

large number of additional duties, including, on occasion, serving as an investigating officer in formal investigations. Unlike line companies, where four or five lieutenants perform the additional duties, the IET company XO must manage all of those duties by himself. He must also ensure that all reports, many of which are associated

with his additional duties, are properly processed by their suspense dates.

With all of these responsibilities, an IET company XO must be a highly versatile officer who can oversee a variety of activities. It is not a job for the faint-hearted. But if he does his job well, he will have the satisfaction of knowing that the soldiers his com-

pany has trained are some of the finest infantrymen in the world.

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Light Infantry TOW Platoon

LIEUTENANT ALLEN L. TIFFANY

One of the most troublesome debates on the light infantry division centers on the seemingly diametrically opposed problems of increasing the division's firepower and conforming to the requirement that it fit on 500 aircraft sorties. So far, most suggestions to "up-gun" the division favor adding weapon platforms of some kind to the light division's table of organization and equipment (TOE). Such additions, obviously, would add significantly to the number of sorties required to move the division. To further complicate the challenge, any change would have to be supported at the battalion level by the present austere support and supply structure.

In the context of the division's world-wide deployment mission, I believe its most vulnerable point is its antiarmor capabilities, and this is where an improvement in firepower can be made.

Unfortunately, with the great amount of night vision equipment, squad level communication gear, and squad level weapons—including the recent arrival of the M249 machinegun (also called the SAW, or squad automatic weapon)—the light infantryman already has about all he can carry.

But what of the other platoons in the

battalion? The scouts are as overloaded as the infantrymen in the line platoons, if not moreso, and the mortar platoon is appropriately tailored for its job. That leaves the antitank (TOW) platoon, which currently has six HMMWVs and 16 men, including the platoon leader (see Figure 1). Five changes in this platoon's structure, implemented collectively, would greatly improve the lethality, survivability, and adaptability of the platoon

and thereby of the division as a whole:

- Replace the TOW platoon leader's command HMMWV with an M966 TOW HMMWV with a three-man crew.
- Equip each TOW HMMWV with an M60 medium machinegun with a tripod and a turret-mounted pintle.
- Equip one man in each squad with an M203 instead of an M16.
- Add an AN/GRC-160 radio to the platoon leader's vehicle.

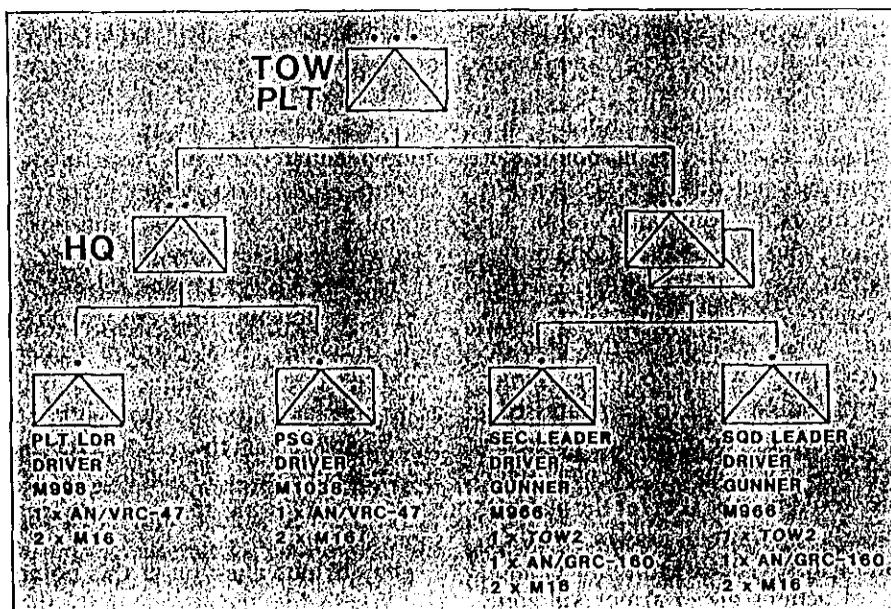


Figure 1. Current TOW platoon TOE (selected components).

- Add either an AN/VRC-47 or an AN/GRC-160 to each of the section leaders' vehicles.

Specifically, these changes (reflected in the revised TOE in Figure 2) would improve the performance of the TOW platoon in carrying out three of the missions it is expected to execute— heavy antiarmor defense, anti-infiltration detection and defense, and convoy escort.

