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# STRYKER GUNNERY: A PROGRAMMED APPROACH TO BUILDING THE COMBINED ARMS TEAM

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*“A Stryker platoon’s strength comes from the skill, courage, and discipline of the individual Soldier. Each Infantryman’s capabilities are enhanced by teamwork and cohesion in squads, crews, teams, and platoons.”*

— **Field Manual (FM) 3-22.3, Stryker Gunnery**

Successfully employing a Stryker company requires the synchronized efforts of both mounted and dismounted elements. It is necessary that each of these elements receive the same quality of programmed, progressive, and quantitative training methodology that goes into certifying large formations. Every light Infantryman can agree on how to execute dismounted squad live-fire events that assess the overall effectiveness of that formation. Yet a similar degree of consensus about how to execute mounted live-fire events does not exist among Infantrymen. Nonetheless, there should be no

*A Stryker vehicle from the 3rd Cavalry Regiment maneuvers through Blackwell Multi-Use Range at Fort Hood, Texas, in preparation for a live-fire exercise on 28 June 2013.*

Photos by 2LT Cameron Hufford

difference in our approach to assessing the “other” squad within the formation — the mounted squad.

FM 3-22.3 espouses that the three fundamental requirements for a combat ready unit are physical fitness, rifle marksmanship, and precision gunnery skills. As such, gunnery is an integral step as commanders certify mission essential tasks prior to platoon or higher level culminating live-fire exercises (See Figure 1). This article describes how the 3rd Squadron, 3rd Cavalry Regiment (3/3 CR) addressed the challenges and opportunities associated with executing Gunnery Tables III-VI with a light Infantry dominated formation. It identifies the challenges facing Stryker organizations, the necessity of gunnery, a methodology for programming gunnery

as a part of a comprehensive and holistic approach to building the combined arms team, and the lessons the squadron learned during recent gunnery operations.

**Challenges Facing Stryker Organizations**

Like most light Infantry company/troop commanders, my knowledge of mounted gunnery and its benefits was limited. There is a difference between gunnery executed by the mechanized/armor community and the Stryker community. The growing separation can have future implications if not remedied. To truly become a combined arms team, each combat arm must know how the other trains. Understanding how each branch approaches training gives a unique perspective that is fundamental in developing cohesion. If light Infantrymen lose the understanding of why gunnery exists or how it has arrived in its current state, then there is a potential to lose focus on how to employ the platform to its maximum potential in combat. Light Infantrymen are in a unique position to learn from their combined arms brothers, but leaders must make learning and collaboration a priority. “When faced with a development challenge, the leadership task should orchestrate a learning process through designed experimentation that cultivates the group’s latent capabilities. To ensure the growth or even survival of the organization it must build new capabilities, and new competencies, practices, and processes must be developed.”<sup>1</sup> As soon as gunnery planning began, 3/3 CR built a team committed to ensuring a successful gunnery. Comprised of a civilian,

19-series master gunners, 11-series NCOs, squadron staff, and support personnel, this team shared ideas, read pertinent manuals, referenced after action reviews (AARs), and fostered a climate of learning. It was precisely this process that made recent gunnery operations a success. The 3/3 CR understood the foundation of the combined arms team is built during planning — not just execution. In training, we must view the collaboration of the combined arms team during planning as important as the execution.

Is the 11A/B or the 19A/B better suited to design, resource, and execute live-fire training that is solely focused on employing vehicles? Being humble professionals, we need to assess the strengths of our combined arms brothers and employ them as the variables allow. A deliberate cross-training of our leadership in training will ensure that the organization is able to work faster, reuse best practices, and reduce costly re-work. The importance of this cross-training is that the organization strives to go outside its comfort zone, learn to adapt to another skill set, and grow combined arms leaders. This is another way to say that we should train as we fight — using the complementary effects of combined arms. As an organization, we must become innovative and adaptive in the face of a changing and complex battlefield of the future. The Joint Vision 2020 describes how such innovation can be executed. This Department of Defense “blueprint” states, “An effective innovation process requires continuous learning — a means of interaction and exchange that evaluates goals, operational lessons, exercises, experiments, and simulations — and that must include

