

should not always expect agreement or good news during these talks — some of it will be bad. And if he overreacts to the bad news he may shut off the flow of information.

Finally, the company commander should encourage his lieutenants to seek the counsel of the first sergeant, because he can play a vital role in their training. Through experience and training, he has become a knowl-

edgeable observer and usually has some good ideas and good advice to give them.

There is no doubt that well-trained lieutenants improve the combat readiness of a unit. And any commander can have well-trained lieutenants if he will develop a plan for training them, insist on the time he needs to implement that plan, and, above all else, set the example for them to follow.



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# Forced March and Live Fire

LIEUTENANT WILLIAM O. ODOM

ARTEP 7-15 includes a forced march/live fire event in which a squad is trained and evaluated on its defensive skills — specifically, on fire control and distribution techniques and on individual marksmanship — under simulated combat conditions. Because of this ARTEP requirement, most installations now have ranges that are dedicated to this event.

The ARTEP requirements for the layout of a forced march/live fire range are straightforward and relatively simple: The range must contain an array of 30 personnel targets and two armor targets at distances varying from 25 to 300 meters. The squad sector, or firing line, must be about 100 meters wide. (Although some of the dedicated ranges at installations are equipped with the vastly inferior "E" and "F" type staked silhouettes, most installations are now equipped with controlled pop-up targets.)

Such a range has far-reaching potential for squad training — potential, unfortunately, that is not being fully tapped. With a little imagination and initiative, though, squad trainers

can make this range more realistic and more efficient. They can add some special effects to the basic ARTEP scenario, modify the range (with some support), and vary the ARTEP itself.

## SPECIAL EFFECTS

Various special effects can be used without affecting the ARTEP test conditions. For example, the trainers can easily create the effect of the "dirty battlefield" complete with enemy dead, obscurants, and noises. They can stuff worn fatigue uniforms and boots with newspaper to simulate the dead, adding aggressor helmets and small arms and moulage kits with splashes of simulated blood for the finishing touches. They can also incorporate pre-arranged friendly "casualties" into all of the actions to give training in first aid and medical evacuation skills.

To provide the battlefield obscurants — smoke, smell, and haze — trainers can burn worn tires and con-

taminated POL products and employ smoke-generating devices (smoke pots are best). To simulate enemy artillery, they can use electrically-primed TNT blocks, and to create a rolling barrage, they can "walk" the explosions up to within 25 meters of the firing line and then throw artillery simulators behind the firers. (These explosions also contribute to the battlefield haze by producing small dust clouds.)

To improve the enemy's "attack," they can add Hoffman devices to the armor targets, place machinegun simulators down range, dress pop-up targets in fatigue shirts, and, if desired, play tapes of battlefield noise.

All the materials needed to produce these special effects are available at installation Training Aids Support Centers, Property Disposal Offices, and Range Supply Sections.

The range modifications are considerably more involved than these special effects, and they may require a major effort and even engineer support. But they are neither impossible

nor impractical to construct; in fact, some ranges have already incorporated them.

Perhaps the most critical modification needed is the installation of an underground conduit system for 220-volt alternating current. Such a system will do away with the need for batteries, radios, and makeshift targetry, thus reducing preparation time and instances of electrical failure. It will also reduce the amount of exposed demolition wire, which is prone to destruction by live fire. Another advantage is that the propane-oxygen machinegun and artillery simulator devices operate best with a 200-volt power source, as do most of the other electrically-powered training aids.

Demolition pits offer several advantages, too, and can be constructed along with the underground electrical system. Demolitions in pits, as opposed to on the surface, can use larger amounts of explosives, and the pits decrease the misfire hazard by protecting both the charge and the demolition wire from small arms fire.

Armor hulls and buildings can also be added. The hulls should be placed both down range and around the firing line; they are ideal furnaces for the burning of oil, worn tires, and smoke pots to represent destroyed vehicles. They can be used for targets, too, if armor pop-up silhouettes are not available.

The buildings should be placed down range to give the squads an opportunity to engage targets in windows with both 40mm practice rounds and small arms fire. They also provide excellent locations for machinegun simulators and sniper targets.

A moving target beyond 300 meters can be added, too. The exact distance to this target can vary with the depth of the range but should not exceed 600 meters so that it can be engaged by both the 90mm recoilless rifle and the Dragon.

Finally, a helicopter silhouette and target mechanism can be placed on a tower in a nearby treeline to simulate an attack by a helicopter gunship.

In addition to the special effects

and these various range modifications, some variations on the ARTEP itself are in order.

First, the scoring is difficult under the current system. When staked "E" and "F" silhouettes are being used, for instance, trainers confirm hits by locating bullet holes and subsequently applying pasters before the next exercise. This method is unnecessarily tiresome and slow.

