

Marines with 1st Battalion, 2nd Marine Regiment, currently attached to 3rd Marine Division, and 3rd Low Altitude Air Defense Battalion, provide combined anti-air and antiarmor capabilities during amphibious defense exercise at Iejima, Japan, January 27, 2021 (U.S. Marine Corps/Alize Sotelo)



Purpose-Built Antiarmor Teams

An Imperative for the Marine Corps Ground Combat Element

By Aaron Smith

The Marine Corps has an “institutional misunderstanding of armor” that leaves its Ground Combat Element (GCE) ill-equipped to defeat the armored platforms that our peer adversaries employ.¹ According to Marine Corps Warfighting Publication 3-15.5, *Antiarmor Operations*, “The expeditionary nature of the Marine Corps limits the number of armor assets available to the Marine

Air-Ground Task Force (MAGTF), while many of our potential enemies continue to expand and upgrade their armored forces. This dilemma requires the MAGTF commander to adopt a style of warfighting that allows him to win without armor parity.”² Unfortunately, the MAGTF has no active antiarmor doctrine and likewise lacks a purpose-built, ground-based antiarmor capability. Although the combined

arms fight extends beyond the GCE, the limitations of airpower prevent the Air Combat Element (ACE) from functioning as a panacea against armor. Correspondingly, the timely availability and successful integration of superior joint or allied armored forces is not a foregone conclusion. The Marine Corps must establish modern antiarmor doctrine and restructure the training and equipping of Combined Anti-Armor Teams (CAATs) across the GCE to remain globally competitive across the full spectrum of conflict.

The paucity of antiarmor doctrine across the MAGTF inhibits the GCE’s

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ability to achieve a competitive advantage. Tavis McLaren argues, with “no dedicated antiarmor doctrine or tactics, techniques, and procedures (TTPs), the result is a widening gap in the capabilities of an infantry battalion.”³ This disparity is inexcusable given the lessons learned over a century of Marines combating armored threats. Antiarmor operations were first captured in Marine Corps doctrine in 1965 with the publication of Fleet Marine Force Manual (FMFM) 9-3, *Antimechanized Operations*, followed by FMFM 2-11, *MAGTF Antiarmor Operations*, in 1992. The latter publication was marginally revised as Marine Corps Warfighting Publication 3-15.5 in 2000, and subsequently renamed Marine Corps Tactical Publication (MCTP) 3-01F. Advocacy for this publication, while active, rested with the School of Infantry West, where it received no updates before it was officially deleted in 2016.⁴ The absence of any doctrinally grounded antiarmor capability in the GCE is manifested by the existence of quasi-antiarmor units haphazardly employed by infantry battalions that lack the focus, equipment, or training to compete against an armored threat.

Sound doctrine must inform a purpose-built capability. Although there are several systems in the GCE that could defeat armor, that is not their primary function. Light Armored Reconnaissance does not doctrinally fulfill antiarmor missions and avoids close decisive combat because its vehicles “cannot survive the fires of medium caliber automatic cannons, antiarmor weapons, improvised explosive devices or direct hits from indirect fire weapons.”⁵ The Amphibious Combat Vehicle similarly lacks the protection to decisively engage an armored threat—and would not conceivably do so while carrying a squad of Marine infantry. These capabilities do not possess the requisite direct fire rapidity with armor-defeating munitions necessary to compete in an antiarmor role.

The CAAT construct represents the most realistic attempt at an antiarmor unit in the GCE, yet its organization and equipment do not lend themselves to success in this capacity. Under current

doctrine, CAATs are the combination of the heavy machine gun and antiarmor platoons within the weapons company of an infantry battalion.⁶ Their mission-oriented organization, while flexible, negates any real utility as an antiarmor unit, especially given a CAAT’s primary operating platforms. According to Walker Mills and Michael Rasmussen, a “gun truck in a CAAT platoon, even when armed with a Saber system, is inferior by nearly every metric to the vehicles it is supposed to kill. When combined with dated antiarmor doctrine, the result is a looming gap in the capabilities of the Marine infantry battalion.”⁷ Whether using older gun trucks or Joint Light Tactical Vehicles (JLTVs), CAATs are slower and more restricted by terrain than are the threats they intend to defeat. These vehicles are difficult to deploy via air, take up excessive space aboard ship, and offer no protection against the main guns of enemy armored personnel carriers and tanks. Their machine guns are unstabilized and lack the penetrating power to defeat most armored platforms.⁸ The missiles employed by CAATs have long flight times and give off distinct signatures that expose positions and preclude reengagement. Moving targets, and especially those equipped with active protection systems, require multiple missiles to achieve a catastrophic kill.⁹

