

INFANTRY NEWS



THE INFANTRY SCHOOL is presently reviewing and revising Field Manual 23-90, 81mm Mortar.

Users who have suggestions for the revision should send them on a DA Form 2028 to the Commandant, United States Army Infantry School, ATTN: ATSH-W-MO, Fort Benning, GA 31905-5598.

THE COMMANDER OF THE U.S. Army Garrison at Fort Chaffee, Arkansas, has told us of a recent publication entitled *A Guide to Training Opportunities*. It lists the ranges, firing points, observation posts, and other training and administrative facilities that are available for use by units desiring to train at Fort Chaffee. The post is located in northwest Arkansas on the Arkansas River just off Interstate 40 near the Oklahoma border. It has more than 70,000 acres of land and enough barracks and other facilities to meet the training needs of more than 30 battalions.

With its wide variety of terrain, Fort Chaffee can provide a challenging and realistic training environment for almost any kind of military unit. A tactical, sod C-130 strip and two drop zones, for instance, are available for units that want to conduct early deployment readiness at the post. Three prepared bridge training sites are also available for river crossing operations.

Anyone who would like more information on what Fort Chaffee has to offer as a training site should send for a copy of the training guide. Write to Headquarters, U.S. Army Garrison, ATTN: ATZR-Z-OPS, Fort Chaffee, Arkansas 72905, or call AUTOVON 962-2206/2466, commercial 501-484-2206/2466.

THE PUSHUP is the one event on

the Army Physical Readiness Test (APRT) that resident students at the Infantry School fail most often. During the past year, as many as 41 students out of a class of 175 have failed the diagnostic test. All 41 of them failed the pushup event; only a few of them also failed either the run or the situp. This failure rate is of concern because of the general age group of the students, 27 to 30, and the fact that they are the Infantry leaders who are supposed to maintain the standards of the Army back in their units.

There are two primary reasons for a student's failure to pass the pushup event. The most obvious is weak upper body strength; the other is faulty technique in performing the pushup. For most of the students who fail the event, their upper body is temporarily weak either because of a recent injury or because they have not conducted regular strength-building exercises. Generally, these students, by participating in a remedial physical training program, can develop their upper body strength and pass their final APRT. There are some, though, who fail the final test and do not graduate with their classmates.

It is important, when designing a remedial PT program, to work on the specific weakness each soldier has displayed. Too often a commander, in response to failures, will run all his men hard during remedial PT when their upper body strength is the real problem.

It is also important for a commander to use some of his most "PT knowledgeable" personnel to operate his remedial PT program — not an NCO or an officer who needs more PT himself. If such a program is not properly supervised, it can actually destroy what the commander is trying to build.

But upper body strength is not the only problem. Sometimes soldiers with

exceptional muscle development in their upper bodies fail because they cannot do pushups properly. The greatest challenge when performing the pushup is to form a level plane from elbow to elbow across the back when in the "down" position. Many soldiers go only part of the way down or give "head fakes" toward the ground and think they are meeting the standard. Many also fail to lock their elbows in the "up" position. One good way to improve on technique is to have the soldiers face each other in PT formation and while one rank of soldiers performs the pushups, the other rank from a kneeling position observes and evaluates them. The important thing here is to stress the proper pushup technique.

Another way to improve on both strength and technique is to have soldiers perform many small sets (five to seven) of the four-count pushup during their conditioning drills. These small sets, with other exercises interspersed, provide for a slight recovery of strength and allow the soldiers to concentrate on technique and not solely on surviving the exercise. Then, at the end of the conditioning drills or the follow-on run, the soldiers should be required to do a large number of pushups to provide for the "overload" of those muscles and to develop strength and endurance.

There are other ways to improve on upper body strength, of course. Weights and exercise machines are excellent for this purpose, and a properly planned and supervised program should improve the overall conditioning of a unit as well.

Why all this concern about the APRT? To the soldier, it is very important. Failing the APRT will prevent his reenlistment, deny him schooling opportunities, or cause him to fail courses he does attend. Commanders and

supervisors must therefore ensure that training for the APRT is done to the proper standard, even though soldiers may complain, in order to protect those same soldiers in the future. *(This item was prepared by Lieutenant Colonel Lawrence B. Goodwin, Jr., Commander, 1st Battalion, The School Brigade, U.S. Army Infantry School.)*

THE FOLLOWING NEWS ITEMS were received from the Infantry School's Directorate of Training and Doctrine:

- **Job Books.** The Job Books for CMF 11 were developed to support the commander's evaluation portion of the Army's Individual Training Evaluation Program (ITEP).

They were designed to be used by the NCO supervisor/trainer to record a soldier's demonstrated proficiency based on standardized training objectives contained in the Soldier's Manual for Skill Level 1 and 2 soldiers. They were also designed to be used as vehicles for transferring training information from unit to unit. Thus, when a unit receives a new soldier, a starting point for individual training can be established.

