

Mortars in Cavalry Troops: Current Problems, Potential Solutions from an Observer/Coach/Trainer Perspective

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Mortar sections assigned to cavalry troops have a unique role to play in the success of the cavalry squadron's mission. Unfortunately this role is often misunderstood, and mortars are frequently underused to the detriment of the troop's mission success.

Mortar sections in cavalry troops are often unable to perform mandated tasks due to lack of equipment or personnel, which results from confusing modified table of organization and equipment (MTOE) configurations by type of squadron. Through our direct observations of multiple cavalry troops conducting decisive-action training during two years at the National Training Center (NTC), it is evident that mortar sections can be better employed during home-station training. Cavalry troops can also increase lethality and fires integration through MTOE changes, understanding the purpose of mortars in cavalry units and by incorporating combined-arms training at troop level.

Current problems

The current cavalry-troop mortar section MTOE configuration does not provide mortar sections with the proper equipment or personnel to properly support the troop's mission. In infantry-battalion mortar platoons, the fire-direction center (FDC) is manned by four Soldiers independent of the mortar squads. In cavalry troops as well as Stryker infantry companies, this process is augmented by using the section leader and one squad leader to serve as both the chief and check computer, respectively. As it currently stands, the MTOE does not account for the FDC's required function; it doesn't provide the section leader the required equipment to perform the role as FDC chief.

Because of this, mortar sections must develop tactics, techniques and procedures (TTPs) to address this shortfall. This happens with varying degrees of success.

A problem specific to armored brigade

combat team (ABCT) formations is the section leader's vehicle. That vehicle is currently a humvee with trailer, which differs from both infantry brigade combat team (IBCT) and Stryker brigade combat team (SBCT) formations – which have a Light Medium Tactical Vehicle (LMTV) with trailer. This configuration provides just less than one quarter of the ammunition able to be carried in an LMTV, thereby significantly decreasing the amount of time the mortar section can operate before needing to be resupplied.

A key personnel shortage in both the ABCT and IBCT formations is the lack of a driver for the section leader's vehicle. This is a shortcoming which requires the section to remove a Soldier from one of the mortar squads to man the vehicle. Also, the M1165A1 humvees or the general-purpose Joint Light Tactical Vehicle (JLTV) equivalent assigned to IBCT formations prevent mortar sections from conducting local security while moving throughout the battlefield due to the inability to mount their assigned crew-served weapons. This requires the development of TTPs to remedy this issue, which often requires augmentation of security provided by maneuver platoons.

These examples of shortcomings in assigned equipment require each element to develop unique solutions to address issues that arguably should not exist.

Recommended MTOE changes

Recommended changes to the ABCT

cavalry mortar sections' MTOE:

- Replace the section leader's humvee with an M1084 LMTV with materiel-handling equipment and trailer. Adding an M1084 LMTV and trailer will increase the section's ammunition capacity by 20,000 pounds, increasing the ability to carry ammunition from 128 rounds to 544 rounds,¹ bringing near parity in its ammo capacity with mortar sections in IBCTs and SBCTs. This will increase the troop's flexibility to operate for extended periods to provide more options to the commander.
- Add a driver to operate the section leader's vehicle (military-occupation specialty (MOS) 11C10). Adding a driver allows the section leader's vehicle to be manned without taking a Soldier from a mortar track to operate his vehicle.
- Add an M151 Mortar Fire-Control System-Dismounted (MFCS-D) FDC variant to the section leader's vehicle. Adding FDC equipment enables the section leader to properly perform his doctrinally assigned duties as the FDC chief.²

Recommended changes to the SBCT cavalry mortar sections MTOE:

- Add an M151 MFCS-D (FDC variant) to the section leader's vehicle. Adding the FDC equipment will allow the section leader to properly perform his role as the FDC chief.
- As it stands currently, the SBCT formation is the best equipped and most flexible of all the cavalry mortar sections. This is due to its extensive



Figure 1. Recommend changes to the ABCT cavalry mortar section. Note for all three figures: Deletions are highlighted in red, additions are highlighted in green. (Graphic adapted from Army Techniques Publication (ATP) 3-21.90)

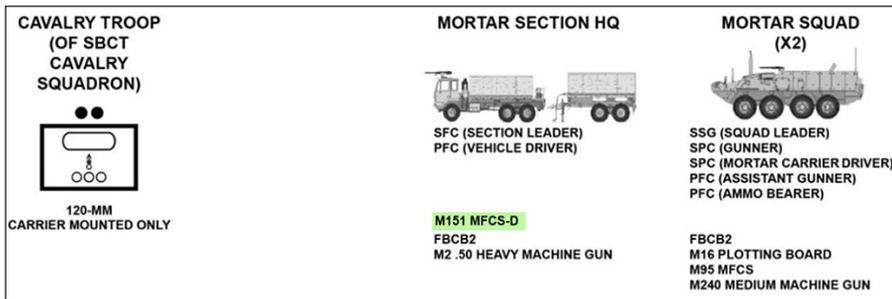


Figure 2. Recommend changes to SBCT cavalry mortar section. (Graphic adapted from ATP 3-21.90)

ammunition capacity and its 12 assigned Soldiers, compared to nine Soldiers in both ABCT and IBCT formations.³

