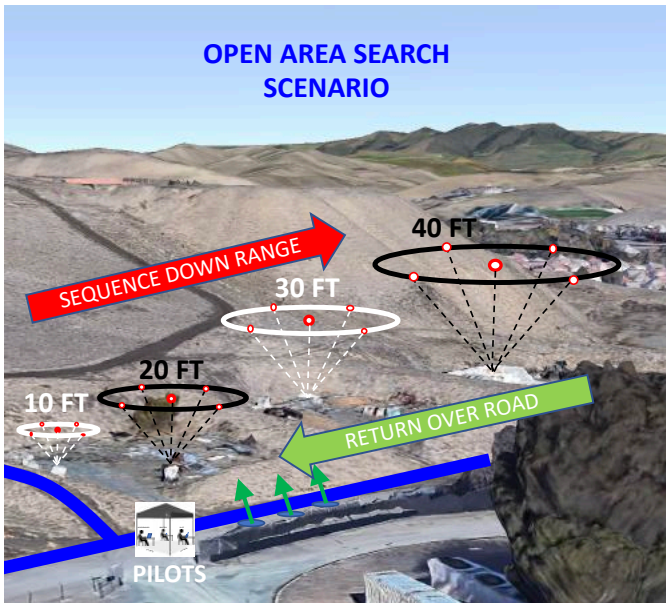
LEVEL 3 | OPEN AREA
SCORABLE SCENARIOS

Perform the designated flight paths around objects with 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 or in view nearby. Identify other objects of interest within the scenario at the same time.

- 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.

Open Area Search Scenarios

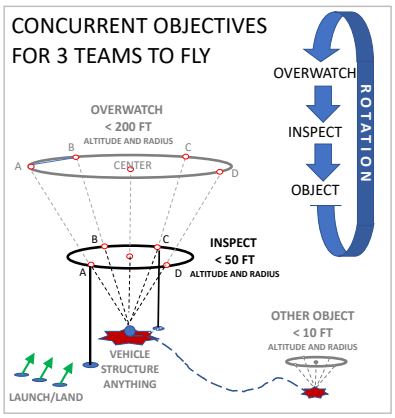
Day and Night Trials

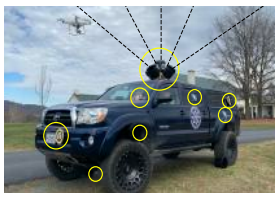


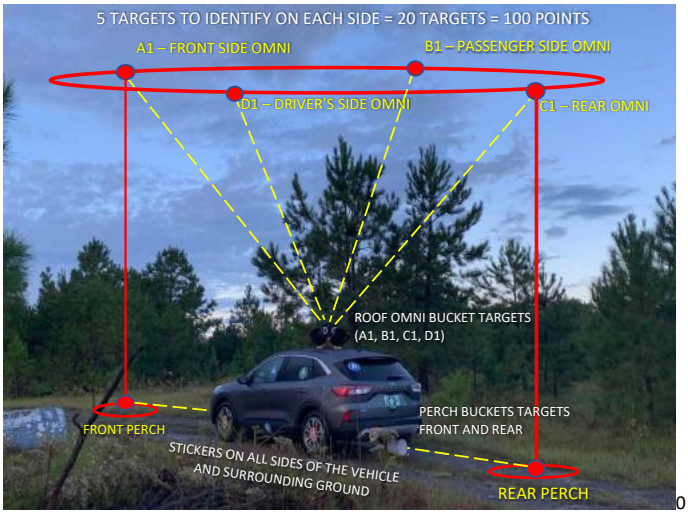
- Teams concurrently fly separate objectives set up at safe distances and/or altitudes apart (with a clearly designated and safe return path).
- Each pilot flies for 15 minutes across 3 different objectives for 5 minutes each. Teams move as necessary to maintain sight lines and communication.
- Scenarios restart with a different rotation of Pilot, Proctor, and VO.

Open Vehicle Identification Scenarios

Day and Night Trials







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Test Methods for Evaluating Aerial Drones
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Science and Technology

VERSION 2023A

LEVEL 3 | OPEN AREA
SCORABLE SCENARIOS

Pilot LAST Name _____

Pilot FIRST Name _____

Pilot Organization _____

Drone Make _____

Drone Model _____

Facility Location _____

Date (YYYY/MM/DD) _____ Team #: _____

PROCTOR NAME _____

BUCKET DIAMETER	VISIBILITY	WIND	PILOT VIEW	TIME LIMIT
4 IN (10 CM) / 8 IN (20 CM)	LIGHTED 300+ LUX / DIM 1-300 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)	(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 pt each).