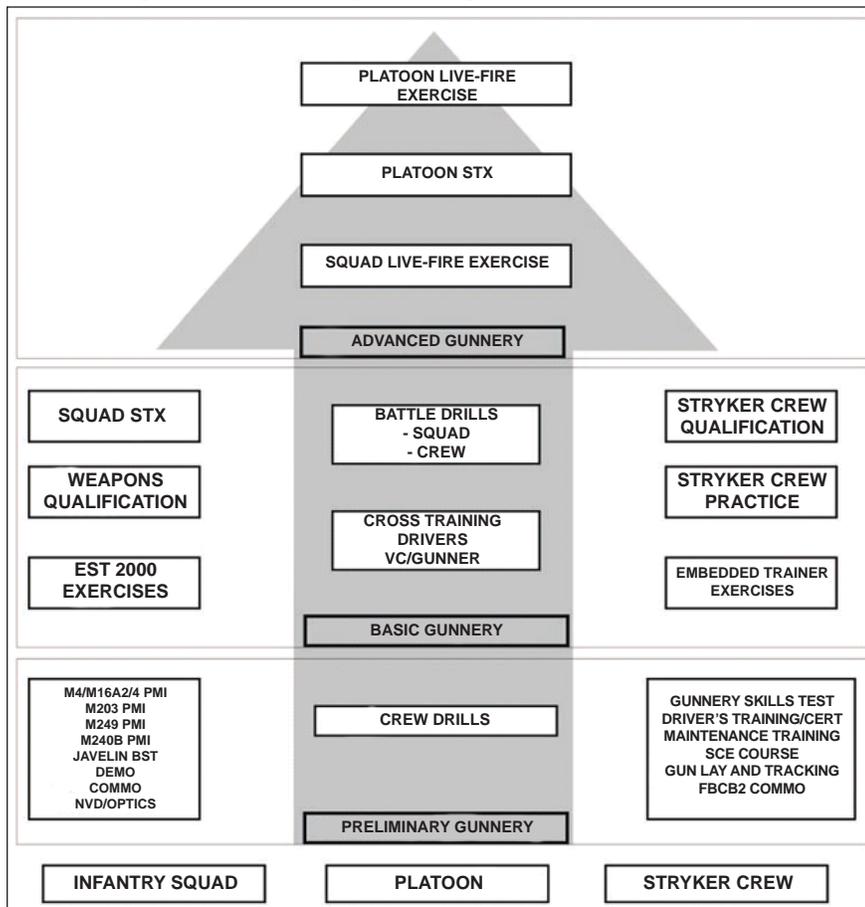
feedback mechanisms... We must be concerned with efficient use of time and resources and create a process that gives us confidence that our results will produce battlefield success.” It is critical that as an organization we are able to take lessons learned and apply them to our future training paradigm.

**The Necessity of Gunnery**

Gunnery is a necessary step in the progression of the combined arms team. Necessary and programmed gates from preliminary gunnery to basic gunnery maximize the use of non-live fire, virtual, and constructive training environments while providing necessary time for the crews to work together as a team. This virtual and constructive training environment provides the added benefit of codifying unit standard operating procedures (SOPs), rehearsing fire commands, and validating safety considerations. Gunnery provides the commander with the ability to quantifiably assess each crew across a pre-determined scoring matrix with impartial graders. An SBCT must embody the tenants of the HBCT gunnery and the reason why this type of training is being executed.

To defeat the enemy force in today’s operational environment (OE) while avoiding fratricide and collateral damage, crews within heavy brigade combat teams (HBCTs) and armored cavalry

**Figure 1 — Gunnery Training Outline from FM 3-22.3**



regiments (ACR) must have a thorough knowledge of the functional capabilities of their platform weapon systems, the techniques of combat identification (CID), and the effective use of all crew-served weapons. In addition, HBCT and ACR crews must develop and sustain tactical skills that will allow them to maneuver effectively and survive on the battlefield. This combination of crew gunnery and tactical skills is essential for total weapon system proficiency.<sup>2</sup>

The Stryker brigade combat team (SBCT), using the tenets of the HBCT gunnery model, must become more efficient at training. Training becomes most effective when it is well-planned, resourced, and rehearsed. What makes training truly powerful in a constrained fiscal environment is the ability of senior leadership to quantifiably and objectively measure the results allowing them to better plan and utilize their resources. If one assesses the majority of squad-level exercises that light Infantry units have historically conducted, they are entirely subjective and provide little for leaders to objectively analyze their formations' performance. Gunnery, however, is entirely objective. In fact, Stryker gunnery is perhaps the most efficient and effective crew/squad-level live-fire event that is available to the Stryker formation — essentially making it the most cost effective. The challenge to gunnery is how to design it to enhance training of the Infantry and build capabilities necessary to achieve mission-essential tasks. Nevertheless, gunnery is a critical and necessary step towards building a lethal combined arms team.