Even with the recommended equipment and organization, CAATs presently lack the purpose-driven training required to forge a credible antiarmor force. The armored threats that CAATs must defeat are not lifeless hulks that sit in the open, waiting to get pounded by ground- and air-based missiles or indirect fire. They employ the principles of fire and maneuver, field craft, signature reduction, and camouflage.¹⁰ CAATs rarely, if ever, train against tanks and receive scant exposure to armored systems beyond the M1A1 Abrams tank, Amphibious Combat Vehicle, or LAV-25. Finally, CAATs lack a demanding Gunnery Skills Test (GST) package in which Marines must regularly maintain extensive Armored Fighting Vehicle Identification (AFVID) skills for all primary threat and allied armored platforms.

To overcome these problems, the Marine Corps must first reestablish doctrine for MAGTF antiarmor operations that supports our emerging operating concepts. MCTP 3-01F should be revised, republished, and integrated across the force. This revised publication should mainly address the fundamentals of antiarmor employment detailed in the U.S. Army’s Field Manual 3-2, *Tactical Employment of Antiarmor Platoons and Companies*. These basics include mutual support, security, flank shot engagements, standoff, cover and concealment, employment in depth, and employment as part of a combined arms team,¹¹ and their application “improves the lethality and survivability of antiarmor elements” on the battlefield.¹² Additionally, the revised MCTP 3-01F should include more detail regarding employment techniques, antiarmor field craft and survivability, hasty antiarmor obstacle employment, and updated armored platform threat analysis to include the capabilities of active protection systems. Finally, this updated doctrine must appropriately frame MAGTF antiarmor operations within the Expeditionary Advanced Base Operations (EABO) concept.

Along with this viable antiarmor doctrine, CAATs should be reorganized into light, agile, purpose-built units dedicated to antiarmor missions and capable of distributed employment. The primary task of these units should be hunting enemy armor by leveraging offensive ambush techniques in compartmentalized terrain, and this goal is best achieved at the forward edge of the battalion’s battlespace as a covering force during shaping operations.¹³ With cheap and sustainable adjustments to their equipment, CAATs become seekers that disrupt and attrite high-payoff targets by maneuvering inside the gaps of an enemy mechanized force.¹⁴ Gun trucks should be divested as the primary platform for CAATs; these platoons should instead center around two-man Javelin teams with a driver and medium machine gunner mounted in MRZR or equivalent all-terrain vehicles. These versatile vehicles are one-tenth the weight and cost of a JLTV, yet offer comparable speed and range, and greater off-road



Marines with Light Armored Reconnaissance Company, Battalion Landing Team 1/1, 11th Marine Expeditionary Unit, offload light armored vehicle during amphibious landing as part of expeditionary advance base exercise, May 15, 2021, San Clemente Island, California (U.S. Marine Corps/Alexis Flores)

mobility. A CAAT under this organization is the “smallest . . . [option] that yield[s] the maximum operational utility” that the commandant requires of the future force.¹⁵ It is a “resilient, low-signature, low maintenance” unit “optimized for inside force employment,” as necessitated by the EABO concept.¹⁶ This kind of CAAT is purpose-built, cheaper, faster, and more concealable. It is more maneuverable, carries a smaller logistic footprint, is easier to embark on ship, and can insert via air on MV-22 Ospreys.¹⁷ Finally, the scalable nature of this unit would allow for the attachment of small unmanned aircraft systems, a fire support team, or small engineer teams to further increase the lethality of CAATs and enable them to win the “hider versus finder competition.”¹⁸