Recommended changes to the IBCT cavalry mortar sections MTOE:

- Replace both M1165A3 humvees (or general purpose JLTV variant) with M1151 uparmored humvees (or heavy gun carrier JLTV variant). Adding uparmored humvees allows the section to provide local security while maneuvering due to its ability to mount their crew-served weapons. This will increase flexibility and protection for mortar sections by enabling them to provide their own local security.
- Add three Soldiers (MOS 11C10). One Soldier will fill the currently vacant role as the section leader's driver. The other two Soldiers will perform crew-served gunner roles on the humvees to provide local security and assist as additional ammunition bearers in low-threat areas.
- Add an M151 MFCS-D to the section leader's vehicle. Adding the FDC equipment will allow the section leader to properly perform his role as the FDC chief.⁴

Roles and responsibilities

The role of the mortar section within the cavalry troop is unique compared to a battalion mortar platoon and is often misunderstood. More specifically, it's the section leader's role within the troop that's misunderstood. Different from a mortar platoon, the mortar-section leader is charged with performing the same duties and warfighting functions as the mortar-platoon leader, platoon sergeant and

fire-direction chief.⁵ In defiance of doctrine, some units assign him/her with additional responsibilities or duties such as supervising the troop-headquarters section.

The mortar-section leader is responsible for not just his/her section but must also assist in planning fires and ensuring they are nested with the maneuver plan. The mortar-section leader must be involved and present in the troop-planning process to effectively incorporate the troop's mortars and remain synchronized. The fire-support officer (FSO) is not organic to the troop and is frequently absent for all but higher-level collective-training exercises. Therefore the role of the section leader is vital in fires planning to ensure the seamless integration of a new FSO into the process. When the commander solely relies on his FSO to assist in fires planning without the mortar-section leader involved, synchronization between the fire and maneuver plan is seldom achieved.

Also, complete understanding of the clearance of fires process at the troop level is often misunderstood. If not specified otherwise, the troop commander is the clearance authority for his mortars within his assigned sector or area of operation. This usually causes problems when aircraft are

involved, or clearly defined boundaries or positions between troops or adjacent units are not established. If a squadron does not establish clear boundaries, then troop commanders must make them and coordinate with adjacent units.

Therefore the mortar section and the troop command post must remain synchronized, with each maintaining current and accurate maps and graphics, digital and analog. This creates a true common operating picture, containing both graphic-control measures and fire-support coordination measures, and ensures it's shared with squadron.

Training deficiencies, solutions

Combined-arms training at troop level is often neglected at home station, and the incorporation of indirect fires with combined-arms maneuver is frequently executed for the first-time during combat-training-center rotations. This stems from a variety of issues such as a condensed training schedule, lack of cooperation with fire-support elements assigned to field-artillery battalions, or two parallel but unsynchronized training plans between fires and maneuver. The latter is normally the major issue and is prevalent throughout most cavalry squadrons.

When it comes to mortar gunnery and qualification, there is usually a knowledge gap at both the troop and squadron level. There is no mortar master gunner course in the Army; therefore current master gunners have no formal knowledge of mortars. The linchpin in this process is the mortar-section leader. In successful units the senior section leader is the one driving the mortar training plan for the squadron. However, the systemic lack of

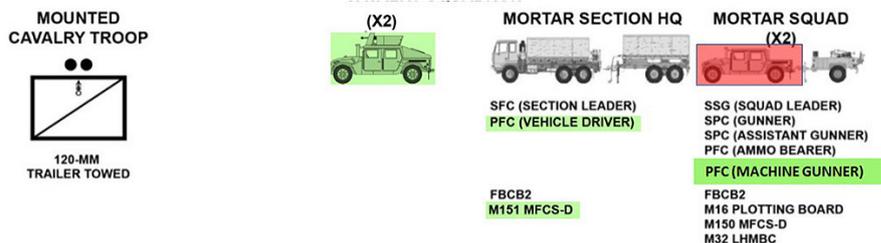


Figure 3. Recommend changes to IBCT cavalry mortar section. (Graphic adapted from ATP 3-21.90)

formal mortar knowledge within the squadron often prevents commanders from understanding or identifying underperforming mortar sections.

As an alternative, we recommend units conduct their Mortar Training and Evaluation Program (MORTEP) concurrent with a unit's tank/Bradley/Stryker gunnery program. Squadrons should consolidate their troop mortar sections under the control of the senior mortar-section leader in the squadron, and train and test gunner and FDC exams concurrent with the squadron's Gunnery Skills Test training/testing program. Unless the squadron's master gunner is an Infantry Mortar Leader's Course (IMLC) graduate, the master gunner should not develop a detailed mortar training plan but should instead align resources so the MORTEP can happen concurrent with crew gunnery.

