ably larger than the beam of a laser system.

Obviously, the best way to counter a radio frequency weapon is to detect it before entering its field of fire. Possible locations of radio frequency weapons can be determined by conducting a map analysis to determine the best fields of fire. Once detected, the "dish" antenna is vulnerable to damage from artillery and direct fire.

Tactical radio frequency systems will have little effect on personnel inside armored vehicles. A suggested countermeasure is to prepare an armored vehicle by removing antennas, disconnecting radios, covering unneeded vision blocks, and buttoning up. Then the radio frequency system can be flanked and destroyed.

Radio frequency systems in built-up areas will be more difficult to counter as they may be employed at very close ranges, penetrating all but the thickest of structures by way of openings, wires, and pipes. In this situation, basements and sewers can be used for moving to positions from which the radio frequency weapon can be destroyed.

If a dismounted soldier is hit by a radio frequency beam, the only countermeasure he can take is to drop to the ground and crawl to the nearest cover. Unless the device is extremely close, his chances of survival are excellent as the waves take at least several seconds to cause incapacitating burns.

CONCLUSION

Many of these directed energy weapons may sound highly futuristic and therefore not worth worrying about right now. But this attitude in the past has wasted thousands of lives. In 1914, for example, professional soldiers did not recognize the effects the machinegun would have on their tactics and operations until it had done considerable damage.

The first units to come under attack by directed energy weapons will succeed or fail on the basis of their knowledge and training. Even if hardened equipment and protective clothing are not available to these units, they can still deal with DE systems by taking advantage of the natural vulnerabilities and limitations and by teaching their soldiers to apply common-sense countermeasures.

MAJOR CLARK P. CAMPBELL is assigned to the 1st Battalion, 509th Infantry (Airborne) in Italy. A 1971 graduate of Norwich University, he has served with the Combined Arms Combat Developments Activity as a project officer for light forces and for directed-energy concepts.

Reorganize Platoon

LIEUTENANT COLONEL RALPH A. HALLENBECK

There are several problems with the currently prescribed organization of an M113-equipped mechanized rifle platoon, problems that might well be solved by a proposed new organization.

Under the current organization, a mechanized rifle platoon has three identical rifle squads and a platoon headquarters. Each squad has an M113, as does the platoon headquarters. Each squad APC has one radio, and the headquarters track has two. Each squad APC also has a caliber .50 machinegun and a Dragon that is mounted at the track commander's turret.

The track commanders (TCs) are normally the squad leaders or, in the case of the headquarters vehicle, the platoon leader. When the platoon fully deploys and uses both mounted and dismounted elements, the squad leaders go with their dismounted elements, while the M113s usually follow and support their respective squads. The platoon leader normally also dismounts and may or may not take the platoon sergeant and a radiotelephone operator (RTO) with him.

In this case, several things are likely to happen. First, the Dragons and caliber .50 machineguns — the most potent weapons in the platoons — will either be left unmanned, or they will be manned by whoever is available. Second, the squad leaders will have no radio communication with their respective vehicles. Thus, only rarely will any of the APCs be well positioned (far enough away from the target and with good fields of fire) to support the dismounted soldiers with either their caliber .50 machineguns or their Dragons.

In fact, the platoon's four M113s either tend to be left out of the action or used at improper ranges. Even if the platoon sergeant is left in charge of the four vehicles, he has only an ad hoc organization to assist him — one that has had little or no training as an integral maneuver unit in its own right.

Another problem with this organization is that the individual squad leader is saddled daily with a difficult training and maintenance requirement. On one hand, he has a dismounted rifle squad to train. On the other hand, he not only has an M113 to maintain, but, at a bare minimum, a driver and an alternate to train on the vehicle, the caliber .50 machinegun, and the Dragon. That's a tall order for any first-line supervisor.

If a squad leader and his driver are in the motor pool and the rest of the squad is not, the squad does not get the leadership it requires. If that squad leader is off somewhere training the squad, his track driver, and maybe one assistant, are left unsupervised. But if the squad leader takes all of his men to the motor pool, the squad is not properly utilized — there are too many people for the job at hand. Even if one NCO per platoon is temporarily put in charge of all four drivers in the platoon, the drivers are not "his" men and the M113s are not his tracks, and that will tell after a while. Almost always, the drivers will get little supervision, poor training, and too little tangible assistance with their maintenance tasks.