In addition to giving the platoon leader the armor protection of the M966 TOW HMMWV, there are three good reasons for changing his vehicle. The first is rather obvious and simple, but it is also the strongest argument for such a change: When the TOW platoon "flies away" as part of its light infantry battalion, it does so with six vehicles and a trailer. Only four of these vehicles carry a weapon system, specifically a TOW. Why not increase that ratio to five out of six to give the battalion more antiarmor punch?

Since the TOW platoon leader's vehicle normally occupies a battle position anyway, why not make it a vehicle that can add to the fight? And since the current M998 command vehicle has no physical attribute that particularly lends itself to command, it is reasonable to assume that a platoon leader can control his TOW platoon just as effectively from an M966.

Certainly there would have to be a careful review of TOW platoon tactics to define the proper role of a platoon leader operating from a gun vehicle. A comparison to the traditional tank platoon, in which the platoon leader commands not only his platoon but also his own "command" tank in a "light" and "heavy" section configuration, may also be in order. Other questions such as when, how, and under what conditions the platoon leader's squad would open fire, among others, would need to be addressed.

There would be other advantages as well to such a change. The night sight that would be available for the platoon leader's use while he was in an M966 would greatly increase his understanding of actions on an armor kill zone (AKZ) at night and during times of

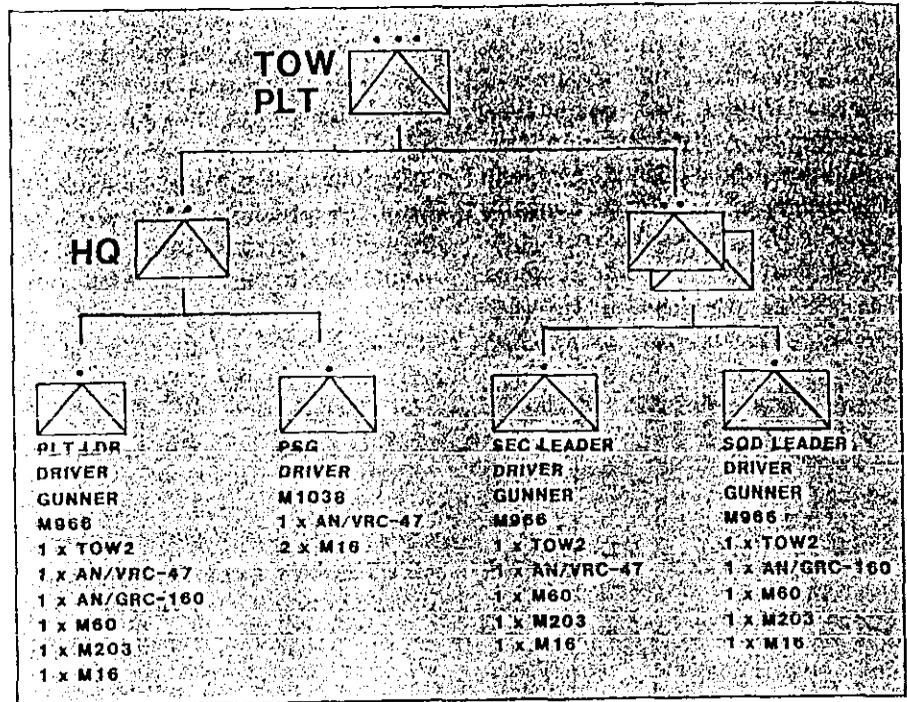


Figure 2. Proposed TOW platoon TOE (selected components).

limited visibility. Currently, the TOW platoon leader depends upon reports from his sections and squads to give him a picture of this activity. Although the current system is not a bad one, it is not as good as the one that could be available with the proposed change.

Equally important, giving the TOW platoon leader an M966 and crew would provide him with enough manpower to accomplish all the required tasks. Currently, to maintain security at night, the platoon leader has two options—rely on himself and his driver or co-locate with a gun—neither of which is satisfactory. In the first, neither security nor radio watch can be done adequately by one man; in the second, the extra vehicle traffic increases the chance that a gun position will be detected by the enemy.

Three men on the platoon leader's vehicle would allow for a rational division of labor. The platoon leader could see to his own unique tasks such as writing operations orders without also having to man the radios, keep an eye on a kill zone, and pull local security while allowing his driver to get some sleep.

The obvious question at this point is, "Where does the extra man for the platoon leader's vehicle come from?"

The simplest and best answer would be to add one III slot to the platoon, increasing its manning requirements to 17. This would increase each battalion's TOE personnel by one, and the division's by nine.

Some people may believe that an alternate weapon system mounted on the command HMMWV—such as the Mk 19, the M2, or even the 25mm cannon—would augment the TOW platoon more effectively than an additional TOW. But since none of these weapon systems is currently found in the light infantry battalion (or even brigade), their support and supply requirements preclude their consideration.

