

TOW GUNNERY WITH A MOTORIZED TWIST



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The 9th Infantry Division (Motorized) developed its TOW Tables in 1986, shortly after it received its full complement of TOWs mounted on the M966 HMMWV (high-mobility multipurpose wheeled vehicle) and has extensively revised them ever since. (See "TOW Gunnery: The Motorized Approach," by Lieutenant Colonel Gregory C. Camp and Captain David H. Olwell, *INFANTRY*, September-October 1987, pages 22-25.)

The TOW gunnery program consists of nine separate tables that are built on the foundation of a quarterly TOW Gunners Skill Test and TOW Leaders Evaluation. These evaluations ensure that crew members and supervisors know how to maintain their TOW systems and place them into operation before conducting training, and both do an admirable job of sustaining the skills of the TOW crews.

TOW Tables I and II consist of practice and record tracking, using the DX-164 TOW training device, which is vastly superior to the M70A2 device. Table III consists of M966 HMMWV TOW crew drill. Tables IV and V are practice and record TOW squad courses, while Tables VI and VII consist of the practice and record section courses. Tables VIII and IX, the TOW platoon practice and record courses, complete the program.

Because the TOW II is the pivotal weapon system in today's motorized division, this training evaluation is critical. Con-

sequently, it is usually resourced and conducted by the brigades during their high-priority training sessions. During a recent training session, the division's 3d Brigade significantly expanded this training concept and integrated tough, battle-linked situational training exercises (STXs) into TOW Table V (TTV) to remedy some training weaknesses that had been identified during a rotation at the National Training Center (NTC).

One of these weaknesses was in identifying obstacles and any bypasses around them. The HMMWV TOWs' vulnerability to dismounted infantry at close range was another area that needed work. In addition, the OPFOR Hind helicopter-surrogates at the NTC had caused the brigade unacceptably high casualties in two battles, largely because of inadequate reactions by the TOW squads, and this also needed fixing.

The 3d Brigade planned to send each of its TOW squads through the expanded and toughened-up TOW Table V during a high priority training program. It also planned to conduct NTC standard after-action reviews (AARs) using the excellent training and experience gained from the NTC training. The TOW Table V was resourced by the brigade's master gunners. (These master gunners are exceptionally well trained and proficient 11-H noncommissioned officers who are graduates of the division's Master Gunner Course—an intensive two-week course on TOW training, maintenance, and tactical employment.)

To ensure good critiques and standardized evaluations, the brigade decided to use only a small number of TOW crew evaluators. Each master gunner evaluator was equipped with a hand-held radio and a stop watch, along with the other administrative material he would need to talk to TTV range control and the target drivers, and to record the elapsed times for the critical events. Each was also assigned a soldier with a video camera-recorder and a supply of tapes; this would help him to record the key events so that they could be used in the AARs conducted by the master gunners immediately after the battle run.

The targets for the TOW table consisted of 15 Soviet-look-alike vehicles provided by the Fort Lewis Training Support Center (TSC)—five three-dimensional fiberglass T-72 visual modification (VISMOD) kits, and ten three-dimensional fiberglass or sheet metal BMP or BRDM VISMOD kits. All of these targets were equipped with the MILES Interim Mobile Independent Target System (IMITS) detector indexed to the appropriate protection level for the vehicles they represented. The soldiers who manned these target vehicles were controlled on a separate frequency by the range officer-in-charge and a master gunner in the TTV range control bunker.

Before dawn on the day the crews were to execute the course, the squad and platoon leaders reported to the command post bunker to receive their operations order (OPORD). The order developed a realistic scenario in which an evaluated unit would conduct a relief in place of another unit with an enemy force expected in sector within two hours. The enemy would be a combat reconnaissance patrol and advance guard.

ISSUE OPORD

From an observation post co-located with the company command post, the range officer issued the OPORD to the platoon and squad leaders and oriented them to the terrain and the target reference points (TRPs). After receiving the OPORD, the squad leaders returned to prepare and inspect their crews and vehicles and to verify their MILES devices against a distant target. The platoon leaders led the squads down range to set the example.

During the standard TOW Table V, the master gunners evaluated the engagements from a total of six firing points (FPs). The crews encountered a different array of targets and ranges at each point. Range cards provided by the unit they had just relieved oriented the crews on their sectors.

After a squad occupied a firing point, range control directed that the targets begin their runs from hidden holding areas. Moving at realistic speeds and directions, the targets entered the squad's sector of responsibility. The master gunners evaluated the crews on detecting and reporting targets, establishing the targets' engageability and priority of engagement, conducting crew drills, and destroying targets. The members of each squad reported on the control net to their platoon leader. From him, they received correct tactical instructions to reposition to subsequent firing positions as the situation warranted.

DAY PHASE			
FP	TARGETS	ACTION	RANGE (meters)
1	1 BRDM	Moving obliquely forward	2000-1500
2	1 BRDM	Moving frontally	1200-800
3	1 BRDM	Moving obliquely	3000-2500
	1 T-72	Overwatching BRDM	2700
4	1 BRDM	Moving obliquely	3000-2500
	1 T-72	Overwatching BRDM	2500
5 (MOPP-4)	1 BMP	Stationary	1700
6	3 T-72s	Moving obliquely	3300-3000
	Attacking		

Targets are all 3-D MILES-equipped VISMODS. All ranges are from target appearance to end of presentation.

