



1975-2000: 25 Years of Master Gunner Training

by Sergeant First Class Ira L. Partridge

Photo by Robert L. Stevenson

Calendar year 2000 is not only the dawn of the new millennium, it's also the 25th anniversary of the master gunner program. Since the first three pilot classes in 1975 — for the M60A1, M551 Sheridan, and the M60A2 tanks — the program has produced 3,871 master gunners. The influence of the master gunner on Armor unit readiness during the last 25 years cannot always be quantifiably measured, but since the program's inception, the master gunner has been the one to call when a tank has any kind of problem.

Where it all began

The master gunner program was created following the Middle East War of October 1973, a struggle that included the first major tank-versus-tank fighting since the end of World War II. The war caused many senior leaders to analyze U.S. Army doctrine and tactics based on lessons learned. Israeli tank doctrine leading into that conflict was mistakenly based upon armor-pure formations,¹ a doctrine validated by the fighting in the Sinai during the 1967 Mideast War, where victory was obtained by deep penetrations and rapid envelopments using tanks. Incorrectly identifying the reason for success, these assumptions elevated dependence on the tank to the point of excluding the other ground forces, leading to “all-tank” units by 1973. Additionally, in early battles, no

attempt was made to close by maneuver. These “all-tank” units would charge from online formations without any type of overwatching fire, expecting defenders to break and run at the sight of charging tanks. In the opening battles of the 1973 war, these tactics left the armor-pure formations susceptible to anti-tank hunter-killer teams because the tanks lacked infantry support, resulting in a 50 percent loss rate. However, commanders soon realized that the problem was the “all-tank” formation, so they switched back to tactics employing tanks, artillery, and infantry in coordinated combined arms maneuver. Tankers were also forced to re-learn “position improvement,” the use of terrain to mask movement, and movement by bounds under the cover of other tanks, instead of wildly “charging” defensive positions. The cost of learning this lesson of combined arms warfare was a staggering price in blood, and victory was only achieved by incredible luck and improvisation.

In early 1974, senior U.S. Army leaders had begun to analyze these armor battles, knowing that American armor might face the same type of combat. The Army was drawing down from its Vietnam-era, jungle/guerrilla warfare mentality and the senior leadership was looking for a new focus. One lesson learned from the 1973 war was that the tank that fired first with accuracy was the tank

that usually won, and that armor unit readiness and tank gunnery proficiency are tremendously important on the battlefield. Tank crew proficiency at every level is essential; sufficient force, good equipment, and sound methods of employment in themselves are not enough.²

This analysis prompted senior officers at the Armor School to conduct a staff study to determine the best way to improve Armor unit readiness and gunnery proficiency. The study included visits with commanders in the field, and determined that each unit should have a tank expert to assist the commander and advise him in developing and executing his gunnery program. Thus was born the master gunner concept for the American Armor Force.

Drawing on a British Army tradition, the term master gunner is derived from the phrase “master of gunnery,” with a master being defined as a workman (NCO) qualified to teach apprentices (armor crewman) and to carry on his trade independently. Gunnery is defined as the art and science of constructing and operating guns. In the British Army highly skilled noncommissioned officers were selected to attend specialized gunnery instruction at the Royal Armoured Corps Gunnery School, at Lulworth, England.

After TRADOC favorably reviewed the staff study, the Armor School was

directed to develop a program of instruction. The Chief of Staff of the Army, General Creighton W. Abrams, directed the Armor School to conduct a "Master Gunnery Course" on a one-time-only basis, teaching advanced gunnery subjects on the M60A1, M551, and M60A2 tank systems. The Armor School's pilot for the M60A1 graduated 12 students on May 16th, the M551 course graduated 10 students on October 3rd, and the M60A2 course graduated five students on December 18, 1975. Teaching these courses were NCOs selected from recent ANCOC graduates and instructors assigned to the Armor School's Maintenance and Weapons Departments who possessed tank systems expertise. The initial quotas of 12 students per class were divided equally between CONUS and USAREUR.

An Armor School Update, published after the 1974 Armor Conference, announced the Master Gunner Course as one of the new courses being designed:³ *"These courses which we are proposing will, we feel, have great application in helping to solve some of the training and maintenance problems in armor and cavalry units today. The Master Gunner Course should fill the need for seasoned, experienced, and trained NCOs to advise, train, and supervise unit gunnery programs. The purpose of this course is to prepare highly selected NCOs in the mastery of the weapons systems of the M60A1/A3, the M551, and the M60A2 and to provide a thorough understanding of tank gunnery techniques and programs. Master gunners will be stabilized for two years. We are hopeful they will be able to maintain the continuity of professional gunnery training within our units, which are often subject to personnel turbulence at critical times. The concept for the course has been approved by the Chief of Staff, and we expect to train enough master gunners to provide a master gunner for each battalion/squadron in FY 75 and one for each company/troop within two years after that."*

Based upon the success of the first graduate master gunners and numerous comments from Armor unit commanders, Department of the Army approved the Master Gunner Course in February 1976. On March 2, 1976, the first Master Gunner Class began and graduated 15 students on May 21, 1976.

