

# TACTICAL EMPLOYMENT OF THE RAVEN SUAS

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The RQ-11 Raven is an extremely useful collection asset for an infantry company. This small unmanned aerial system (SUAS) provides company commanders with an organic capability that delivers real-time video. This capability is enhanced further by configuring the Raven for mounted operations, which includes launching and recovering the Raven from a moving vehicle. Charlie “Rock” Company, 5th Battalion, 20th Infantry Regiment — a Stryker rifle company in the 3-2 Stryker Brigade Combat Team — experimented with this concept while preparing for and executing National Training Center (NTC) Rotation 15-08.5 at Fort Irwin, Calif. This article will explore the use of the Raven through the lens of the Army’s warfighting functions.

**Mission Command.** C/5-20 IN placed the Raven operator in the executive officer’s (XO) Stryker. This placed the Raven operator a sufficient distance from likely enemy contact to conduct short halts for pre-flight inspections. Further, co-locating the Raven operator with the XO expedited submission of enemy sighting reports to the battalion and allowed the XO to inform the company’s common operating picture (COP) while the commander maneuvers platoons. Joint Capabilities Release (JCR) competence within the XO’s crew and across the formation also helps ensure the company COP retains shared understanding and communicates operations and intelligence information through another medium.

**Intelligence.** A tactic C/5-20 IN employed during NTC 15-08.5 involved launching the Raven from a moving Stryker. This gave the company real-time intelligence from the Raven, enabling more expeditious use of the information gathered. This allows the unit to retain situational awareness and make informed decisions with over-the-horizon line of sight after crossing the line of departure. For instance, when the Raven is flown while maneuvering in an attack, the commander can make immediate adjustments to his plan and take more effective action against the enemy.

**Movement and Maneuver.** Experimentation with employing Ravens to identify threats in front of the formation began at Joint Base Lewis-McChord (JBLM), Wash., on 18-19 May 2015. The goal was to use the Raven during offensive operations without halting the attack. This testing resulted in more than five successful launches of the Raven from a moving Stryker. Using the Raven in this manner allowed the Stryker formation to move in traveling overwatch until the SUAS detected the enemy. The formation then transitioned to bounding overwatch. Since traveling overwatch is much faster than bounding overwatch, a forward Raven dramatically increases the tempo of a Stryker company, allowing it increased freedom of action to seize positions of relative advantage. Due to its



Photo courtesy of author

*A Soldier from C/5-20 IN launches a RQ-11 Raven UAS from a Stryker.*

light armor, the Stryker has to be more cautious than tanks or Bradleys. This normally means dismounting infantry and clearing every intervisibility (IV) line or every area with restricted terrain. However, by using the Raven while moving, the Stryker formation can continue to move without dismounting infantry. The Raven is therefore able to extend the commander’s visibility past the maximum engagement line of most anti-tank weapons, thereby reducing the company’s vulnerability.

**Protection.** Employing the Raven from a mobile platform significantly increases mobility and survivability because the system remains mobile, not in a static position susceptible to small arms fire. A static launch site takes time to set-up and break down due to the tripod mounted line-of-sight antenna, which is only designed for ground mounting. During NTC Rotation 15-08.5, C/5-20 IN launched the Raven from the Stryker during the battalion defense and piloted it from the Stryker while displacing from one battle position to another. The company employed a Stryker mounted antenna system developed during the train-up to NTC.

During the movement in the defense, C/5-20 IN received a report from the battalion S2 of a chemical attack to the east of their position that posed a risk for contamination. Since the Raven was launched while on the move, Strykers immediately closed all hatches while still maintaining situational awareness with the Raven. During this incident, the Raven proved useful, allowing the company to visually clear routes until they left the suspected contamination area. This employment technique provided tactical flexibility that could save lives in a combat situation.

**Restricted Operating Zone (ROZ).** ROZ request challenges can be reduced significantly if brigade planners assume that companies will employ their Ravens whenever possible. Early in the planning process, planners must deconflict airspace coordination measures by time, space, or altitude for all assets operating in the area. Brigade planners who understand how companies use Ravens on-the-move could execute ROZs more like air corridors to provide the companies flexibility while reducing the frequency of ROZ cancellation inherent within a dynamic operating environment.