An up-to-date job book is an effective training management tool because it helps the trainer identify the tasks on which soldiers need additional training. By using this information, a commander and his trainers can plan effective individual training programs.

Army Regulation 350-1 and TRADOC 351-11 state that the job books are "not subject to administrative inspection or audit except by the unit chain of command."

- **SQT Program.** The SQT program can have a significant effect on an enlisted soldier's military career. Scoring well on the SQT is, in fact, vital to his career progression. The SQT is a written test and is based solely on tasks contained in the CMF 11 Soldier's Manuals.

As part of the SQT development effort, the Infantry School has been conducting field validations in units in the United States and in overseas locations of the CMF 11 SQT for Fiscal Year 1985. A major concern of many of the

soldiers is the apparent lack of individual training on Soldier's Manual tasks at the unit level. The soldiers say that very little individual preparation is being done, especially for those soldiers in the lower five enlisted grades.

Units must ensure that individual training is conducted on Soldier's Manual tasks, especially on those mentioned in the annual SQT notice. Units should also develop programs to encourage individual preparation. If they do not do these things, their soldiers' military careers could be jeopardized. Individual training must be accomplished not only to ensure that soldiers do well on the SQT but also to see that their individual skills are maintained and sustained within a unit.

THE NATIONAL INFANTRY MUSEUM has furnished us these items of interest:

The Fourth Annual National Infantry Museum Five-Mile Run has been scheduled for Saturday, 13 October 1984. Participation has increased each year, and there were more than 3,000 runners in last year's event.

Runners from other posts are invited to take part, and awards will be given in the individual, team, and formation categories. Further information may be obtained from the National Infantry Museum, Fort Benning, Georgia 31905, AUTOVON 835-2958, or commercial 404/545-2958.

The Museum recently added to its growing Italian collection a complete Italian enlisted infantryman's uniform from World War II. In addition, an Italian general from World War II days, Giuseppe Festa, donated the Sam Brown belt from his uniform, which was already on display.

A horse-drawn, wooden supply cart used in World War I by the medical corps has also been acquired and will be placed on display when some restoration work has been done on it.

The Museum prepared a special exhibit in honor of Lieutenant General David E. Grange's retirement at Fort Benning. General Grange, a former Infantry School commandant, made the trip from Ranger headquarters to

the retirement ceremony in the Museum's World War II command car.

Some other recent donations to the Museum include a camouflage parachute used in the jump on Corregidor on 16 February 1945 by Charles E. Breit; a Civil War sponge cover; a Spanish-American war mess kit and a cap device (Company K, 8th Infantry) for an M1895 forage cap; a rare Fascist Italian officer's dagger, and a German SA dagger; memorabilia of Sergeant Harold W. Hankins, an original member of Darby's Rangers during World War II; and the uniform worn by PFC John C. Reich, the first man to jump from his aircraft during Operation URGENT FURY and to land on the island of Grenada. PFC Reich is a radio operator with the 1st Battalion, 75th Infantry (Rangers).

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is \$2.00 for a one-year membership, or \$10.00 for a lifetime membership.

Additional information about the Museum and Society is available from the Director, National Infantry Museum, Fort Benning, GA 31905, AUTOVON 835-2958, or commercial 404/545-2958.

THE FOLLOWING NEWS ITEMS were submitted by the U.S. Army Infantry Board:

- **High Mobility Multi-purpose Wheeled Vehicle (HMMWV) Weapon Station-40mm (Grenade) Machinegun, MK 19 Mod 3 (MK 19).** Several service schools have recognized the need to have a weapon station on the new HMMWV for mounting selected weapon systems and other devices. The Infantry School wanted a weapon station for mounting a variety of automatic weapons; the Military Police School wanted to mount an MK 19 for rear area combat operations; and the Field Artillery School saw a need for employing the Ground/Vehicular Laser Locator-Designator (G/VLLD) from the gun station on the HMMWV.

To save money, the Army decided to test the three recognized needs simultaneously, and the Infantry Board conducted the joint test during November and December 1983 and January 1984.

The HMMWV weapon station tested consists of a 36-inch diameter ring mount with the necessary adapters to accommodate the MK 64 MOD 4 gun cradle and the G/VLLD, AN/TVQ-2. The MK MOD 4 gun cradle serves as a tri-weapon mount for the MK 19, M2, and M60 machineguns with their attached ammunition boxes.