Table 1

When the squads moved to their subsequent positions, the master gunners evaluated them on their terrain driving and occupation skills. The complete spectrum of crew skills was evaluated with the introduction of a MOPP-4 engagement at FP 5 and a disabled vehicle and dismounted and engagement at FP 6. (The target array and ranges for each firing position used for the day phase are shown in Table 1.)

At the conclusion of the engagement from FP 6, a crew's company commander or platoon leader replaced the master gunner and then rode with and evaluated the crew during the STX phase of the course.

This phase of the evaluation was tactically structured by having a squad withdraw along a designated route from its final firing position. The squad's destination was another battle position overwatching an engagement area several kilometers to the south of the original FPs. As it withdrew, the squad navigated through lanes in friendly obstacles that had been emplaced to impede the enemy advance.

Intelligence on the platoon net indicated that enemy motorized elements might have infiltrated and established ambushes along the withdrawal route. As a squad moved down the designated route, it encountered a hasty minefield and was expected to detect the obstacle, report it, find a quick bypass around it, and continue its withdrawal. Shortly after bypassing this suspected enemy obstacle, the squad came under fire from a close-in ambush that blocked its withdrawal route.

The training objective for this STX was to identify the enemy, take evasive action, place immediate suppressive small arms fire on him, and continue the withdrawal along a designated alternate route.

The enemy at this STX site consisted of an actual Soviet BTR-60P and some RS-31 pop-up targets that simulated a dismounted squad emplacing another minefield and preparing for an ambush. All of the targets were equipped with MILES detectors, and the enemy personnel targets would drop if they were accurately suppressed by the TOW squad. A controller hidden nearby initiated the ambush when the squad came around a corner in the woodline about 200 meters away. To add battlefield realism, pneumatic artillery and machinegun simulators were used to simulate the engagement of the TOW

NIGHT PHASE			
FP	TARGETS	ACTION	RANGE (METERS)
1	2 T-72s	Moving obliquely	3000-2500
2 (MOPP-4)	1 BMP	Moving near IRP	3000-2500

All target arrays are controlled by video display terminal and with the collimator and MILES M73 TOW/Thyde/STX simulator.

squad with an RPG rocket launcher and a machinegun.

A squad was considered successful if it quickly identified the ambush before it could be executed and bypassed the kill zone, as well as calling for indirect fire. For AAR input, the hidden target controller gave the range control bunker and the master gunner his observations from the enemy's perspective.

After encountering the close-in ambush, the TOW squad was forced to deviate to an alternate withdrawal route through more open terrain, where it came under attack from a Hind-D helicopter. Another hidden target controller operated another pneumatic machinegun and a series of ATTS (automatic tank target system) target lifters equipped with Hind-D silhouettes and Hoffman devices. The controller sequenced the target presentation to give it the appearance of an attacking Hind-D. (The application of acetate windshields and red stars added realism to the targets.)

A TOW squad succeeded on this STX if it detected the threat early, conducted evasive driving, and sought a more covered withdrawal route through a nearby woodline.

After evading the Hind-D attack, the squads were directed to the AAR site, where, after a short break, the master gunner started his portion of the AAR. Selected portions of the video tape were replayed to emphasize the key lessons.

Once the master gunner had completed his portion of the AAR, the company commander or platoon leader who had received input from the range control bunker and target operators began his AAR.

Careful scheduling had also allowed the company commanders to evaluate their platoon leaders on the course and to certify their skills. The squads from different platoons were sequenced down-range so that each newly certified platoon

leader could ride with each of his squads to identify the strengths and weaknesses in his battle drills and SOPs. This worked exceedingly well, because the unit leaders became thoroughly involved in fixing the weaknesses already identified.

After the AAR, the squads were released to conduct corrective training and prepare for the night phase (TOW Table V-B). Time and an adequately resourced training area were provided for this corrective training. As in the day phase, all of the TOW systems were verified at night against a distant target before a squad began its evaluation. (The target arrays and ranges for the night phase are shown in Table 2.)

Fortunately, the recent introduction of the collimator adaptor assembly and new adjustable M73 MILES daysight tracker simulator now allow realistic gunnery at night. This is an absolutely essential skill in the motorized division, which conducts a significant percentage of its operations during darkness to exploit its superior technology, specifically the night vision goggles and the AN/TAS-4A TOW thermal night sight. With these new devices TOW MILES equipment can be used 24 hours a day.

After the TOW squads had executed both the day and the night phases of TOW Table V and conducted detailed after-action reviews, they showed supreme confidence in their skills and their equipment. This confidence was exhibited in the target kill percentages at the NTC, where the members of the brigade killed significantly more OPFOR vehicles with TOWs than the average rotational unit training there.

The gunnery program works, and works well. The addition of an STX phase provided a realistic battlefield experience and allowed the 3d Brigade to correct its identified shortfalls. The training is realistic, demanding, and fun. It trains the crews, interjects healthy competition, and provides the skills they need to defeat enemy armored forces and survive.

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