



COMBINED ARMS WEAPONS PROFICIENCY FOR THE HBCT

SERGEANT FIRST CLASS TOMMY HOWARD

As the Army transforms itself into a modular configuration, it is imperative that we look at the way we train gunnery to ensure that we provide the commanders of the brigade combat teams (BCTs) the tools necessary to train and evaluate their Soldiers, crews, and platoons. To that end, a heavy BCT workgroup was formed composed primarily of the Stryker/Bradley Proponent Office (S/BPO) from Fort Benning, Georgia, and the gunnery doctrine branch at Fort Knox, Kentucky. The determined end result is a four volume set of manuals with a different Volume 2 for the respective heavy, Stryker, and infantry BCTs.

This set will provide a comprehensive document for training gunnery to all Soldiers within a BCT. In this article, I concentrate on the HBCT gunnery manual (Draft FM 3-20.21) and provide a general overview of the changes in gunnery strategy that Soldiers and commanders will use. Additionally, a series of accompanying articles have been provided in this issue of *Infantry Magazine* to discuss in greater detail important aspects of this manual. It is noteworthy to point out that the Combined Arms Weapons Proficiency for the HBCT will provide a blueprint for subsequent BCT manuals.

HBCT Manual Overview

The HBCT gunnery manual is designed to provide a comprehensive training strategy for commanders and training managers that encompasses all Soldiers operating in combined arms battalions (CABs) and reconnaissance squadrons. Current gunnery doctrine is split among three different gunnery manuals. There is a manual for the Abrams tank, Bradley Fighting Vehicle (BFV), and Scouts. Each manual has its own organization, training strategy, and even evaluation procedures for the elements that use each particular manual. The HBCT manual will bring all three manuals under one document and standardize training and evaluations for all elements within a BCT. Yes, Abrams tanks and Bradleys will use the same overall gunnery methodology. Keeping in mind that each platform has its own characteristics, the primary differences between current BFV and Abrams gunnery are flexibility versus prescription in table development and points versus TPU (trained, needs practice, untrained) evaluation criteria. Draft FM 3-20.21 will address these differences placing all members of the BCT under the same gunnery methodology. At the end of the day, the HBCT commander will be able to

look across his brigade and have standard terminology, methodology, evaluation, and training tables. However, commanders will also have the ability to personalize the training their units receive.

Flexibility vs Prescription

The current Bradley gunnery manual (FM 3-22.1) contains a very flexible type of gunnery model. For each gunnery event, there are some guidelines for table development, but the tables can look very different from unit to unit based on commanders' guidance and intent. Conversely, current armor and scout gunnery are much more prescriptive. As an example, range bands and target types are spelled out for the unit; there is very little room for command guidance and the implementation of a unit's contemporary operational environment (COE) into its gunnery program. With BCTs being developed as "plug-and-play" type organizations deployable with any one of the division headquarters and into any type of environment, it is important to empower the HBCT commander and his CAB and squadron commanders with the flexibility to develop their gunnery programs for their impending missions. With this in mind, the HBCT gunnery manual has implemented a flexible gunnery methodology. This will allow the commanders to implement their own elements such as range bands, target types, vehicle posture and even environments (such as urban operations) into all levels of gunnery.

Although flexibility is important, the gunnery doctrine teams from both Fort Benning and Fort Knox agreed that one of the most important aspects of gunnery is to maintain a minimum proficiency level

WEAPON PROFICIENCY FOR BCTS

Volume 1	Small Arms Proficiency	Published TBD
Volume 2	Weapon Proficiency Strategy for the BCT	
FM 3-20.21	Heavy Brigade Combat Team	Published 1OCT07
FM 3-22.X	Stryker Brigade Combat Team	Published QTR 4 FY07
FM 3-22.X	Infantry Brigade Combat Team	Published QTR 1 FY08
Volume 3	CS/CSS Weapons Proficiency	Published TBD
Volume 4	Field Artillery Weapons Proficiency	Published TBD



MSG Johancharles Van Boers

(MPL) within gunnery in order to sustain the critical skill requirements across the fleet. As an example, the manual states that on each gunnery table, a crew must fire a minimum of one offensive engagement, one defensive engagement, and one short halt engagement for each day and night. The remaining engagements can be fired from whatever posture the commander wants to train. If his upcoming mission will include a large number of cordon and search-type missions, then he may want to train on more short halt engagements. A commander in Korea may want to emphasize defensive engagements, etc. The correct answer will always be what the commanders in the field know they need to train on, and it is the HBCT gunnery manual that provides them that framework using minimum proficiency levels as a guide.