OPEN SCENARIO | SEARCH		ALIGNMENT	ACUITY
START TIMER	ALIGN BUCKET	IMAGE POINTS	CORRECT GAPS (1 POINT EACH)
1 HOVER OVER STAND #1 AT CHOSEN ALTITUDE	STAND #1 1	5 1	T BL R BR L
2 PITCH BACKWARD	1A	5 1	TR B TR L BR
3 ORBIT LEFTWARD 90°	1B	5 1	R TL T BL B
4 ORBIT LEFTWARD 90°	1C	5 1	BR R TL L BR
5 ORBIT LEFTWARD 90°	1D	5 1	B TL R BL T
6 HOVER OVER STAND #2 AT CHOSEN ALTITUDE	STAND #2 2	5 1	BL T BR R TL
7 PITCH BACKWARD	2A	5 1	L BR T TL R
8 ORBIT RIGHTWARD 90°	2D	5 1	TR B TL B BL
9 ORBIT RIGHTWARD 90°	2C	5 1	T BL R TL B
10 ORBIT RIGHTWARD 90°	2B	5 1	TL R TR L BR
11 HOVER OVER STAND #3 AT CHOSEN ALTITUDE	STAND #3 3	5 1	R TL B BL R
12 PITCH BACKWARD	3A	5 1	BR T TL R BL
13 ORBIT LEFTWARD 90°	3B	5 1	B TR R BL T
14 ORBIT LEFTWARD 90°	3C	5 1	BL R BL T BR
15 ORBIT LEFTWARD 90°	3D	5 1	L TL R BR T
16 HOVER OVER STAND #4 AT CHOSEN ALTITUDE	STAND #4 4	5 1	TL B TR R BR
17 PITCH BACKWARD	4A	5 1	T BL B TR L
18 ORBIT RIGHTWARD 90°	4D	5 1	BR B TL B TR
19 ORBIT RIGHTWARD 90°	4C	5 1	R BL T TR B
20 ORBIT RIGHTWARD 90°	4B	5 1	TR L BL R TL
STOP TIMER		/100	/100
ELAPSED TIME (MM : SS)		PASS | FAIL (CIRCLE ONE)	PASS | FAIL (CIRCLE ONE)

OPEN SCENARIO | VEHICLE			ALIGNMENT	ACUITY
START TIMER		ALIGN BUCKET	IMAGE POINTS	CORRECT GAPS (1 POINT EACH)
ALIGN OVER OMNI BUCKET – START TIMER		#4 TOP TARGET:		
1 A1 - FRONT SIDE - ROOFTOP OMNI BUCKET	FRONT	A	5 1	T BL B TR L
2 A2 - FRONT SIDE - WINDSHIELD CENTER		A2	5 1	TR B TR L BR
3 A3 - FRONT SIDE - VIN #		A3	5 1	R TL T BL B
4 A4 - FRONT SIDE - LICENSE PLATE		A4	5 1	BR R TL L BR
5 A5 - FRONT SIDE - PERCH UNDERBODY BUCKET		A5	5 1	B TL R BL T
6 B1 - PASSENGER SIDE - ROOFTOP OMNI BUCKET	PASSENGER	B	5 1	TR L BL R TL
7 B2 - PASSENGER SIDE - FRONT WINDOW		B2	5 1	L BR T TL R
8 B3 - PASSENGER SIDE - REAR WINDOW		B3	5 1	TL R TR L BR
9 B4 - PASSENGER SIDE - EXTERIOR FEATURE		B4	5 1	T BL R TL B
10 B5 - PASSENGER SIDE - SURROUNDING GROUND		B5	5 1	TR B TL B BL
11 C1 - REAR SIDE - ROOFTOP OMNI BUCKET	REAR	C	5 1	R BL T TR B
12 C2 - REAR SIDE - WINDOW CENTER		C2	5 1	BR T TL R BL
13 C3 - LICENSE PLATE		C3	5 1	B TR R BL T
14 C4 - EXTERIOR FEATURE		C4	5 1	BL R BL T BR
15 C5 - PERCH UNDERBODY BUCKET		C5	5 1	L TL R BR T
16 D1 - DRIVER SIDE - ROOFTOP OMNI BUCKET	DRIVER	D	5 1	BR B TL B TR
17 D2 - DRIVER SIDE - FRONT WINDOW		D2	5 1	T BL B TR L
18 D3 - DRIVER SIDE - REAR WINDOW		D3	5 1	TR L BL R TL
19 D4 - EXTERIOR FEATURE		D4	5 1	R BL T TR B
20 D5 - SURROUNDING GROUND OBJECT		D5	5 1	BR B TL B TR
STOP TIMER			/100	/100
ELAPSED TIME (MM : SS)			PASS | FAIL (CIRCLE ONE)	PASS | FAIL (CIRCLE ONE)