

# FROM THE BORESIGHT LINE

## Who Is Your Master Gunner and What Do They Do For You?

**Editor's Note:** We are excited to reintroduce our standing column, "From the Boresight Line." This column will provide a platform for Armor Master Gunners to discuss issues, concerns, and solutions specific to the Armor community. I look forward to sharing insights from Master Gunners across both the operational and institutional force. Retired CSM Greg Brobst's following article provides a great starting point for what I expect will be a thoughtful and informative dialogue.

by Retired CSM Greg Brobst

Commanders, if there is one person standing in your formation that you explicitly trust assisting you in decisions concerning lethality, maintenance, and training, who is it?

If that Soldier is not wearing a Master Gunner Badge on their chest, why not? If your master gunner has not approached you to describe in detail what they can do for you, maybe it's time to schedule an office call with them.

Here is what you should know, "Your master gunner is your advisor for all things gunnery and the combat employment of your fleet." Your master gunner serves as your advisor for crew management, gunnery training and certification records. Your master gunner advises you on the combat employment and capabilities of all organic weapon systems, ammunition, identification of enemy vehicles, and their combat capabilities and vulnerabilities.

Your master gunner serves as your primary trainer for direct fire employment, operation of organic weapon systems (both platform and dismounted), conduct of fire, degraded operations, and a myriad of other tasks associated with the employment and operation of the platforms and weapon systems in your formation.

Your master gunner is trained to

advise you on advanced maintenance and troubleshooting of the fire control system and organic weapons and is your subject matter expert for bore sighting, collimation of the Muzzle Bore Device, plumb and sync procedures, Live Fire Screening Accuracy Test and zero. Most notably, due to the rigors of the course, the master gunner graduates with expert level



knowledge of training management.

Understandably, your master gunner may also be serving as a vehicle commander or even a platoon sergeant. However, I will ask you again, why not your Mike Golf?

In May of 1973, GEN Donald Starry

was selected to command Fort Knox and the U.S. Army Armor School. His initial counseling session with the Army Chief of Staff, GEN Creighton W. Abrams Jr., was direct and to the point. "Don't screw up the tank program. Just start with doctrine, describe the equipment requirements, reshape the organization. And get the Army off its ass!"<sup>1</sup>

In 1974, the Army began its arduous recovery process from a nearly 11-year conflict in Vietnam. For the duration of the conflict, much of the training and combat preparations of the nearly 800,000 Soldiers focused on jungle/guerilla warfare and counter-insurgency operations. With the "Cold War" pending, the Army quickly needed to refocus its training and combat preparations toward the communist threat in eastern Europe.

The concept of the master gunner dates to 1974 when a staff of senior officers proposed the master gunner concept to commanders in the field. The master gunner would provide the needed expertise to help tank crews with the increased complexity of the modern tank fire control systems and the lack of advanced gunnery knowledge. Approved in April 1974 by the U.S. Army Chief of Staff, the U.S. Army (for a one-time execution) graduates 12 NCOs from the first Master Gunner Course. When the new master gunners returned to their



**Figure 1. Master Gunner Badge, M2 .50 caliber head-space and timing gauge, lenstatic compass, and notebooks** (U.S. Army National Guard photo by SGT Tara Fajardo Arteaga)

units, they made immediate positive impacts.<sup>2</sup>

The Army of today looks very similar to that of 1974. We recently closed a nearly 20-year counter-insurgency war which was fought on two fronts, mostly without heavy armor. Additionally, we are once again facing a peer threat on the plains of eastern Europe. There was a 20-year “train-up” for Operation Desert Storm, but that 20-year window may not be available in preparation for the next conflict. Therefore, we need to ensure we are ready now and leverage every available asset to do it.

Recently, we have changed our doctrine from unified land operations to multidomain operations, a significant change in the approach to combined arms operations. Utilizing lessons from the second Nagorno-Karabakh war and the Russo-Ukraine war, like how we utilized the analysis of the six-day war and Yom Kippur war in the early ‘70s, our current doctrine has changed to embrace emerging technologies and capitalize on their ability to enhance decision making while providing overmatch against our adversaries.

There is little room to argue that our next conflict will look nothing like what we have experienced during the last 20 years in Iraq and Afghanistan. There will be no patrol bases or combat outposts, our service and support activities will be significantly further away from the front-line combat organizations, and any loss of combat power will significantly affect the security of the organizations area of operations.

Under these conditions there can be no substitute for expert vehicle crew members. All crew members must strive to keep their vehicle in the fight because their vehicle is their home, it is their sanctuary, and their means of survival. Crew members must understand how the vehicle was designed to operate, what its capabilities are, what its limitations are, and most importantly, how to overcome them.

Crew members, specifically gunners and vehicle commanders, must have confidence in the weapon systems of their vehicle and understand how to employ them. This understanding not only includes the employment of it under ideal conditions when the vehicle is operating with no faults but also, during conditions that are less than ideal or degraded. Fire control system faults can and will happen, the ability of a crew to recognize them and apply immediate action may be the difference between life and death. In direct fire combat, the opportunity to remove oneself from an engagement and retrograde to the field trains or brigade support area may not be available. When fighting a numerically superior foe, every combat vehicle counts.