Points vs TPU

The other area of gunnery that had to be mediated was scoring and evaluations for all three phases of gunnery as Abrams uses a 1,000 point system to evaluate while Bradleys use the TPU methodology. While both have their pros and cons, the decision was made to use the points system with the addition of flexibility. A staple of BFV gunnery has always been that regardless of crew errors (with the exception of safety violations) the crew would pass the engagement if it killed the target before exceeding the threat time. We have incorporated this mentality into the new points system, only reducing engagement scores due to safety violations and/or failure to kill all targets within the designated threat time. Crew cuts, such as fire commands and response terms, will be deducted at the end of the phase (day/night). This reduces the crew's overall score and if enough mistakes are made, it can cause the crew to fail the table. It will not, however, cause the crew to fail any single engagement within the table as long as the crew killed the targets within the allowable threat time. For a more detailed explanation on crew gunnery, see Staff Sergeant

Philip Mandile's article "Preliminary and Basic Gunnery for the HBCT" on page 13.

Evaluating collective gunnery was another issue that was refined. Each platform in the BCT had its own scoring model. What was important for the gunnery doctrine team was that commanders would assess their platoons in accordance with applicable training and evaluation outlines (TE&O) and with what was important to the commander. Additionally, it was decided that the regimented mathematical system used by the armor community was dated and was not advantageous to the flexibility and MPL precepts established in the earlier chapters. Therefore, collective tables will be scored using a TPU model with both gunnery and mission training plan (MTP) scoring standards. For a detailed explanation on advanced gunnery, see Sergeant First Class William Simons' article "Advanced Gunnery for the HBCT" on page 22.

Threat Timing

One of the pillars that forms the foundation for evaluating the HBCT is threat-based timing matrices. The time a crew has to engage and destroy a target on the range is tied to a threat model. This model is based off the time it takes for the threat to get first burst on the friendly vehicle. This makes the worst case assumption that when a vehicle gets hit first it begins to do other things (such as survivability moves) besides the direct fire engagement process. With data supplied by the Army Materiel Systems Analysis Activity (AMSAA) and the Army Research Laboratory, threat matrices for all platforms in the HBCT have been developed. These times have been altered to make them unclassified and are based off a threat crew that is as well trained as U.S. Army Soldiers. Factors that went into the development of the times were acquisition, ranges to target, capabilities of the threat vehicle, and in the case of the TOW missile, flight time of the round. Each target presented has

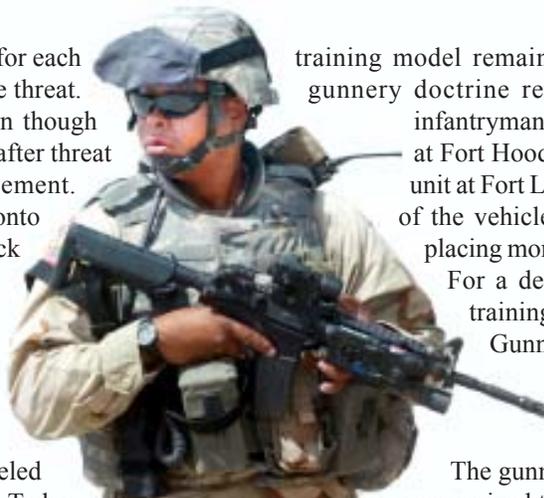
its own threat time, meaning the clock is ticking for each target as the friendly vehicle exposes itself to the threat. A basic tenant of this evaluation system is even though you can receive partial credit for killing a target after threat time has expired, you cannot pass the engagement. Again, it's threat based — who got first burst onto target, the threat or the Bradley, Abrams, or truck crew?