With all these problems in mind, the 1st Battalion, 6th Infantry, 1st Armored Division, in Germany, came up with a modification of its rifle platoons last year. Specifically, all four of each platoon's APCs (and their crews) were grouped into a single "heavy" squad. Under this organization, the responsibility for vehicle maintenance and crew training was given to the squad leader of the "heavy" squad, which freed the squad leaders of the two "light" squads to concentrate on training their dismounted riflemen, grenadiers, M60 machinegunners, and designated Dragon gunners.

The squad leader of the "heavy" squad also became responsible for maintaining the four assigned M113s and their caliber .50 machineguns, Dragons, and radios, and for training four TCs, four drivers, and one platoon RTO/communications specialist as drivers, RTOs, caliber .50 machinegunners, and Dragon gunners. Most important, the heavy squad was designed to fight as a unit consisting of two sections of two tracks each. The heavy squad, and each section of that squad, was expected to be proficient at mounted movement techniques, overwatch and fire support techniques, and mounted land navigation.

REORGANIZED PLATOON

HEAVY SQUAD	PERSONNEL	EQUIPMENT
(1 ea)	Sqd Ldr (SSG) Section Ldr (SGT) 2 TCs (SGT/CPL) 4 Drivers (CPL/PFC) 1 RTO (CPL/PFC)	4 M113 APCs w/cal .50 MGs and Dragons
LIGHT SQUAD	**PERSONNEL**	**EQUIPMENT**
(2 ea)	Sqd Ldr (SSG/SGT) Asst Sqd Ldr (SGT/CPL) M60 MG (CPL/PFC) M60 MG (PFC/PVT) Grenadier (PFC/PVT) Grenadier (PFC/PVT) Rifleman (PFC/PVT) Rifleman (PFC/PVT)	2 M60 MGs 2 M203 4 M16*

*One rifleman would be designated a Dragon gunner if a Dragon was dismounted to accompany the light squad.

In effect, then, the squad leaders of the two light squads do not command APCs. They and their squads are only passengers. If the platoon leader finds it absolutely necessary, he and he alone can "bump" one of the TCs to better control the platoon when it is mounted. But because he will almost always dismount and accompany the light squads when they dismount, he and his RTO will usually ride in the passenger compartment of what was previously the platoon headquarters track (the one with the two radios). This allows the platoon leader to stay in communication with his commander and with the heavy squad leader on separate nets.

The platoon RTO, who accompanies the platoon leader, is equipped with a PRC-77. When the platoon leader dismounts, he uses the PRC-77 to stay in communication with his heavy squad leader, the forward observer (FO), and his platoon sergeant. The platoon sergeant moves to what was the platoon leader's track to act as the communications link between his platoon leader on the ground and the company commander.

Thus, once the battle is joined, the two light squads are immediately available for commitment as the traditional dismounted assault force. There is no fumbling around as squad leaders get unraveled from TC hatches, no question about who mans the caliber .50 machineguns and the Dragons, and no uncertainty over how command and control functions will be performed. The leader of the heavy squad responds to the orders of the platoon leader and moves his two sections into the best possible positions from which to fire the machineguns and the Dragons. He may even have to dismount the caliber .50s and the Dragons to insure the survivability of the APCs. No matter what technique is used, though, the base of fire from the heavy weapons that can be provided through maneuver is a major advantage of the new organization.

Needless to say, the keys to a successful heavy squad system are strong leadership and unit integrity. For this reason, the members of the heavy squad should be highly experienced, with the very best staff sergeant as its leader. Membership in the heavy squad should be seen as a logical career progression for the best performers — that is, as the road to promotion. Membership should also result in such other immediate and tangible rewards as being excused

from petty details. Moreover, if the heavy squad needs assistance — in removing or replacing track pads, for example — the light squads can and should be tasked to help out.