Today's pop-up targets, if manipulated with the limited exposure times directed in the ARTEP, also pose several difficulties. The target operator is required to control each target's exposure time, which becomes complicated when targets in more than one zone are exposed at varying time intervals. This means that at least two dedicated scorers are needed, and even then an accurate count requires sending hole counter and paster details down range.

A better scoring technique would be to expose the targets by zone from farthest to nearest without regard to exposure time. Once exposed, the target would stay up until "killed." At the end of a timed firing period, the squad would be scored on the number of "kills" or downed targets. This technique would eliminate the need for hole counter and paster details, eliminate the confusion as to whether a target had been "killed" or dropped by a control mechanism, and greatly simplify scoring. It could also

be used to teach ammunition conservation and distribution of fire techniques.

The recommended total exposure time in the ARTEP is three minutes. This time is derived by multiplying the total number of targets in each zone by the minimum exposure time for an individual target. (Zone I — 3 seconds times 10 targets equals 30 seconds; Zone II — 5 seconds times 10 targets equals 50 seconds; and Zone III — 8 seconds times 10 targets equals 80 seconds; this amounts to a total of 160 seconds or 2 minutes, 40 seconds. The remaining 20 seconds are arbitrarily added to allow for armor target engagements and to provide a round figure for the time limit.)

Further, although a squad forced march/live fire ARTEP event tests a squad's ability to march, to shoot, and to occupy a hasty defensive position, it does not include many intermediate tasks such as camouflage, assembly area procedures, fragmentary orders, movement techniques, leader control, and reorganization following enemy contact. Although most of these tasks are handled in other ARTEP events, there is no reason not to incorporate them into this event as well.

Many other tasks can also be included: Fire support requests can be answered by company mortars firing sabot rounds; tanks can direct their



fires at long-range targets; and mechanized squads can direct .50 caliber machinegun fires at appropriate targets. Dragon engagements also add exciting possibilities, and 90mm antipersonnel rounds can be used to supplement the HEAT rounds.

Trainers can also further develop the NBC scenario suggested in the ARTEP by placing CS powder in the smoke pots and in the demolition pits. At the same time, they can place Soviet contamination markers near the assembly area to signal the NBC threat, thereby testing a squad's ability to recognize and respond to the warning signs. They can also simulate NBC casualties and conduct

the entire exercise under MOPP-4 conditions.

Other minor variations can be used for units that have special needs. For example, a Ranger unit might increase the weight of each man's rucksack by adding a basic load of ammunition and by raising the ARTEP standard for hits; an airborne unit might begin its exercise by jumping into the area.

Finally, the basic ARTEP event and all of its variations might also be conducted at night. Such a night exercise would give the squads an opportunity to train with night vision devices, using limited visibility firing techniques and battlefield illumination by company mortars, hand

flares, searchlights, and infrared light sources.

The need for squad proficiency is unquestioned, and the squad forced march/live fire range has limitless potential for squad training. In a single exercise, a squad can be trained in the most difficult aspects of squad operations. The range, along with these suggested modifications, deserves the trainers' attention.

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# Indoor TOW Training

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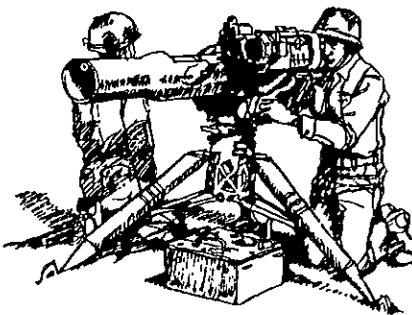
Often in trying to carry out a TOW training schedule, an instructor will find that elements beyond his control can destroy his most carefully laid plans. For example, a snowstorm can wipe out his target acquisition classes, or rain can interfere with his target board tracking. Sometimes he has only a limited amount of time or space for his training.

In any unit, the loss of a training day is bad news. To a Reserve or National Guard unit, it can be a catastrophe. The solution, therefore, is to move some of the outdoor TOW training inside.

This is not as difficult as it sounds. All it takes is some imagination, for the materials needed are cheap and easy to obtain. Such commonplace things as a G.I. blanket, a flashlight,

a stack of old magazines, and some index cards are the basic ingredients.

The blanket, with some books or wooden blocks placed under it, can



be used as a sandtable or a terrain board for a class on preparing range cards. Roads can be made from toilet tissue, and small plastic houses and

trees can be added to supply landmarks and reference points.

The instructor needs only to give the TOW crewmen magnetic north, an idea of the distances involved, and their own location on the board. Then, by using two different gun positions, the crewmen can become more aware of a TOW section's deployment and of the importance of interlocking and support fires.

Each soldier should then be required to explain what he placed on his range card and why. This process, and the instructor's critique, should lead each soldier to a better understanding of the intricacies of range card construction.

The different scale models of modern military vehicles that are usually available to a unit can be used