The second change, equipping each TOW HMMWV with an M60 medium machinegun with tripod and turret-mounted pintle, would help negate the current lack of automatic firepower available to the TOW squads. In part due to the dynamics of the light infantryman, who is foot mobile, and the TOW HMMWV, which simply cannot carry more than five men total, the TOW squad often finds that it must provide for its own security. Mounting a medium machinegun along with a mounted TOW system is feasible, and it would go a long way toward correcting some of the major short-falls the TOW squads and platoons cur-

rently face.

The M60 is recommended over the M249 for several reasons, but primarily because of its longer range and more powerful ammunition. The M249, though lighter and thus preferable for dismounted operations, does not have either the range or the ability to penetrate hard targets that the M60's 7.62mm rounds have.

With only the three M16s a TOW squad now has, it is virtually impossible to suppress, destroy, or button up targets beyond 400 meters. And, of course, by the time enemy vehicles have come to within 400 meters, the TOW system's effectiveness is rapidly diminishing toward zero. The armor-penetrating ability of the M16 round is only a fraction of that of the 7.62mm armor-piercing incendiary (API) round. And when dealing with soft targets, the TOW platoon is completely incapable of engaging anything beyond the range of the M16.

The combination of the TOW's thermal sight for spotting purposes, the range of the M60, and the power of the API 7.62mm round could form a potent team, especially during anti-infiltration operations.

Another reason for adding a medium machinegun is that the TOW squads (either individually or as part of the platoon) do not currently have an effective weapon with which to protect themselves while moving. Hand-held M16s in the turret or poking out of a window do not make effective convoy escort weapons. A machinegun from the M60 family would also increase the platoon's ability to provide defensive antiaircraft fire.

The machinegun mount would have to meet three criteria: First, it would have to be positioned in such a way as to allow flexibility for both the TOW and the machinegun (whether the SAW or the M60). Second, it would have to be able to provide a stable platform from which to fire. And third, it would have to be built so that either system could be mounted whether the other one was or not; that is, they should be neither mutually dependent nor mutually exclusive.

I think a mount could be developed

and placed some 90 to 180 degrees to the left of the present turret ring. The best option might be a mount similar in design to the current TOW mount, the mounting ring of which has a securely welded insert with a pintle base. It would also need a lock-down device that would secure it while mounted. Even mounted to the left of the TOW, however, a gunner might still burn the M60 if he did not take care when he positioned the back of the TOW before firing.

The gunner would be responsible for operating the machinegun while mounted. On those rare occasions when the gun would be more valuable in a dismounted position, the driver would be responsible for its employment.

M203

For the third change, one man in each squad would be issued an M203 instead of an M16. The M203 is a powerful weapon whose high arc trajectory might be of value in firing down slopes (since TOW squads are often on high ground when in the defense) and into other low-lying areas that might not be reached by the essentially flat trajectories of the M16 and the M60 at ranges of 450 meters and less. Certainly, the explosive round of the M203 would be very effective at dispersing approaching enemy troops. And like the turret-mounted M60, the M203 would dramatically improve defense while the platoon was moving.

An additional AN/GRC-160 in the command vehicle would greatly increase the TOW platoon's lethality on the battlefield. The TOW platoon leader often finds that to control his platoon adequately he must locate himself in a position that has a commanding view of the AKZ and its approaches. Such a location often gives him an opportunity to call for and control indirect fire on the AKZ. The problem is that the platoon leader usually must monitor both the platoon internal net and the battalion command net. Obviously, with only one

AN/VRC-47, if he wants to call in fire he must switch one of these off during the battle, and neither choice is desirable.

With both an AN/VRC-47 and an AN/GRC-160, a platoon leader could configure his radios so that the AN/GRC-160 would be on the platoon internal net, the AN/VRC-47 would be on the indirect fire net, and the receiver would be on the battalion command net. This would enable the platoon leader to control his platoon, call for fire, and monitor the battalion command net for incoming calls.

Adding an AN/GRC-160 to the command vehicle would also give the platoon leader a dismountable radio to use in dismounted operations.

For similar reasons, the two section leaders should each have an additional AN/VRC-47 or an AN/GRC-160. The most critical reason, however, for an additional radio unit (receiver or transceiver) for a section leader is unique to section operations: Since a section leader and his squad leader have only one radio in their respective vehicles, they must stay on the same radio net. But when a section is attached to a company to support it, that section leader must then switch to the company commander's command net. This means that to stay in touch with his section leader the squad leader must also switch to the company's command net.