Finally, it is absolutely essential that the platoon leader plan for and control the employment of all three squads. The tactics of the two dismounted squads are not affected much by this TOE modification, except that an APC will not normally follow each dismounted squad to provide close support. In his orders the platoon leader can, of course, place a vehicle and its crew, or a whole heavy section, under the operational control of the leader of a light squad. But this would happen only where difficult terrain made other employment options less desirable. That is, the tactics of the heavy squad should fit its enhanced mass, mobility, and firepower characteristics, all of which are important. The heavy squad should always be employed where its Dragons and caliber .50 machineguns will do the most good, and the employment of these weapons normally require some stand-off distance and a stable platform. More important, the weapons effects are the greatest if the heavy squad's fires are massed in one designated sector or avenue of approach.

The ability of the heavy squad to relocate rapidly, both laterally and in depth, should be constantly stressed in all training, planned for in advance, and exploited whenever the situation presents itself.

For the 1st Battalion, 6th Infantry, this heavy squad-light squad division of labor has proved itself over and over again. The battalion has enjoyed unparalleled success during numerous field training exercises. In every exercise, it was the speed and fluidity of the battalion's maneuver that controllers and evaluators singled out as the key to success. The same comments were noted during unit ARTEPs.

In both field and garrison the heavy squad-light squad organization improved efficiency, gave superior results, and recognized skill progression opportunities. Members of light squads who aspired to heavy squad rank or status had to be "promoted" into the heavy squads. Thereafter, newcomers, for the most part, manned the light squads. The pros and cons of this approach are fairly obvious. But, on balance, it has worked very well.

ANSWER

One might ask, however, whether all this reorganization was really worth the trouble. After all, the current mechanized infantry organization has been around for years, is generally accepted and understood, and is perceived to work. The answer to this question, in a round-about way, is this:

Imagine for a moment that each mechanized infantry platoon under the current organization was equipped with four Bradley infantry fighting vehicles (IFVs) instead of M113s. How many squad leaders (sergeants or staff sergeants) could do all of the following tasks simultaneously?

- Supervise the maintenance of an IFV with its stabilized turret, chain gun, and TOW missile systems.
- Train an IFV crew to "tank crew proficiency."
- Train a six-to-eight-man dismounted infantry squad to full proficiency, while also accounting for and maintaining all the squad equipment.
- Employ the IFV and the dismounted element in battle as a coordinated unit, despite the physical separation often required to make the most of the characteristics of each.

Such a squad leader would have to be capable of replacing both an M60 tank commander and a straight infantry squad leader. He would also be required to perform as a combined arms platoon leader on a small scale. In sum, his daily tasks would be virtually impossible.

And while the daily tasks assigned to the squad leader of the current M113-equipped squad are obviously different in degree, they are not different in kind. Today's squad leader gets by as best he can, usually by concentrating on maintaining his M113 in garrison and by fighting his dismounted soldiers as best he can when required to do so in the field. His squad plays "follow the leader" as its primary mounted maneuver technique and promptly forgets about its M113 as soon as it dismounts. Field maintenance occurs only when specifically directed, during obvious lulls in the field exercise, or when the vehicle is no longer in fighting condition.

Like his squad leaders, the platoon leader often views the APC as transportation, a source of heat in the winter, and his biggest and most mysterious challenge during garrison maintenance periods. When in the field, he perceives his platoon as either mounted or dismounted, never both; and he generally assumes (without much thought) that his platoon sergeant knows what to do with the squad's APCs when he, the platoon leader, is off leading a dismounted operation.

Even when his unit is in a defensive position, he either dismounts his caliber .50s (usually a good idea) or turns his APCs into pill boxes. It never occurs to him that the four APCs could give the platoon a rapid maneuver capability, especially if employed in mass. And if it does occur to him, he does not have a ready organization with which to execute such a maneuver.

So the question remains: Does the current organization — even with M113s instead of IFVs — really work? A light squad-heavy squad reorganization is at least an alternative and one whose value has been proved.

LIEUTENANT COLONEL RALPH A. HALLENBECK is assigned to the J3 Directorate, U.S. European Command in Germany. He formerly commanded the 1st Battalion, 6th Infantry, in the 1st Armored Division. A graduate of the U.S. Military Academy, he holds a master's degree from Penn State University