Employing the Raven from a moving Stryker is very effective and should be pursued by companies in the future. Regrettably, the current ROZ planning timeline does not allow companies to use the Raven as a responsive collection platform. To provide companies better flexibility, 5-20 IN staff developed a reconnaissance and surveillance plan during the planning process and collaborated early with the brigade aviation element (BAE) to plan additional ROZs. This allowed C/5-20 IN to make timely adjustments to the ROZ requests to avoid air space conflicts with pre-established ROZs or air corridors. Raven employment during training events does take more planning and coordination to accomplish, but it must be done in order to maintain proficiency.

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# UPDATED ATP 3-21.8 AVAILABLE FOR DOWNLOAD

## DOCTRINE AND COLLECTIVE TRAINING DIVISION

The Maneuver Center of Excellence's Doctrine and Collective Training Division announces the recent publication of Army Techniques Publication (ATP) 3-21.8, *Infantry Platoon and Squad*. This new ATP provides techniques for the employment of Infantry platoons and squads of the Infantry, Stryker, and Armored brigade combat teams (BCTs).

The ATP, which was published in April, replaces Field Manual 3-21.8, published in March 2007; Army Tactics, Techniques and Procedures (ATTP) 3-21.71, published in November 2010; and ATTP 3-21.9, published in December 2010. It presents doctrinal guidance; describes relationships within the platoon and squad; defines organizational roles and functions, capabilities, limitations; and describes the responsibilities for platoons and squads during unified land operations.

"This manual consolidates all three organizational Infantry platoons (IBCT, SBCT, and ABCT) into one manual. It will provide a one-stop shop for all Infantry Soldiers, no matter which platform they are operating from," said Bruce Moore, ABCT doctrine branch.

"This new manual combines traditional techniques with current methods developed during operational deployments and at the Combat Training Centers," said COL Marty Barr. "The new '7-8' provides a doctrinal foundation for pre-commissioning sources who organize leader training using the Infantry platoon model, new Infantry leaders, and Soldiers who work with the Infantry."

ATP 3-21.8 is available for download from the Army Publishing Directorate at [www.apd.army.mil/ProductMaps/TRADOC/ATP.aspx](http://www.apd.army.mil/ProductMaps/TRADOC/ATP.aspx).

A doctrine supplement, which includes additional digital resources, is also available at <http://www.benning.army.mil/infantry/DoctrineSupplement/ATP3-21.8/>.

The screenshot displays the Army Training Publication (ATP) 3-21.8: Infantry Platoon and Squad web page. On the left is a navigation menu with a search bar and a list of sections: Preface, Introduction, Introduction to ATP 3-21.8, Chapter 1: Organization, Chapter 2: Offense, Chapter 3: Defense, Chapter 4: Stability, Chapter 5: Movement, Chapter 6: Patrols and Patroling, Chapter 7: Sustainment, Appendix A: Planning, Appendix B: Direct Fire Planning and Control, Appendix C: Indirect Fire Support Planning, and Appendix D: Security. The main content area shows the 'Introduction' page, which includes a header 'INTRODUCTION' and a sub-header 'Introduction to ATP 3-21.8'. Below the sub-header is a paragraph explaining that the manual encompasses techniques for Infantry platoons and squads of the Infantry, Stryker, and Armored brigade combat teams (IBCT, SBCT, and ABCT). It states that the manual replaces Field Manual 3-21.8 (March 2007), Army Tactics, Techniques, and Procedures (ATTP) 3-21.71 (November 2010), and ATTP 3-21.9 (December 2010). The introduction also mentions that the manual provides doctrinal guidance, describes relationships within the platoon and squad, defines organizational roles and functions, capabilities, limitations, and lays out the responsibilities for platoons and squads during unified land operations. It emphasizes that the Infantry platoon and squad must be ready to adapt to various levels of conflict and peace in different environments, requiring bold, aggressive, resourceful, and adaptive leaders. The introduction concludes by stating that the publication addresses significant changes in Army doctrinal terminology, concepts, and constructs, and provides proven tactics, techniques, and procedures (TTT). A 'Chapter 1 - Organization' section is partially visible at the bottom, starting with a brief description of operational environments and an overview of the Army's operational concept of unified land operations, including organizational structure, law of war, rules of engagement (ROE), and combat power. It also mentions that the manual addresses the role and organizational characteristics of the Infantry platoon and squad as trained to conduct offensive, defensive, and stability tasks.