By conducting the MORTEP concurrent with crew gunnery, the training glidepaths between vehicle crews and mortar squads stay aligned. The gunner and FDC exams must be evaluated by an IMLC graduate external to the section or a battalion mortar platoon's platoon sergeant.⁶ Once complete with gunner and FDC exams, the consolidated mortar sections can complete mortar gunnery Tables II (preliminary live-fire simulations) and III (drills) in garrison with internal evaluation.⁷

MORTEP Tables IV-VI are all conducted as live-fire events on a range. The squadron's fire-support element should provide overall command and control for the training event because forward observers are recommended for Table IV (basic)⁸ and required for Tables V and VI.⁹ While the execution of the event should be led by the squadron's FSO, troops from across the squadron must also provide the requisite range support. The brigade must also task another battalion's mortar platoon to externally evaluate the squadron's mortar sections for Table VI (qualification).¹⁰

Although this article recommends that the squadron FSO oversee the MORTEP, commanders are ultimately responsible for the training proficiency of their mortar sections.

Mortar-section leaders must backbrief their commanders on the MORTEP training plan early in the planning process to allow commanders to modify the training event if necessary to ensure all training objectives are met. Commanders must also oversee the MORTEP during each table to ensure each training event is being run properly and tasks are being trained to standard.

Following MORTEP, troop mortar sections must train during each collective-training event, starting at the section level. Beginning with situational-training exercises (STXs), scout sections must call for fire, and the entire fires approval and execution chain must rehearse its role in, at minimum, a simulated manner. Doing this properly requires the observer, section leader, platoon leader, FSO, troop commander and the mortar section clearance of fire rehearsed during each fire mission.

Mortar-section leaders must battle-track and serve as the FDC for each fire mission, and mortar squads must rehearse their crew drills up to hanging simulated rounds. During subsequent training events, from platoon STX training through brigade external evaluations, mortar sections (and the troop fire-support element) must continue to train their assigned tasks for every simulated fire mission. If mortar sections train their tasks during each simulated call for fire mission in all training events following the MORTEP, the mortar section will prove the most well-trained and well-rehearsed section in the troop.

Conclusion

An updated MTOE, greater clarity on roles and responsibilities, and increased combined-arms training at the section through troop levels will result in vastly improved mortar sections. While having mortars at the troop level gives cavalry troops a distinct advantage, if not properly incorporated they can become a wasted asset. The ability to effectively synchronize the troop's maneuver and fires plan consistently leads to greater success on the battlefield. Therefore understanding the shortcomings within our formations and recommending changes

to better the force is the way forward. Although successful units find ways to make what they have work, starting with the right tools and people where they need to be will increase the effectiveness of these units.

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Notes

¹ ATP 3-21.90.

² Ibid.

³ Ibid.

⁴ Ibid.

⁵ Ibid.

⁶ Training Circular 3-20.33, *Training Qualification and Mortars*.

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

ACRONYM QUICK-SCAN

ABCT – armored brigade combat team
ATP – Army techniques publication
BCT – brigade combat team
FDC – fire-direction center
FSO – fire-support officer
IBCT – infantry brigade combat team
IMLC – Infantry Mortar Leader's Course
JLTV – Joint Light Tactical Vehicle
LMTV – Light Medium Tactical Vehicle

MFCSD – Mortar Fire-Control System-Dismounted
MORTEP – Mortar Training and Evaluation Program
MOS – military-occupation specialty
MTOE – modified table of organization and equipment
NTC – National Training Center
O/C/T – observer/coach/trainer
SBCT – Stryker brigade combat team
STX – situational-training exercise
TTP – tactics, techniques and procedures



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Derived from Center of Military History information provided at <https://history.army.mil/html/moh/civwaral.html>. Listed alphabetically. Note: Asterisk in the citation indicates the award was given posthumously.

PITMAN, GEORGE J. SGT
Unit: Company C, 1st New York (Lincoln) Cavalry. Place and date of action: Sailors Creek, VA, April 6, 1865. Entered service: Philadelphia, PA. Born: Recklestown, NJ. Date of issue: May 3, 1865. Citation: Capture of flag of the Sumter Heavy Artillery (CSA).

PLATT, GEORGE C. PVT
Unit: Troop H, 6th U.S. Cavalry. Place and date of action: Fairfield, PA, July 3, 1863. Born: Ireland. Date of issue: July 12, 1895. Citation: Seized the regimental flag upon the death of the standard bearer in a hand-to-hand fight and prevented it from falling into the hands of the enemy.

POND, GEORGE F. PVT
Unit: Company C, 3rd Wisconsin Cavalry. Place and date of action: Drywood, KS, May 15, 1864. Entered service: Fairwater, Fond du Lac County, WI. Born: Lake County, IL. Date of Issue: May 16, 1899. Citation: With two companions, attacked a greatly superior force of guerrillas, routed them and rescued several prisoners.

POND, JAMES B. 1LT
Unit: Company C, 3rd Wisconsin Cavalry. Place and date of action: Baxter Springs, KS, Oct. 6, 1863. Entered service: Janesville, Rock County, WI. Born: Allegany, NY. Date of issue: March 30, 1898. Citation: While in command of two companies of cavalry, was surprised and attacked by several times his own number of guerrillas but gallantly rallied his men, and after a severe struggle, drove the enemy outside the fortifications. Pond then went outside the works and, alone and unaided, fired a howitzer three times, throwing the enemy into confusion and causing him to retire.