With CAATs under this kind of organization, infantry battalions could address the scalable nature of CAATs by providing ample opportunities for

them to train against joint and allied armored platforms. Such instruction would give CAAT Marines the chance to experience and understand the capabilities and employment techniques of diverse armored platforms. Marines need to get inside these vehicles and understand the armament, targeting systems, sight packages, and engines, so they can understand how to survive against and destroy comparable enemy platforms. Armed with this experience, CAATs could develop and refine successful TTPs and increase missile team proficiency. A robust semiannual GST package should accompany this training. The CAAT GST should include an extensive AFVID test of all major threat and allied platforms. The standard for this AFVID should be 90 percent positive identification of all required vehicles in less than 10 seconds for both day and thermal images. Robust AFVID standards would compel CAAT Marines to maintain a working

knowledge of the effective range, optics, targeting capabilities, munitions, exhaust points, protection systems, engine and suspension type, vulnerabilities, on- and off-road speeds, tactics, and formations of enemy platforms.¹⁹ This familiarity makes the CAAT Marine a more capable hunter and intelligence collector, thereby increasing the lethality of the GCE.

Some may argue that the ACE, combined with indirect fires, could neutralize any serious armored threat before our outmatched platforms and infantry must seize an objective. This assumption, however, does not account for all the limitations of airpower and the capability of enemy armor. Airpower is a low-density, high-demand, maintenance-intensive capability that is always in short supply. The comparable aviation platforms and extensive air defense of peer adversaries suggest that airspace in a major conflict will likely be contested.²⁰ Again, according to Mills and Rasmussen, at a “time

when our aircraft expect to be operating in closely contested skies, their unhindered support would be the first casualty of any near-peer conflict.”²¹ The ACE is further limited by enemy electronic warfare, weather, and sustainment restrictions. Effective artillery support against armor is likewise constrained by range, enemy counter-battery fire, restricted munitions, and the complex urban terrain characteristic of many littoral regions.²² Limitations aside, the enemy on the ground is not naïve. We cannot prosecute targets from the air that we cannot see, which will invariably make these threats a problem for the GCE to manage.²³ Disciplined armored adversaries know how to reduce thermal and electromagnetic signatures, hide their pattern of life, and effectively conceal vehicles in terrain. As stated by Chris Niedziocha, “If you cannot sense, you cannot shape. Properly concealed assets are resistant to detection by even the most sophisticated airborne sensors as long as they do not run, emit in the electro-magnetic spectrum, or move around, especially on roads.”²⁴ The MAGTF must have a dependable ground-based antiarmor alternative to airpower.

Others may argue that the Marine Corps will always have the benefit of joint or allied forces with the direct fire capability to defeat enemy armor when needed. This is a risk-imbued assumption that negates historical precedent. In the event that joint or allied armored forces are readily available, success is possible only if we extensively train together for the joint antiarmor fight. The kind of tank-infantry integration the Marine Corps is accustomed to is not what the Army trains to provide. Without capturing the doctrine and TTPs gleaned through 76 years of Marines fighting alongside armor—and training to these TTPs with the Army and allied forces—Marines will die needlessly as we relearn these lessons in combat.

As we form the infantry battalions of the future, doctrinally grounded and purpose-built antiarmor teams are necessary to provide the firepower and mobility in distributed operations required by our operating concepts.²⁵ In the end, if the

Marine Corps “cannot create a credible antiarmor capability . . . we will limit ourselves to operations on the periphery.”²⁶ The aforementioned recommendations are rapidly achievable and will forge the CAAT into an asset that enables success for the GCE against armor. JFQ

Notes

¹ Corey Blankenship, “Armor for the Infantry: A Love-Hate Relationship That Needs to Change,” *Marine Corps Gazette*, March 2019, available at <<https://mca-marines.org/wp-content/uploads/Armor-for-the-Infantry.pdf>>.

² Marine Corps Warfighting Publication 3-15.5, *Antiarmor Operations* (Washington, DC: Headquarters U.S. Marine Corps, February 22, 2000), 1.

³ Tavis McLaren, “Tank Action! The Case for Increased Anti-Armor Capabilities,” *The Cove*, June 4, 2020, available at <<https://cove.army.gov.au/article/tank-action-the-case-increased-anti-armour-capabilities>>.

⁴ Marine Corps Bulletin 5603, *Marine Corps Doctrinal Proponency Assignments* (Washington, DC: Headquarters U.S. Marine Corps, May 24, 2018), 6–25, available at <<https://www.marines.mil/portals/1/Publications/MCBul%205603%20dt%2024May18.pdf?ver=2018-05-25-065849-067>>.

