

# TRAINING NOTES



## TOW Training Strategy

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During the past year there has been much discussion about the performance of the TOW at the National Training Center (NTC) as a part of the combined arms team. The lower than expected probability of hit (Ph) data with TOW MILES and the basic TOW that has been collected at the NTC has led the Infantry School to ask the following questions:

- What is a reasonable standard of performance for the TOW as a part of the combined arms team?
- Why is there a variation between the desired standard of performance and the current TOW performance at the NTC—and at the newer Joint Readiness Training Center (JRTC) as well?
- What training strategy do we need to get us to the desired standard?

Today, the band of performance for the TOW at the NTC ranges between a .2 Ph for TOW MILES and a .4 Ph for the live basic TOW missile. These hit probabilities are much lower than the Ph called for in the TOW and TOW MILES requirements documents and have led to many questions concerning the effectiveness of the infantry's antiarmor capability. The School believes that somewhere between the standard called for and the actual hits on the NTC's simulated bat-

tlefield lies the desired standard for TOW as part of the combined arms team.

In coming up with that acceptable standard, the School has had to consider many factors, such as established Phs and probabilities of kill (Pks), the addition of the man/crew/unit operating under stress, the battlefield obscuration used, the type of TOW system employed, the ammunition used, the tactical mission performed, and especially the limitations of TOW MILES. (The TOW MILES cannot penetrate obscuration; it has a fixed time of flight—12 seconds—that is not range dependent; it does not cue the gunner when the 12 seconds have elapsed; and it cannot be collimated with the night sight.

Considering all of these factors, a reasonable standard for TOW MILES performance at the NTC (force on force and live fire) should be about .5 Ph under conditions of moderate obscuration. Variables that will increase or decrease a unit's ability to achieve this standard include the unit's training, its application of doctrine, its maintenance posture, and the METT-T (mission, enemy, troops available, terrain, and time) conditions it encounters on the simulated battlefield.

In an effort to zero in on lucrative

areas for improvement, the Infantry School has designed a TOW training strategy that is intended to do the following:

- Improve individual/crew/section/platoon TOW MILES gunnery under battlefield conditions.
- Increase leader proficiency in TOW unit employment.
- Increase soldier and leader confidence in the TOW system.
- Improve the performance of TOW MILES at the combat training centers.
- Ultimately obtain more TOW kills in war.

We are beginning to understand what TOW MILES can and cannot do for us, but we still believe that it is a satisfactory simulator for the basic TOW missile. Units must be proficient with TOW MILES because, like it or not, TOW MILES will continue to be used to measure unit proficiency at the combat training centers.

There are some initiatives in progress that will make it better in the future. These include an improved MILES laser, a built-in end-of-missile-track indication (which will tell the gunner when his required 12 seconds of tracking time is up), and a TOW night sight collimation improvement scheduled to begin soon.

The School's proposed TOW training strategy will add to the present requirement for TOW gunners-- which is to qualify on the M70 training device --by introducing a series of MILES gunnery tables and situational training exercises (STXs) that will qualify individuals and crews.

These tables and STXs (see chart) were designed to be sequential and progressive with specific, measurable standards for the qualification events. They also provide for the integration of the precision gunnery training system (PGTS) and advanced gunnery. If the strategy is fielded, a TOW gunner will be required to fire Table 5 successfully to be qualified or verified. This table, which contains a mix of Tables 2-4, is a pure MILES gunnery table containing six TOW MILES shots at armored vehicle targets that are at various ranges and moving at variable speeds. It is best when used on the multi-purpose range complex (MPRC) but is adaptable to almost any home station situation. Four of six hits for qualification should be a reasonable indicator of gunnery proficiency on a clear battlefield and a logical building block to

the higher levels of proficiency. The M70 training device will continue to be used to train and sustain tracking and point-of-aim skills.

The focus of the crew qualification STXs is on gunnery, battle drills, and tactics. The scoring of the STXs is

TOW Tables and STXs	
Table 1:	Gunnery Training (M70)
Table 2-4:	Preliminary Gunnery Qualification Tables (MILES)
Table 5:	Gunner Qualification (MILES)
Table 6:	Advanced Gunnery (PGTS, when fielded)
Table 7:	Squad Intermediate STX
Table 8:	Squad Qualification STX
Table 9:	Section Intermediate STX
Table 10:	Section Qualification STX
Table 11:	Platoon Intermediate STX
Table 12:	Platoon Qualification STX

based upon the successful accomplishment of individual, crew, and leader tasks.

An in-house validation is now being conducted at Fort Benning on the proposed MILES tables and STXs. Part of this validation will involve the use of live TOW missiles to confirm that the new strategy will result in more live missile hits against uncooperative moving targets than are achieved with the present strategy.

If the new strategy does show a significant increase in TOW effectiveness with live missiles, we will begin an external validation process: A light MTOE unit and a heavy MTOE unit will be asked to use the strategy in preparing for their rotations through the JRTC and the NTC, respectively. Then, while the units are at the training centers, their TOW performance will be compared with that of like units that have not used the strategy. (Additional information on the TOW training strategy is available from the Enlisted Training Branch, DOTD, USAIS; AUTOVON 835-1612/1788.)

If this external validation proves that the new strategy does lead to the attainment of higher TOW standards, it will be implemented throughout the Army in 1989.

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# Light Infantry FDC

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In an infantry battalion mortar platoon, its fire direction center is also its nerve center. If the FDC is to provide responsive and effective indirect fire support, it must be configured so as to facilitate the rapid and accurate computing of fire control data.

With the advent of the light infantry concept and the introduction of the

high mobility multi-purpose wheeled vehicle (HMMWV), the FDC in a light infantry battalion was moved from the M561 Gamma Goat to the HMMWV but without a specific configuration or standing operating procedure for its organization in that vehicle.

The mortar platoon of the 4th Battalion, 27th Infantry, 25th Infantry

Division (Light) has developed an FDC structure that not only meets the battalion's needs but also complements the light infantry's streamlined, rapid deployment characteristics.

In developing an effective FDC configuration for the HMMWV, the battalion had to meet a number of key requirements: