



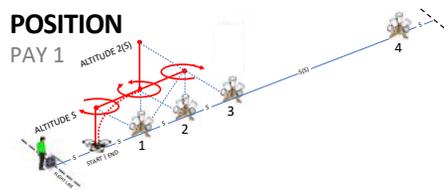
LEVEL 3 | OPEN LANE PAYLOAD FUNCTIONALITY

Perform 5 different flight paths around the omni bucket stands. Each flight path includes a sequence of alignments with one or more buckets. While aligned with each bucket, control camera zoom and exposure to capture a SINGLE IMAGE of the inscribed ring and IDENTIFY TARGETS inside each bucket.

- Score ALIGNMENT POINTS after the trial from images with UNBROKEN RINGS (5 pts) or BROKEN RINGS (1 pt).
- Score ACUITY POINTS by calling out the 5 increasingly small VISUAL ACUITY TARGET GAPS (1 pt each).
- 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.

POSITION

PAY 1

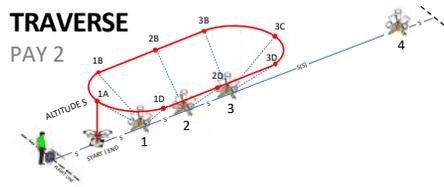


- Demonstrate basic flight maneuvers between designated hover positions, orientations, and altitudes along the lane centerline at altitudes 5 and 2(S).
- Climb, descend, yaw, pitch, and roll to simultaneously align with downward buckets to check position then forward buckets to check altitude.

• Complete 10 positions along the lane centerline with 18 alignments and 1 accurate landing (counts double) to score up to 100 points.

TRAVERSE

PAY 2

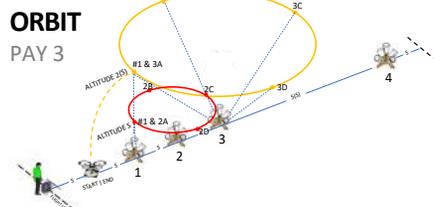


- Fly sideways parallel to objects while looking forward to identify features as if along a road, truck, bus, building, fence, tree line, etc.
- Maintain altitude 5 flying leftward and rightward around the first three bucket stands to align with all the designated buckets.

• Complete 1 lap leftward then 1 lap rightward with 18 alignments and 2 accurate landings to score up to 100 points.

ORBIT

PAY 3

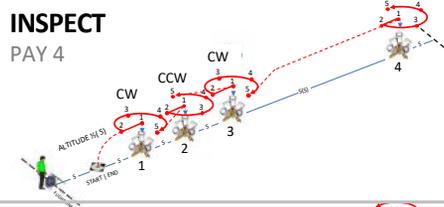


- Fly circular orbits around designated bucket stands while looking inward to identify features on all four sides. Fly altitude 2(S) leftward and rightward around stand #3 (white), then altitude 5 leftward and rightward around stand #2 (black).
- Each orbit has 5 bucket alignments starting with 1 downward 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.

INSPECT

PAY 4

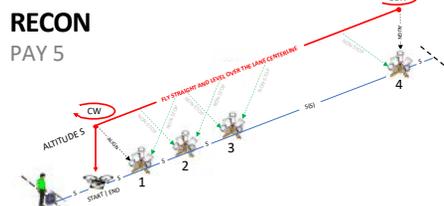


- Fly in closer proximity around objects to inspect detailed features on top and all four sides of the bucket stands.
- Maintain altitude 1/2(S) starting on top of each bucket stand with alternating leftward and rightward rotations to inspect all four sides of each bucket stand.

• Complete all 4 stands with 20 alignments to score up to 100 points.

RECON

PAY 5



- 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.

LEVEL 3 | OPEN LANE

PAYLOAD FUNCTIONALITY



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.
ACUITY SCORE: Circle correctly identified GAP DIRECTIONS in the answer key (1 point each).

POSITION (PAY 1)				TRAVERSE (PAY 2)				ORBIT (PAY 3)				INSPECT (PAY 4)				RECON (PAY 5)			
20 IMAGES TO CAPTURE • 18 ALIGNMENTS • 2 PERCH TARGETS				20 IMAGES TO CAPTURE • 18 ALIGNMENTS • 2 PERCH TARGETS				20 IMAGES TO CAPTURE • 20 ALIGNMENTS • NO LANDING				20 IMAGES TO CAPTURE • 20 ALIGNMENTS • NO LANDING				20 IMAGES TO CAPTURE • 20 ALIGNMENTS • NO LANDING			
ALIGNMENT		ACUITY		ALIGNMENT		ACUITY		ALIGNMENT		ACUITY		ALIGNMENT		ACUITY		ALIGNMENT		ACUITY	
ALIGN BUCKET	IMAGE POINTS	CORRECT GAPS (1 POINT EACH)		ALIGN BUCKET	IMAGE POINTS	CORRECT GAPS (1 POINT EACH)		ALIGN BUCKET	IMAGE POINTS	CORRECT GAPS (1 POINT EACH)		ALIGN BUCKET	IMAGE POINTS	CORRECT GAPS (1 POINT EACH)		ALIGN BUCKET	IMAGE POINTS	CORRECT GAPS (1 POINT EACH)	
HOVER	1	5	1	T	BL	R	BR	L											
	2A	5	1	L	BR	T	TL	R											
YAW L&R	1	5	1	T	BL	R	BR	L											
	2A	5	1	L	BR	T	TL	R											
YAW R&L	1	5	1	T	BL	R	BR	L											
	2A	5	1	L	BR	T	TL	R											
CLIMB	1	5	1	T	BL	R	BR	L											
	3A	5	1	BR	T	TL	R	BL											
DESCEND	1	5	1	T	BL	R	BR	L											
	2A	5	1	L	BR	T	TL	R											
FORWARD	2	5	1	BL	T	BR	R	TL											
	3A	5	1	BR	T	TL	R	BL											
BACKWARD	1	5	1	T	BL	R	BR	L											
	2A	5	1	L	BR	T	TL	R											
FWD/L&R	2	5	1	TR	B	TL	L	BR											
	1C	5	1	BR	R	TL	L	BR											
FWD/R&L	L	5	1	B	TR	L	BL	T											
	1A	5	1	TR	B	TR	L	BR											
LAND	P1	5	1	BL	R	TL	L	BL											
	P2	5	1	L	BR	T	TL	B											
/100				/100				/100				/100				/100			
ELAPSED TIME (MM : SS)				ELAPSED TIME (MM : SS)				ELAPSED TIME (MM : SS)				ELAPSED TIME (MM : SS)				ELAPSED TIME (MM : SS)			