### Methodology for Programming Gunnery

This section discusses a recommended timeline that units can use as a guide to ensure a standard gunnery is conducted as an integral part to developing the combined arms team. The timeline begins six months from execution and extends through recovery. The 3/3 CR used this methodology in the recent gunnery that assisted in the validation of the draft version of the new gunnery training manual — Training Circular (TC) 3-20.1 *Direct Fire Gunnery*. Additional doctrine and Army publications used consisted of:

- FM 3-22.3, *Stryker Gunnery*, March 2006
- TC 7-21, *Stryker Drivers Training*, December 2006
- ST 3-20.13-2, *Stryker Mobile Gun System Gunnery*, January 2007
- FM 3-20.21, *HBCT Gunnery*, March 2009
- DA Pamphlet (PAM) 385-63, *Range Safety*, August 2009
- ST 3-20.21-2, *Vehicle Crew Evaluator Exportable Package (VCEEP)*, November 2009

**Figure 2 — Green-Amber-Red Time Management System**

<p><b>Green Period</b></p> <ul style="list-style-type: none"> <li>— Training focus primarily on collective tasks with individual and leaders tasks integrated during multi-echelon unit training.</li> <li>— Maximum Soldier attendance at prime-time, mission-essential training.</li> <li>— Coincides with availability of major resources such as major training areas (MTAs), local training areas (LTAs), and key training facilities or devices.</li> <li>— Administrative and support requirements that keep personnel from participating in training eliminated to the maximum extent possible.</li> <li>— Leaves and passes limited to the minimum essential.</li> </ul> <p><b>Amber Period</b></p> <ul style="list-style-type: none"> <li>— Small unit, crew, and individual training emphasized.</li> <li>— Provides time for Soldier attendance at education and training courses.</li> <li>— Some suborganizations may be able to schedule collective training.</li> </ul>	<ul style="list-style-type: none"> <li>— Scheduling of periodic maintenance services.</li> </ul> <p><b>Red Period</b></p> <ul style="list-style-type: none"> <li>— Diverts the minimum essential number of personnel to perform administrative and support requirements.</li> <li>— Suborganizations take advantage of all training opportunities to conduct individual, leader, and crew training.</li> <li>— Support missions/details accomplished with unit integrity to exercise the chain of command and provide individual training opportunities for first-line supervisors as time permits. Unit taskings can be used to reduce the number of permanent special duty personnel within installations and communities.</li> <li>— Leaves and passes maximized. When appropriate, block leave may be scheduled.</li> <li>— Routine medical, dental, and administrative appointments coordinated and scheduled with installation support facilities.</li> </ul>
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- ST 3-20.21-1, *Individual and Crew Live-Fire Prerequisite Testing*, January 2010
- Army Tactics, Techniques, and Procedures (ATTP) 3-21.9 (FM 3-21.9), *SBCT Infantry Rifle Platoon and Squad*, December 2010
- DA PAM 350-38, *FY13 Standards in Training Commission (STRAC)*
- TC 3-20.1, *Direct Fire Gunnery*, draft: August 2012

Understanding the doctrine is an important first step. Once the resources have been collected, it is up to the unit to build a timeline that can encompass all the necessary tasks needed for a successful gunnery. The following is a comprehensive timeline that reflects 3/3 CR's road to gunnery.