Distinguishing the Program

There are many reasons for the continued success of the program and the superb training that all Master Gunner

Course students receive. The first of two essential elements is an expert cadre that possesses the needed knowledge and experience. Master gunner instructors are experts on the subject being presented and they professionally present that subject. These instructors know *not only* the answers to the questions students raise, but often the answers to the questions that students don't usually ask.

The second essential element is a student trained up to baseline proficiency on the fundamentals of the tank system. These two elements combine to complete the concept of master gunner training, taking a soldier who is proficient in his tank, and turning him into an expert. Course entrance prerequisites epitomize the baseline of training, each prerequisite selected for the specific skills it represents. For instance, an SSG without tank commander (TC) experience, who has never qualified a tank from the TC position, cannot relate, train, or have credibility with TCs when training proper qualification procedures. Prerequisites also identify the top 10 percent of Armor Force NCOs, which is the target personnel resource base for master gunner candidates.

The original prerequisites for the courses were:⁴

- Active or Reserve
- Rank of SSG to SFC
- Minimum two years as TC
- Passed TCQC (Tank Crew Qualification Course, predecessor to TCPC)
- Volunteer
- "Handpicked" by the battalion commander
- Secret Clearance
- "After completion of the course be eligible for retention in his unit for a minimum of two years in the duty position of Master Gunner"

Prerequisites for these initial courses, announced in *ARMOR Magazine*, were slightly different:⁵

- Highly motivated
- 11E (pre-19 series tankers) volunteers E6 and above
- Qualified on Table VIII within the past 24 months
- Selected by the commander
- Two years retention by the unit that sent the individual to school after completion of the course
- Security clearance (SECRET)
- "Master Gunner candidate must be an individual who will be respected by his peers and listened to by his superiors"

These two sets of prerequisites comprise what was thought to be the necessary baseline skills that a master gunner would need. Throughout the history of the course, prerequisites have remained similar, but not without change. The rank requirement changed (automatic waivers are authorized by the Chief of Armor) to allow promotable sergeants to attend. Being "handpicked" was replaced by a requirement for a battalion commander interview. Two year stabilization was amended to an option available to the unit, with a 10-month service retention becoming the requirement. Added to the original prerequisites was a minimum GT score of 105, CO score of 110, and graduation from BNCOC. As stated, all prerequisites were selected for the specific skill they represent, and to distinguish the top 10 percent of all Armor NCOs.

Credibility is the Bottom Line

Key to initial approval of the Master Gunner Program was the credibility established by those first master gunners who took the knowledge out of the school and into the field. Graduates who share their acquired knowledge and train other tankers and tank crews are master gunners. Graduates who fail to impart this knowledge become highly trained tank commanders or platoon sergeants. Regardless of the position the master gunner is filling, he must pass on this acquired knowledge to maintain the credibility of being a master gunner. Credibility has been, and should always be, an essential element for the continued success of the Master Gunner Program. Without that credibility in the field there would be no Master Gunner Program. Quality, not quantity, is at the heart of master gunner credibility.

Information flow to and from the field via articles, newsletters, the Master Gunner Homepage,⁶ and new master gunners add to this credibility. In the early 1980s, *ARMOR Magazine* carried a "Master Gunner Corner." In one of these,⁷ the Master Gunner Program was described as a "tool for getting the knowledge out of the school and into field units, a highly technical course requiring above average intellect and motivation. Its brisk pace of instruction does not allow for students who cannot keep up."

The issue of credibility leads to two reasons why students are dropped from the course for not meeting academic standards. First, to ensure that the master gunner graduate is capable of producing

the results expected by his unit commander. After all, the master gunner is the linchpin for gunnery proficiency in Armor units. He has the knowledge that ties the three areas of a tank gunnery program together, which are turret maintenance, advanced gunnery techniques, and gunnery training management. Secondly, to protect the credibility of the master gunner, all master gunners currently serving in the field, and all the master gunners that served before. To graduate students for political congeniality is not maintaining the high standards of the course and is a disservice to the Master Gunner Program and master gunners.

Jobs and Tanks

From the beginning — until March 1985 — the master gunner's job description was relegated to the status of an additional duty. He was slotted as a platoon sergeant or operations NCO. Serving in either of these positions often distracted the master gunner from his primary mission of training tank crews and advising his commander. Currently, TO&E authorizes a SSG position in the headquarters platoon as company master gunner, with a go-to-war mission as the company commander's alternate TC. Battalions are authorized an SFC for battalion master gunner, with a go-to-war mission of augmenting the battalion maintenance section; battalion commanders have another SFC as alternate TC.