Non-Standard Missions

For at least the last 12 years, since the operational tempo greatly increased as a result of the Balkans and now Operation Iraqi Freedom, HBCT Soldiers have conducted missions in wheeled vehicles instead of their Abrams tanks and BFVs. Today, this also includes engineers and artillerymen, who are also conducting infantry-style missions. The HBCT gunnery manual recognizes this and includes examples on how any type of unit can use the rifle squad strategy as well as the HMMWV strategy to train their Soldiers to perform missions in their COE. There are also examples for use by combat support (CS) and combat service support (CSS) units until Volume 3 (CS/CSS gunnery) is completed. For a more detailed explanation on truck gunnery, see the related article on page 16.

The Infantry Rifle Squad

For too long rifle squad training has suffered within the mechanized community. Squads are often an afterthought because manpower shortages require the manning of the four Bradleys within an infantry platoon, leaving squads short of personnel. While the HBCT gunnery manual cannot ease manpower shortfalls, it has placed more emphasis on the training of rifle squads. This process began by simply moving the squad into a chapter as opposed to an appendix. By having the squad as an appendix, the thought process is already in place that they are a leftover element. The rifle squad is the reason Bradleys exist in the first place. With this in mind, the squad gunnery model was reorganized. The overarching idea is that as the SBCT and IBCT gunnery manuals come on line, the squad basic model used in the HBCT manual will be a common thread throughout the Volume 2 series. Although each type of BCT will have its own mission essential task list (METL), commander's intent and different delivery systems (airborne, air assault, etc.), the terminology and



training model remain consistent. This also keeps the gunnery doctrine relevant and familiar to the new infantryman who is stationed in a Bradley unit at Fort Hood today and reassigned to a Stryker unit at Fort Lewis tomorrow. The reorganization of the vehicle tables will also be beneficial in placing more of an emphasis on the rifle squad.

For a detailed explanation on rifle squad training, see the article titled "Rifle Squad Gunnery" on page 19.

Table Organization and Advanced Gunnery

The gunnery tables in the HBCT have been reorganized to place emphasis on the collective rather than the individual or crew. The strategy contains a total of 12 tables with the first six being crew tables. When a crew has completed Table VI, they are qualified. However, they are only half way done with gunnery and have six collective tables left to negotiate. Tables VII-IX are section tables. The feedback that we have received from the workgroups conducted with operational units is that Table IX must be a qualification table for all weapon system platforms. Additionally, to meet the demands from the field, commanders can task organize however they choose, whether it is one BFV, one Abrams, and a rifle squad or a more pure organization. Again, the commander decides what his unit needs to train. Based on COE, level of proficiency (ARFORGEN cycle) and commander's intent, the collective gunnery starting at the section level is inherently flexible. Tables X-XII are platoon tables leading up to platoon qualification. Commanders develop their platoon qualification and have the flexibility to include all elements from engineers to CS/CSS, mortars, etc., into their tables.

In summary, the HBCT gunnery manual will be a flexible, comprehensive document that provides commanders, master gunners, and training managers with a framework to train squads, crews, and platoons. It also provides examples and MPLs to assist commanders in training all elements of the BCT for both missions within and outside their typical scope.

We encourage commanders, master gunners, and training managers to read the coordinating draft of FM 3-20.21 and ask them to contact the Stryker/Bradley Proponent Office with their recommendations for the gunnery manual. The point of contact is SFC Simons, the Infantry Center's lead for Combined Arms Weapons Proficiency for the Heavy Brigade Combat Team (Draft FM 3-20.21). He can be reached at (706) 544-6201 or william.f.simons@us.army.mil.

CHAPTER OUTLINE

- Chapter 1** - Introduction
- Chapter 2** - Platform Capabilities and Characteristics
- Chapter 3** - Training Devices and Simulators
- Chapter 4** - Training Management Strategies
- Chapter 5** - Range Operations
- Chapter 6** - Engagement Process
- Chapter 7** - Rifle Squad Training
- Chapter 8** - Crew Gunnery Evaluations
- Chapter 9** - Preliminary Gunnery Training
- Chapter 10** - Basic Gunnery Training
- Chapter 11** - Advanced Gunnery Training

Sergeant First Class Tommy Howard has been the chief of the Stryker/Bradley Proponent Office for three years and will soon retire from active duty after 20 years of service to the Army and BFV communities. He is a combat veteran; his previous assignments include serving as a squad leader, platoon sergeant, battalion master gunner, and division master gunner. He is a graduate of the BFV Master Gunner Course, the Battle Staff NCO Course, the Advanced NCO Course and holds a bachelor's degree in Social Science.