

become apparent during movement. Commanders gain depth through initial positioning, movement techniques (traveling, traveling overwatch, bounding overwatch), and disengagement criteria.

The maneuvering platoons also gain enough depth to engage an enemy force from several directions. Templating the enemy's direct and indirect fire ranges gives the commander a gauge he can use to assess the risk in maintaining his depth. Flank shots result from fixing the enemy from one direction in an effort to turn his flank to the main effort. Mutual support exists within the company by platoons as well as within the zone of action with other companies. Cross-talk on the battalion command net eases this process.

Standoff provides more survivability, but if a unit templates its enemy and understands the range and the effect of his weapons, it can make the most of standoff by fighting outside the enemy's direct-fire envelope. All-around security is paramount to the supporting force. If a unit must fix an enemy force while its assault forces close on the enemy, it must also take the appropriate means of providing continuous fires.

The U.S. Army needs a dedicated support system to fight offensively, and the Echo Company can fill that role. It has the means by which to gain an initial advantage over the enemy (maneuver). Its long-range accurate fires, when focused on the enemy, are capable of inflicting substantial

destruction (firepower). A task force commander, by dedicating the combat multipliers to the TOW company, ensures that his support force is a credible one (protection). Bringing it all together is the responsibility of the Echo Company commander (leadership).

Innovation, and the use of all available assets, will help increase the effectiveness of our antiarmor companies.

Captain R.W. Chatham, Jr., served as an antiarmor platoon leader and an Echo Company executive officer in the 82d Airborne Division, commanded an Echo Company in Europe, and served as an antitank company observer-controller at the National Training Center. He is now a small group instructor at the Infantry School.

SWAP SHOP



Infrared LED Light

As light infantrymen, we conduct most of our operations at night and often use chemical lights as control measures. Although these lights work well, they have some disadvantages: They are expensive (about \$3.00 each); they don't last long (about three hours for an infrared light); and sometimes they don't work at all.

I wanted to find something I could use as an alternative, but I also wanted it to last longer and be reusable. After a little trial and error, I found that a small infrared light emitting diode (LED) did the job quite well. It was also inexpensive and practically indestructible. (The diodes come in several different colors in addition to the infrared.)

Because I wanted the light to work with a regular nine-volt battery (BA-3290), I had to add a 470-ohm, $\frac{1}{2}$ -watt resistor. The light, the resistor, and a nine-volt battery connector can be purchased at any electronics store for

about \$2.50.

To make this light, first strip the insulation from the leads on the battery connector. Then wrap one of the leads around one end of the resistor. Connect the other lead to one of the diode's tails and complete the circuit by connecting the other tail to the other end of the resistor. Soldering the connections is not necessary; the glue from a hot glue gun will hold everything in place and waterproof the light as well.

I have tested the lights for more than 48 hours of continuous burning before the battery finally gave out. The lights themselves will last almost forever without burning out. The diode is as bright as a chemical light but smaller, which decreases the chances of enemy detection.

My platoon found these lights very useful during a recent ARTEP.

(Submitted by Lieutenant Kent A. Palmer, 3d Battalion, 17th Infantry, Fort Ord, California.)

