

The Drone Competition Event challenges teams to demonstrate proficiency in precision drone operations and Search & Rescue (SAR) tactics.

The Search and Rescue Drone Event is designed to provide students with a structured, law-enforcement–based application of drone technology for locating missing persons and assessing emergency situations. This event emphasizes professionalism, accurate decision-making, and safe drone operation within realistic search-and-rescue scenarios.

Entry Requirements

- Teams must be composed of 2 members.
- Chapters can only register 2 teams to compete.
- **FAA Trust Certification** : Both members of the team must have their FAA Trust Certification. Certification Link: <https://trust.pilotinstitute.com/>

Materials

Competitors can/should provide the following materials. Competitors are only permitted to bring in the below materials to the competition. TPSA does not provide the below materials.

Competitor Provided Materials

- **Photo Identification (Must be presented at check-in)**
- **Proof of FAA TRUST Certification**
- **Approved Drone Equipment:** Small Unmanned Aircraft System (sUAS) with functional camera
Controller with screen/tablet for live feed (if applicable)
Extra batteries & charging equipment
- **Safety Equipment:** High-visibility vest (for visual observer)
- **Logbook or Notepad (For recording search & rescue data)**
- **Drones must comply with FAA regulations and event safety standards.**
- **Blank SD Card:** A blank SD card that is compatible with your drone.

Procedures and Timeline

- **Check In (10 min Time Limit):** Teams must check in at their designated time. Late arrivals (beyond 10 minutes) will be marked as no-shows and disqualified
- **Pre Event Briefing (5 min Time Limit):** Competitors will be directed to the event area. The event moderator will provide a detailed briefing on rules, procedures, and expectations.
- **Scenario Briefing (5 min Time Limit):** The judge presents a detailed briefing of the scenario. The judge will read directly from the hard copy scenario document.
- **Search & Rescue (SAR) Scenario (20 min Time Limit)**
 1. The scenario will be 20 minutes total. 2 minutes for planning this includes preflight safety checks, 18 minutes for execution.
 2. The team must declare the search technique after the judge reads the scenario brief
 3. The drone operator will call "props hot" and the moderator will start the time.
 4. The mission ends when competitors locate and report the subject's location accurately. The Drone Operator will communicate with the ground officer "actor" via radio (provide by TPSA) to direct them to the location of the "target" Need to use landmarks and N,E,S,W directional communication. . (Visual confirmation from drone's display on controller or phone required by the judge).
 5. Within the scenario, the 'subject' may be portrayed by a real person, a cutout, a suspect role, or a victim/missing person role
 6. Competitors will be stopped at the end of the eighteenth (18) minute time limit by the event moderator if the Lead Officer has not advised dispatch and judge that the scene is secure/suspect(s) in custody.
 7. If the search is not completed within 18 minutes, scoring will be based on completed tasks only.
- **Evaluation and Scoring (5 min Time Limit):** Judges will score competitors based on a standardized rubric. Scoring is conducted without competitors present to ensure objectivity. Once all assessments are finalized, scores will be recorded for each Competitor.

Rules

- **Search & Rescue Specific Rules:** Teams must verbally state their search technique to the judge before starting. Subject location must be clearly reported using landmarks, distance, or GPS coordinates.

- **Detaining Suspects:** Competitors will direct the ground officer "actor" to the location of the target. Need to communicate using landmarks and N,E,S,W directional communication.
- **Scenario :** Hostage negotiation scenarios or no-win scenarios are prohibited for this event
- **Command Compliance:** Actors are required to adhere to all instructions and commands issued by competitors, and are expected to do so without any form of resistance or hesitation.

Professional Dress Guidelines

To secure professionalism points, competitors should dress in attire that accurately reflects what professionals in the respective public safety careers would wear while performing the tasks associated with the event. Competitors are also expected to consult and follow the professional dress guidelines in the rulebook to qualify for points. Additionally, participation is contingent upon meeting all prescribed safety protocols.