As a result, a company commander may find himself, three line platoons, one mortar section, one Dragon section, and two TOW squads all on the same net. Once the battle is joined, the TOW elements are going to be communicating intensely as the section leader controls fires relative to target reference points and coordinates the lateral bounds of his two guns. Clearly, such a situation could congest the command net to the point of halting coordinated action.

If the section leader had an additional radio, he could monitor the company command net on one radio while controlling his section on the other net, which would be on the TOW platoon's internal frequency. The squad leader would stay on the TOW

platoon's internal frequency.

In addition, such a change would give two other vehicles in the platoon the radio assets to operate as a command vehicle if the platoon leader's vehicle were disabled. As the platoon is now equipped, if the command vehicle is disabled, a section leader with only one radio in his vehicle has to try to run the platoon.

These proposed changes are offered for consideration to the light units already formed and to those to come. Making all five changes would greatly

improve the lethality of the TOW platoon and the light infantry battalion, particularly in combating enemy armor formations. Equally notable is that the changes would make the light division more effective in mid- to high-intensity scenarios. And the best part is that all of them could be made within the constraints the division must live with. In such a context, the changes would be virtually "free."

Certainly, there are other ideas that warrant consideration, either building on what is suggested here or address-

ing other parts of the light division. But one thing is certain—the light infantry division is here to stay. The question is how to improve it to get "a bigger bang for the light infantry buck."

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From HMMWV to Ambulance

LIEUTENANT ROBERT L. PORTER

There is little question that the evacuation of wounded and sick soldiers during combat is of paramount importance. For a light infantry battalion, the evacuation problem is particularly acute because it does not have any vehicles with a litter-carrying capability.

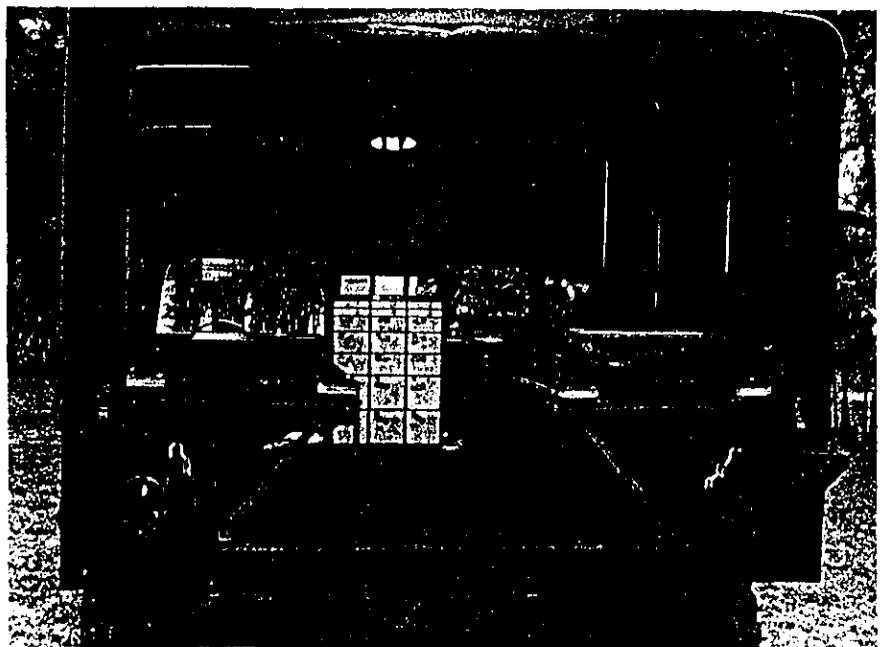
Part of the problem is caused by the Army's delay in fielding the M997 HMMWV (high mobility multipurpose wheeled vehicle) ambulance. This delayed fielding, combined with the inability of both the M578 ambulance (gamma goat) and the M718A1 quarter-ton frontline ambulance (FLA) to support light infantry units, inhibits the evacuation of litter patients from a battlefield environment.

One solution to this problem was found by my unit, the 4th Battalion, 87th Infantry, 25th Infantry Division. Using some creativity and \$235 worth of locally purchased and supply-channel materials, we created a HMMWV FLA that provides the same capability as our previous FLA; with a minimum of work the vehicle can be

easily changed back to its cargo-carrying configuration. When the modified vehicle was tested during the battalion's external evaluation at Fort Hunter Liggett, California, it performed superbly in both capacities.

In order to do this, we made four modifications to the vehicle:

- First and foremost, the bottoms of the troop seats on each side were replaced with modified seat/gurneys. The gurneys were equipped with pad-



HMMWV converted to frontline ambulance.