**D-180:** Using the Gunnery Progression Table outlined in ST 3-20.12-2 (Chapter 13), TC 3-20.1 (Chapter 9 and 10), DA PAM 350-38 (see applicable platform chapters), and FM 25-100, the timeline for Stryker gunnery training can easily be identified. For all intents and purposes, gunnery prep should begin six to eight months prior to live-fire training exercises. This coincides with the green-amber-red cycle of unit progression prior to the advent of the Army Force Generation (ARFORGEN) cycle (See Figure 2). During red cycle, the unit should maximize all opportunities for individual- and crew-level training. At the battalion/squadron level, this time should be used to develop an initial concept of the operations, support requirements, ammunition projections, and other long-range planning requirements. Chapter 5 of

DA PAM 350-38 discusses the amounts and Department of Defense Identification Codes (DODICs) needed to certify one crew based on various tables with standard parameters. Initial scenario building begins during this phase with the master gunner developing the scenario based on commander's guidance and required performance measures (RPM) in TC 3-20.1. The master gunner has to understand the commander's intent to execute a successful gunnery. Additional conditions are set by subordinate commanders to ensure maximum training value and mission-essential tasks are achieved during gunnery. These RPMs and additional conditions can be leveraged to ensure training units are practiced for a decisive action training environment (DATE) or able to be employed doctrinally against a near-peer threat. Additional planning considerations are the dates and subject matter for the initial vehicle commander evaluator (VCE) certification, scoring matrices, and the date for the initial Stryker gunnery skills test (SGST). A D-180 conference is recommended to confirm resources (class III [B], V, IX) and support requirements (VCE, SGST). The battalion/squadron master gunner's interaction with key staff members and subordinate unit leaders cannot be stressed enough. His tireless work during this phase of the train up is paramount to conducting efficient and effective gunnery tables.

**D-90:** By this time, the unit will have entered amber cycle tasking. Units perform periodic maintenance, and emphasis is placed on squad, crew, and section training. Beginning this type of battle rhythm will allow organizations to continue parallel and decentralized operations while allowing the unit to self-organize and identify weaknesses in the maintenance plan prior to gunnery. Using the amber cycle to ensure a critical look at maintenance system(s) will help to develop a service plan, class IX projection, and budget analysis that will drive Stryker gunnery. Although the focus will be on training fire teams and squads in the variety of dismounted tasks, special attention needs to be given to the mounted section within the formation. Low cost, virtual training can be conducted at either the local training support center (TSC) or through the remote weapon station (RWS) or mobile gun system (MGS) embedded trainer. The requisite skills which lead to a successful gunnery are formed mainly through crew-level virtual training. The battalion master gunner establishes in-process reviews (IPRs) which include elements of necessary staff, subordinate units, and outside units (if acting as VCEs). Ranges, ammunition, and orders are locked in and published as required. Units begin gathering the necessary support items for their support, and commanders track progress through individual and initial crew training.

**D-30:** Conduct the final stage of gunnery progression at the beginning of green cycle. This affords the unit maximum time to conduct culminating platoon-level exercises after completing gunnery while still within green cycle. The unit has to strive for maximum Soldier participation while eliminating administrative and support requirements to the greatest extent possible. According to the gunnery progression table, advanced gunnery must precede the culminating, combined arms exercises. The last 30 days will include a weekly IPR with the participants, operations and sustainment rock drill, final SGST, and the VCE certification. The master gunner confirms with range operations that the support requirements for range operations are verified and contacted as

necessary. Units will begin troop leading procedures and pre-combat checks and inspections prior to deploying to the field. Units should strive to execute a 24-hour tactical operations center while in the field. Changes to crew rosters, support requirements, or ranges will be brought to the attention of the squadron staff immediately for action during this time.