Safety Protocols

- **Designated Airspace:** Drones must remain within the designated competition area.
- **Unsafe flying:** Collisions or unsafe flight will result in disqualification.
- **Compliance With Staff Instructions:** Teams must follow event staff and judge instructions at all times
- **Visual Observer Responsibilities:** Visual observers must maintain situational awareness and assist the flyer.
- **Safety Compliance & Disqualification Policy:** If the judge determines a safety violation, the team may be disqualified
- **Safety Vest Requirement:** The Visual Observer must wear a safety vest at all times during competition.
- **Shirt Sleeves:** IF Long sleeve shirts are worn, they shall fit closely at the wrist and not extend past the wrist.
- **Emergency Stop Command: 'Index':** If the 'Index' command is issued by a Judge, Staff Member, Actor, or other designated authority, all Competitors must immediately cease all activities and actions. This includes stopping any ongoing tasks, disengaging from any current simulations, and discontinuing any interactions with other participants. If an Actor issues the 'Index' command while handcuffed, they must be immediately released from the handcuffs by the nearest Competitor or event staff member. All Competitors must promptly secure and holster any weapons they may be handling. After holstering, Competitors should adopt a neutral, attentive posture and await further instructions from event officials. Failure to promptly and accurately comply with the 'Index' command may result in immediate disqualification and/or other appropriate actions as determined by event officials.
- **Shoes:** Competitors must wear low-heeled, closed-toed footwear for this event.
- **Prohibited Materials:** Flash bangs, live munitions, or any type of projectiles are prohibited during the event. Use of any prohibited item will result in disqualification. Any damages that result from the use of prohibited items will be the financial responsibility of the competitors school. The chapter's membership shall be suspended.
- **Hair:** All hair must be secured out of the eyes for the duration of the event. Competitors with hair extending past the top of the shoulder shall wear their hair secured neatly in a bun or ponytail ensuring that no hair extends below the collar of the uniform. It is not an exception to the rule that a Competitor's chosen hair style is too thick to be secured above the collar.
- **Unusual Assaults or Tactics:** Unusual assaults or tactics may not be used during the event, if the team is unsure they should consult the Judge before the event begins.

Judge Qualifications

- Judges must have experience in drone operations in law enforcement.

Criteria	Unattempted	Unsatisfactory	Satisfactory	Proficient	Exemplary	Points
Preflight Checks/Site Evaluation						
Equipment & Documentation Check Competitors verify that the drone, controller, batteries, props, and camera are all present, fully functional, and compliant prior to flight	0 No inspection performed	2 Partial inspection; major items missed	5 General inspection but lacked detail or missed multiple checks	8 Thorough and efficient inspection, with only one missed functional check	10 Detailed, and complete inspection.	
Site Hazard Assessment Competitors evaluate obstacles, weather, and environmental factors before flight.	0 No assessment performed.	2 Partial assessment but missed major hazards.	5 General assessment completed but lacked detail.	8 Thorough assessment completed efficiently.	10 Detailed and well-communicated assessment with mitigation strategies.	
Flight Operations						
Takeoff & Controlled Flight Competitors launch safely and maintain a controlled flight path.	0 No takeoff or immediate loss of control	2 Partial assessment but missed major hazards.	5 General assessment completed but lacked detail	8 Thorough assessment completed efficiently.	10 Detailed and well-communicated assessment with mitigation strategies.	
Terrain Navigation Competitors maneuver around obstacles and adjust flight path as needed.	0 No maneuvering attempted.	2 Attempted maneuvering but collided with obstacles.	5 Avoided most obstacles but required corrections.	8 Smooth and effective navigation around obstacles.	10 Expert navigation with real-time adjustments	
Search Execution						

Criteria	Unattempted	Unsatisfactory	Satisfactory	Proficient	Exemplary	Points
Search Pattern Utilization Competitors follow a declared search pattern.	0 No search pattern used.	2 Deviated from the planned search method.	5 Followed the search pattern but with inefficiencies.	8 Executed the search strategy effectively.	10 Used the search strategy flawlessly, optimizing efficiency.	
Target Identification & Reporting Competitors locate and report the subject's location accurately. The Drone Operator will communicate with the ground officer "actor" to direct them to the location of the "target" Need to use landmarks and N,E,S,W directional communication.	0 No target located.	2 Identified the target but reported incorrect location.	5 Target was located but was able to direct the officers on the ground to target but made many errors in the process.	8 Target was located but was able to direct the officers on the ground to target but made many errors in the process.	10 Target was located, precisely reported.	
Post Flight						
Landing & Shutdown Safe and controlled landing within the designated area.	0 No landing or crash landing.	2 Landed off-target or unsafely.	5 Landed safely but not within the target zone.	8 Landed within the correct zone.	10 Perfectly executed landing in the correct location.	
Communication						
Team Communication Competitors actively relay information to each other throughout the mission.	0 No communication	2 Only one competitor communicated.	5 Basic communication but not sustained.	8 Strong communication for most of the mission.	10 Clear, constant, and effective communication between team members.	

Criteria	Unattempted	Unsatisfactory	Satisfactory	Proficient	Exemplary	Points
Dispatch Communication Dispatch Communication Team lead advises dispatch they are on scene, requests a secure channel, asks about airspace restrictions, checks site safety	0 Does not notify dispatch.	2 * *	5 Notifies dispatch of partial information	8	10 Notifies dispatch of all required information	
Professionalism						
Professionalism This criterion evaluates the appropriateness of attire and the level of professional behavior displayed, considering industry standards relevant to the event.	0	2 Attire is inappropriate for the event and does not meet industry standards. Professional behavior is inconsistent.	5 Attire is mostly appropriate but may not fully meet industry standards. Professional behavior is generally acceptable	8 Attire meets industry standards and is appropriate for the event. Professional behavior is consistent	10 Attire meets industry standards and is appropriate for the event. Professional behavior is outstanding and goes above and beyond expectations. Attire quality is not a factor between Proficient and Exemplary	
Total Score: _____ / 100 pts						