all four sides of the bucket stands. • Maintain altitude 1/2(S) starting on top of each bucket stand with alternating leftward and rightward rotations to inspect all four sides of each bucket stand. • Complete all 4 stands with 20 alignments to score up to 100 points.
<p>RECON MAN 5</p> 	<ul style="list-style-type: none"> • Fly straight and level over the centerline to establish a stable hover over an object down range to perform reconnaissance tasks. • Maintain altitude 5 to align with buckets and the landing at each end of the lane. Reconnaissance tasks are performed every 8(S) over a total distance of 80(S). • Complete 5 laps (or 10 lane lengths) with 20 alignments to score up to 100 points.

M **LEVEL 2 | OPEN LANE**
MANEUVERING ONLY



Pilot LAST Name _____
 Pilot FIRST Name _____
 Pilot Organization _____
 Drone Make _____
 Drone Model _____
 Facility Location _____
 Date (YYYY/MM/DD) _____ Team #: _____

PROCTOR NAME _____

BUCKET DIAM.		LANE SPACING (S)			VISIBILITY		WIND		PILOT VIEW		TIME LIMIT		
4 IN (10 CM)	8 IN (20 CM)	5 FT (1.5 M)	10 FT (3 M)	20 FT (6 M)	LIGHTED 300+ LUX	DARK < 1 LUX	AVERAGE MPH	GUSTS MPH	LINE OF SIGHT FACINE LANE OPTIONAL V.O.	INTERFACE ONLY BACK TO LANE MANDATORY V.O.	5 MIN	10 MIN	___ MIN
(CIRCLE ONE)		(CIRCLE ONE)			(CIRCLE ONE)		(FILL IN)		(CIRCLE ONE)		(CIRCLE ONE OR FILL IN)		

ALIGNMENT SCORE: Circle points for images with UNBROKEN RINGS (5 pts) or BROKEN RINGS (1 pt). Draw a line through all incomplete.

POSITION (MAN 1)	TRAVERSE (MAN 2)	ORBIT (MAN 3)	INSPECT (MAN 4)	RECON (MAN 5)
18 IMAGES TO CAPTURE 1 Landing Scored Twice	18 IMAGES TO CAPTURE 2 Landings Scored Separately	20 IMAGES TO CAPTURE No Landing	20 IMAGES TO CAPTURE No Landing	20 IMAGES TO CAPTURE No Landing

START TIMER	ALIGNMENT	
LAUNCH TO ALT S	BUCKET SEQUENCE	IMAGE POINTS
	1	5 1
	2A	5 1
YAW L-360	1	5 1
	2A	5 1
YAW R-360	1	5 1
	2A	5 1
CLIMB	1	5 1
	3A	5 1
DESCEND	1	5 1
	2A	5 1
FORWARD	2	5 1
	3A	5 1
BACKWARD	1	5 1
	2A	5 1
FORWARD & YAW L-180	UPSIDE DOWN 7	5 1
	1C	5 1
FORWARD & YAW R-180	L	5 1
	1A	5 1
LAND	○	5 1
	COUNTS DOUBLE	5 1
END TIMER	/100	
	ELAPSED TIME	

PASS FAIL
(CIRCLE ONE)

START TIMER	ALIGNMENT	
LAUNCH TO ALT S	BUCKET SEQUENCE	IMAGE POINTS
	1A	5 1
	1B	5 1
	2B	5 1
	3B	5 1
	3C	5 1
	3D	5 1
	2D	5 1
	1D	5 1
	1A	5 1
	○	5 1
LAUNCH TO ALT S	1A	5 1
	1D	5 1
	2D	5 1
	3D	5 1
	3C	5 1
	3B	5 1
	3A	5 1
	2B	5 1
	1B	5 1
	1A	5 1
	○	5 1
LAND	○	5 1
END TIMER	/100	
	ELAPSED TIME	

PASS FAIL
(CIRCLE ONE)

START TIMER	ALIGNMENT	
LAUNCH TO ALT 2(S)	BUCKET SEQUENCE	IMAGE POINTS
	1	5 1
	3A	5 1
	3B	5 1
	3C	5 1
	3D	5 1
REVERSE	1	5 1
	3A	5 1
	3D	5 1
	3C	5 1
	3B	5 1
DESCEND TO ALT S	1	5 1
	2A	5 1
	2B	5 1
	2C	5 1
	2D	5 1
REVERSE	1	5 1
	2A	5 1
	2D	5 1
	2C	5 1
	2B	5 1
END TIMER	/100	
	ELAPSED TIME	

PASS FAIL
(CIRCLE ONE)

START TIMER	ALIGNMENT	
LAUNCH TO ALT 1/2(S)	BUCKET SEQUENCE	IMAGE POINTS
	1	5 1
	1A	5 1
	1B	5 1
	1C	5 1
	1D	5 1
NEXT STAND	2	5 1
	2A	5 1
	2D	5 1
	2C	5 1
	2B	5 1
NEXT STAND	3	5 1
	3A	5 1
	3B	5 1
	3C	5 1
	3D	5 1
NEXT STAND	4	5 1
	4A	5 1
	4D	5 1
	4C	5 1
	4B	5 1
END TIMER	/100	
	ELAPSED TIME	

PASS FAIL
(CIRCLE ONE)

START TIMER	ALIGNMENT	
LAUNCH TO ALT S	BUCKET SEQUENCE	IMAGE POINTS
	4	5 1
	UPSIDE DOWN 7	5 1
UP RANGE	L	5 1
	1A	5 1
LAP 2	4	5 1
	UPSIDE DOWN 7	5 1
UP RANGE	L	5 1
	1A	5 1
LAP 3	4	5 1
	UPSIDE DOWN 7	5 1
UP RANGE	L	5 1
	1A	5 1
LAP 4	4	5 1
	UPSIDE DOWN 7	5 1
UP RANGE	L	5 1
	1A	5 1
LAP 5	4	5 1
	UPSIDE DOWN 7	5 1
UP RANGE	L	5 1
	1A	5 1
END TIMER	/100	
	ELAPSED TIME	

PASS FAIL
(CIRCLE ONE)