**Execution:** Just like Infantry platoon-level training, units need to focus solely on completing their gunnery tasks. The chain of command must minimize outside distractions (details, staff duty, etc.) or remove them completely. Execute gunnery on three ranges over 10 days to ensure the execution phase runs smoothly. These ranges should be in close proximity to one another and increase in complexity to reflect the different tables being executed. The additional time in the schedule accounts for training stoppages. During gunnery, 3/3 CR experienced vehicle maintenance problems, range fires, weather stoppages, weapons malfunctions, and re-training, which all required time to fix. Having additional days built into the schedule ensured every crew was able to complete all training/re-training required and provided time for necessary maintenance operations between ranges. Moreover, successful gunnery execution rests with two individuals — the master gunner and the beach master. Master gunners work hand in hand with the beach master throughout the gunnery. The beach master must be aggressive and competent. It is his responsibility to ensure the next three or four crews and vehicles are staged and awaiting hot status. With communication checked and ammo uploaded, the crew and VCEs wait for the master gunner's call to move forward. The master gunner pushes the crews while on the range. He presents targets quickly, adjudicates re-fires or alibis in a timely fashion, and provides the range OIC with a projection of the number of crews to be fired that day. His host of supporting staff includes the timer, target operators, recorder, and scorer. The MGS master gunner is a combat multiplier. He should be located with the MGS platoons and provide on-site assistance during execution. It is recommended that a master gunner and beach master are on each range and provide a roll-up of the day's results to a single battalion/squadron point of contact. The conduct of the individual tables is important. It is imperative that commanders identify the RPM/additional conditions for each table which must include the conduct of crew drills, alternate VC firing at multiple targets, firing on the move, an NBC (nuclear, biological, chemical) engagement, and night engagements. These parameters will allow the senior commander an objective assessment as to his crews' capabilities. It is also recommended that commanders are on-site and executing training with their Soldiers. The commander's presence will ensure training is conducted to standard and give the light Infantry company/troop commander a better understanding and perspective of the capabilities of the mounted squad and how it can be employed. In addition to the immense planning requirements needed to ensure a successful gunnery, it is imperative the commander, beach master, and master gunner are also present. Following these steps will result in an efficient and effective execution of gunnery at the battalion/squadron level.

**Recovery:** Recovery must be comprehensive and systems-based. The 3/3 CR conducted a five-day recovery model that incorporated a detailed preventive maintenance checks and

services (PMCS) and inspection of Soldiers, weapons, and equipment from the individual Soldier to the vehicles themselves. During the five-day recovery period, leaders inspected not only the item but the system which tracked it. For example, a complete organizational clothing and individual equipment (OCIE) layout was conducted on members of the squad (individual); clothing records were taken from the supply room, and missing items were annotated as either field loss, statement of charges, or financial liability investigation of property loss (FLIPL) (system). Weapons were cleaned (individual), and 5988s and service schedules were updated (system). Infantry Carrier Vehicles (ICVs) were PMCS'd (individual), and service schedule, mileage, and man hours were updated (system). The five-day recovery concluded with an entire troop layout that was inspected by squadron leadership, which tested the validity of the tracking systems and quality of recovery.

### Outcomes and Lessons Learned

First, commanders can scale gunnery training to meet the needs of their unit. By developing unique, METL-focused RPMs, commanders are able to employ doctrinal concepts of how an SBCT would fight in decisive action against a near-peer threat. The commander may choose any target for the scenarios, provided they can be destroyed by the weapon/ammunition resourced for the engagement. The commander (and master gunner) builds scenarios that test the fundamental skills, weapon system capabilities, vehicle performance requirements, and METL to meet the training objectives. The unit selects where the RPMs are placed — but the commander has flexibility to match the training

to his environment. Second, gunnery instills confidence to the ground force commander that his mounted support by fire is able to maneuver and engage in support of his dismounted force, and it provides a deeper understanding for the crew as to the capabilities and limitations of the platform. Finally, cross-training during gunnery produces lasting effects among future leaders within the formation on the planning and execution of mechanized gunnery procedures.

In conclusion, 3/3 CR learned valuable lessons during the conduct of their gunnery. Using pertinent doctrine and a programmed and integrated training progression, 3/3 CR was able to execute an efficient and effective Stryker gunnery. The education the light Infantry received on the employment and capabilities of the platform and another branch's training methodologies was priceless. Opportunities exist to replicate this type of training across the entire formation, integrating all of the warfighting functions to achieve a collaborative combined arms team. It starts with understanding gunnery. Stryker formations need to recognize the importance of gunnery within the training cycle, how it can be leveraged to its greatest success, and its essential part in forming the combined arms team.

### Notes

<sup>1</sup> Dean Williams, *Real Leadership, Helping People and Organizations Face Real Challenges* (San Francisco: Berrett-Koehler Publishers, 2005), 90.

<sup>2</sup> FM 3-20.21/MCWP 3-12.2 1-1.

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*A Soldier with Thunder Squadron, 3rd Cavalry Regiment loads ammunition into the Remote Weapons Station-mounted .50-caliber M-2 machine gun in preparation for a live-fire exercise.*