As experts, these crew members must be lethal. In simple terms, lethality for an armored crewmember, as demonstrated in the Yom Kippur War, is the tank that fired first with accuracy was the tank that usually won the engagement. One shot, one kill; several years ago, this was the battle cry for many tank companies as they embarked on their path to crew level gunnery. Although it is still said, it is increasingly hard to believe. Our vehicle crews,

although qualified, have demonstrated significant shortfalls during qualification gunnery.

In September 2019, III Corps conducted and published a lethality study<sup>3</sup> that highlighted the decline of lethality within the heavy force. At the time of publication, the combat training centers observed a 30 percent decrease in targets hits during the past 20 years and crew qualification rates below 60 percent (III Armored Corps, 2019). In March 2023, the National Training Center (NTC) live fire team non-commissioned officer (NCO) in charge said, “organizations simply do not train as well as they believe they do prior to arriving to NTC.” Dragon 40 went on to identify most organizations have continually produced low lethality averages in both offensive and defensive engagements.

For mechanized forces, lethality begins at the crew level; a graduate of Master Gunner School is well equipped to assist Commanders at all echelons with developing training plans that focus on refining or in many cases, rebuilding lethality. For all master gunner courses (Abrams, Bradley, Stryker, and Common Core), the unit training plan is the tie that binds. Every graduate is evaluated on their ability to process the information provided during the course and back brief a panel of instructors on how they plan to implement the concepts trained during the course once they return to their unit. During these briefings, nothing relevant to the course is off limits. Students are required to not only know the material but know how to implement it.

Training Circular (TC) 3-20.31, **Training and Qualification Crew**<sup>4</sup> defines the duties of the company master gunner as follows.

- Develop and implement live fire gunnery standard operating procedures.
- Track weapons system maintenance tasks and advise the commander on maintenance status.

- Maintain weapon system firing data.
- Assist in the integration of newly assigned Soldiers.
- Establish and conduct initial skills training for new vehicle commanders and gunners.
- Assist in training new crew members.
- Train and certify vehicle crew evaluators.
- Recommend placement of new arrivals to the commander and command sergeant major or first sergeant.
- Recommend crew assignments for all platforms within the unit.
- Assist all elements in the unit concerning direct fire training and employment.
- Forecast and manage ammunition through the Training Ammunition Management Information System. Manages ammunition accounts for all subordinate units.
- Resource and request training areas and ranges through the Range Facility Management Support System.
- Manage direct fire training documents, gunnery skills test records, simulation training records, and crew rosters.
- Establish and oversee gunnery skills test training and evaluating the results.
- Coordinate the pickup, training, use, installation, troubleshooting, and turn-in of all Training Aids, Devices, and Simulations Systems (TADSS) required for conducting effective training.
- Certify and recertify other instructor/operators, if senior instructor/operator qualifies, to conduct crew direct fire training simulations training.

- Develop, validate, and manage games for training scenarios supporting the unit training program and the gaming Gate to Live Fire exercises.
- Plan and manage crew direct fire training simulations training.
- Train crews on TADSS device-based direct fire training systems (installation, bore sighting, and troubleshooting procedures, point of aim, and maintenance).
- Oversee all direct fire training and execution.
- Maintain live fire training standards on all ranges.
- Advise the commander of the tactical capabilities and limitations of all platform weapon systems against threat systems (while in a tactical environment and in coordination with the intelligence staff officer [S-2]).

For the duties of the battalion and brigade level master gunner, refer to TC 3-20.31.

Arguably, there is no one better equipped to coach, train, and mentor you on lethality, maintenance, and training than your master gunner. The unit master gunner has proven themselves to a panel of subject matter experts, why are you not allowing your master gunner to prove themselves to you? Sit down with your "MG" and have a conversation about what they can do for you and your organization.

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## Notes

1 Sorley, Lewis. "Prologue," Press on! Selected Works of General Donn A. Starry, vol. 1, Combat Studies Institute Press, U.S. Army Combined Arms Center, Fort Leavenworth, KS, 2009, page IX.

2 Partridge, Ira L., "1975-2000: 25 Years of Master Gunner Training," ARMOR magazine, 2000, pages 19-21.

3 III Armored Corps. "Lethality Report on State of the Armored Brigade Combat Team (ABCT) Direct Fire Weapon Systems (M1 Abrams and M2 Bradley Family of Vehicles)," Sept. 20, 2019, page 3.

4 Headquarters, Department of the Army, Training Circular (TC) 3-20.31 Training and Qualification, Crew, Chapter 2, Crew Training Program (2015).

## ACRONYM QUICK-SCAN

**NCO** - non-commissioned officer  
**NTC** - National Training Center  
**TADSS** - Training Aids, Devices, and Simulations Systems