Current Training Configuration

The master gunner student is being trained to be the commander's tank gunnery table technical advisor. He will assist the commander and staff in planning, developing, conducting and monitoring the unit's tank gunnery tables program, to include turret maintenance programs to ensure proper readiness posture is maintained.

To become a master gunner, the student faces 11 weeks or 55 days of the most academically challenging training that armor noncommissioned officers can face. The course includes 441 total hours, of which 36 hours are administrative, 178 hours are maintenance training covered in Exams I through III, and 227 hours are gunnery training and training management covered in Exams IV through VII. The course standards have always been 100 percent to pass hands-on performance tests and 90 percent to pass written tests. Written tests are usually 10-question free response tests, covering each subject area.

During the M1A2 Transition Course, the student receives four weeks of training on those areas specific to the M1A2 tank. With 160 total course hours, of which 16 are administrative, 105 hours encompass maintenance training, covered on Exam I, and 39 hours encompass gunnery training, covered on Exam II. The course standards remain 100 percent to pass hands-on performance tests, and 90 percent to pass written tests. Written tests, again, are usually 10-question free response tests, covering the particular subject area.

Into the Future

The future of the Master Gunner Program holds bold and interesting developments in the training of new master gunner students. In the near term, soldiers in M1A2SEP units will continue to get additional training during the M1A2 Transition course. Eventually, all transition students will learn both the M1A2 and M1A2SEP. Further down the road the M1A1 Master Gunner Course will do the same with the M1A1 and M1A1D. Beyond that, the Master Gunner Course will ultimately return to its original configuration by dual-tracking the M1A1/M1A1D course with a separate M1A2/M1A2 SEP course. But new technology has not been limited to the vehicles; it's continually being incorporated and utilized to improve the training that master gunner students receive. New technology, like computers and the internet, are being used to increase the amount of information available to master gunners, and the Armor force, in the field.

Sometimes new ideas are developed or proposed on how to better train master gunners. Some are interesting ideas that deserve further development and inclusion, and some deserve to fade from view as bad ideas. With the dawn of the new millennium, many things are changing with the constant expansion of the Internet, and the expanded use of computer-based training utilizing CD-ROMs. Using this media can help to develop a better trained master gunner. However, one mission cannot change — the continuous effort to maintain the high standards of the Master Gunner Program. Since the course's inception, these high standards have remained the foundation for all training. Unfortunately, high standards mean that not every soldier can become a master gunner, and this can be unpopular when soldiers are sent back to their units for failing to meet the standard. But a high standard should always be the primary mission. Remember that quality, not

quantity, is the goal of the program. The demands of the job and what is expected of a master gunner are great; if the master gunner is not held to this high standard or prepared to meet the challenge, then the quality of the Armor force suffers.

The Master Gunner Program is a major contributor to why the American Armor force is the most respected in the world. New technologies and new training techniques will only make the program better, not simply produce more graduates. It continues to produce high quality, knowledgeable, and credible master gunners. The master gunner has, for the past 25 years, been sought out to answer any tank-related question, or when something just had to get done! The future should hold no less. Readiness of the Armor force is the goal of the Master Gunner Program. Let others pay in blood for *their* lack of readiness.

Notes

¹MAJ Edwin L. Kennedy, "The Failure of Israeli Armored Tactical Doctrine, Sinai, 6-8 October 1973," (*ARMOR*, Nov-Dec 1990), pp. 28-31.

²LTG John R. Deane Jr., Keynote address: "Armor Today and the October War," (*ARMOR*, Jul-Aug 1974), p. 35.

³Armor School Update, (*ARMOR*, Jul-Aug 1974), p. 45.

⁴Master Gunner Courses, (1975 U.S. Army Armor School, Self Study for Commission on Occupational Education Institutions), POI for Courses 020-F1 (M60A1/A3), 020-F3 (M60A2), and 020-F2 (M551).

⁵"Forging the Thunderbolt — Master Gunner," (*ARMOR*, Jan-Feb 1975), p. 8.

⁶Master Gunner Homepage: <http://147.238.100.101/school/16cav/mastgun/mgindex.htm>

⁷SFC James Barnes, Master Gunner Branch Chief, "Master Gunner's Corner: Only the Best Quality to be Master of Gunnery," (*ARMOR*, Nov-Dec 1981), p. 11.

SFC Ira L. Partridge received his initial Armor training at Fort Knox, Ky., in 1985. He graduated from the Master Gunner Course in 1993. His assignments as a master gunner include one year as a company master gunner and three years as battalion master gunner for 5-77 AR, 1st AD, Mannheim, Germany, moving with the unit in 1994 and redesignating to 1-32 AR, 2nd ID, Fort Lewis, Wash. He is currently serving as the newsletter editor, webmaster, and operations sergeant for the Master Gunner School at Fort Knox, Ky.