⁵ Marine Corps Tactical Publication 3-10D, *Employment of the Light Armored Reconnaissance Battalion* (Washington, DC: Headquarters U.S. Marine Corps, May 2016), 2-7.

⁶ Marine Corps Reference Publication (MCRP) 3-10A.1, *Infantry Battalion Operations* (Washington, DC: Headquarters U.S. Marine Corps, July 2020), 1-7.

⁷ Walker Mills and Michael Rasmussen, “Bringing Anti-Armor Back: Fixing a Critical Capability Gap in the Marine Corps,” *Modern War Institute*, January 11, 2019, available at <<https://mwi.usma.edu/bringing-anti-armor-back-fixing-critical-capability-gap-marine-corps/>>.

⁸ Ibid.

⁹ Vincent Delany, “On Killing Tanks,” *Modern War Institute*, March 23, 2020, available at <<https://mwi.usma.edu/on-killing-tanks/>>.

¹⁰ Geoffrey Dennis Weldon Court, *Hard Pounding: The Tactics and Technique of Antitank Warfare* (Washington, DC: U.S. Field Artillery Association, 1946).

¹¹ Field Manual 3-21.91, *Tactical Employment of Antiarmor Platoons and Companies* (Washington, DC: Headquarters Department of the Army, November 2002), 1-1–1-7.

¹² Lawrence Collins, “Killer Troop Tests Anti-Armor Doctrine on National Training Center Battlefield,” *Armor: Mounted Maneuver Journal* 125, no. 2 (April–June 2015), 37.

¹³ Alberto Salabarria, “No More CAAT: Return to the Doctrinal Anti-Armor Task Organization,” *Marine Corps Gazette*, July 2020, 40–41, available at <<https://mca-marines.org/wp-content/uploads/MCG-July-2020-1.pdf>>.

¹⁴ Mills and Rasmussen, “Bringing Anti-Armor Back.”

¹⁵ David H. Berger, “Commandant’s Planning Guidance: 38th Commandant of the Marine Corps,” Marine Corps Publications Electronic Library (July 2019), 11, available at <https://www.hqmc.marines.mil/Portals/142/Docs/%2038th%20Commandant%27s%20Planning%20Guidance_2019.pdf?ver=2019-07-16-200152-700>.

¹⁶ *Expeditionary Advanced Base Operations (EABO) Handbook: Considerations for Force Development and Employment* (Quantico, VA: Marine Corps Warfighting Lab, June 1, 2018).

¹⁷ Eric T. Myers, “The Parthian Defense: Leveraging Existing and Evolutionary Fires Technology to Enable Expeditionary Infantry to Block Armor,” *Marine Corps Gazette*, February 2018, 64–65, available at <https://mca-marines.org/wp-content/uploads/The_Parthian_Defense.pdf>.

¹⁸ David H. Berger, *Force Design 2030* (Washington, DC: U.S. Marine Corps, March 2020), 5.

¹⁹ MCRP 3-12B, *Tank Gunnery* (Washington, DC: Headquarters U.S. Marine Corps, February 23, 2016), 2-4–2-28.

²⁰ Myers, “The Parthian Defense,” 64.

²¹ Mills and Rasmussen, “Bringing Anti-Armor Back.”

²² Robert W. Lamont, “Armor Protected Firepower: Tanks and EF 21,” *Marine Corps Gazette*, December 2016, 62, available at <<https://mca-marines.org/wp-content/uploads/2018/12/Gazette-December-2016.pdf>>.

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²⁴ Chris Niedziocha, “Fighting a Peer Adversary: Part I: Observations and Recommendations from MAGTF Warfighting Exercise 1-20,” *Marine Corps Gazette*, July 2020, 47, available at <<https://mca-marines.org/wp-content/uploads/MCG-July-2020-1.pdf>>.

²⁵ Edward J. Leslie et al., “FD2030 Infantry Battalion Experimentation: Phase III of Force Design 2030,” *Marine Corps Gazette*, February 2021, 13, available at <<https://mca-marines.org/wp-content/uploads/MCG-February-2021.pdf>>.

²⁶ Mills and Rasmussen, “Bringing Anti-Armor Back.”