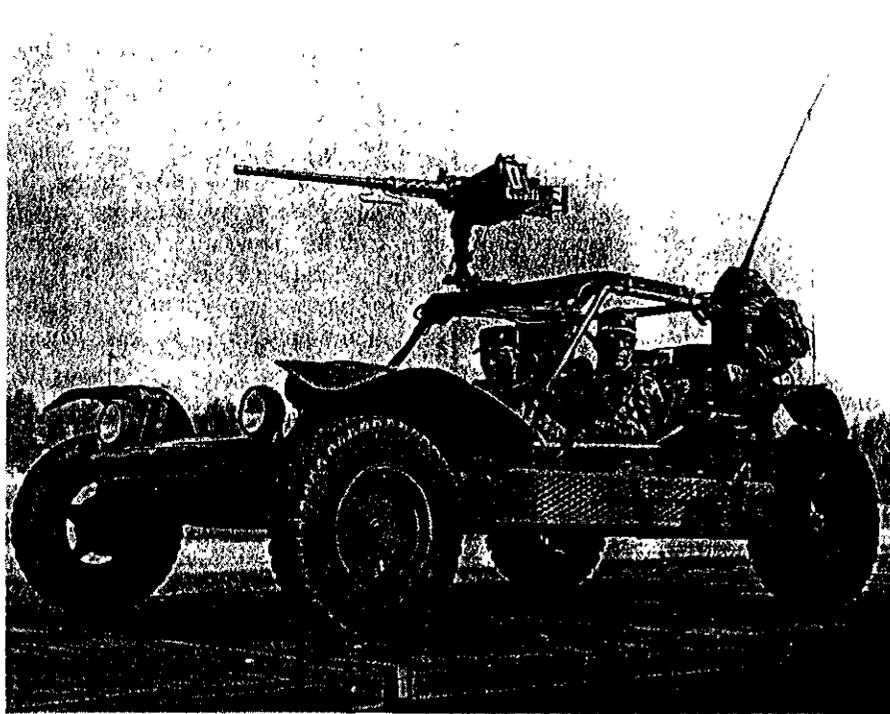
The 40mm (grenade) machinegun, MK 19 MOD 3, is a belt fed, air cooled, blowback operated, advanced primer ignition weapon. It fires 325 to 375 rounds per minute from the open-bolt position in either a semi-automatic or an automatic mode, and it has iron sights that are graduated from 100 to 1,500 meters. It weighs 72.5 pounds and is 43.10 inches long. The MK 19 can also be ground mounted on the M3 tripod.

The Infantry Board tested the HMMWV weapon station and the MK 19 at Fort Benning; the Field Artillery School tested the G/VLLD at Redstone Arsenal. The purpose of the tests was to determine hit probability; human factors and safety implications; reliability and maintainability; adequacy of training programs; and position-disclosing effects.

The data obtained from this test, along with data from other sources, will be used to determine the adequacy of the weapon station on the HMMWV and to evaluate the operational capability of the MK 19.

• **Surrogate Fast Attack Vehicle.** Recent studies again have emphasized the need for reconnaissance or command and control vehicles in an infantry division. The Infantry Board recently evaluated a surrogate fast attack vehicle (SFAV) to see if a vehicle of this type would meet the requirements.

The SFAV is a two-passenger wheeled vehicle made with a high-strength tubular frame and a unitized roll cage. Its power train is a 90-horsepower, air-cooled, gasoline engine and a standard four-speed manual trans-



Surrogate Fast Attack Vehicle

axle with rear drive that provides high cross-country speed and mobility. Numerous modifications have been applied to include hardening the welded seams; installing a 24-volt electrical system; adding weapon mounts (TOW and universal) and fenders; and strengthening the drive wheels.

During the test, the test soldiers used the SFAV to accomplish route reconnaissances, zone reconnaissances, and night observation post missions. Equipment essential to each mission

was loaded on the vehicle to see what effect it would have on the vehicle's operational capabilities. The roads and trails varied on each mission; they included improved hard-surfaced roads, improved gravel roads, and unimproved dirt trails over heavily vegetated and rolling hills.

The Infantry School will use the test results to determine whether a vehicle of this type would meet an Infantry Division's need for a reconnaissance or command and control vehicle.

• **Airdrop Rigging Procedures for the Squad Automatic Weapon.** Tests on the squad automatic weapon (SAW), which is scheduled to be fielded during Fiscal Years 1985 and 1986, did not include the validation of airdrop rigging procedures for the parachutist to use when jumping with the SAW and its ammunition. These tests clearly needed to be done. The Infantry School therefore developed certain proposed rigging procedures, and the Infantry Board conducted airdrop operations to test these procedures. During the test, parachutists performed jumps while wearing typical combat equipment, including the SAW

and its ammunition, rigged according to the proposed procedures.

The Board modified a parachutist's standard adjustable individual weapons case (M1950) to accommodate the SAW. (This case is secured vertically by a quick-release snap attached to the left D-ring on the parachute harness.) Before each jump, the parachutists rigged their SAWs and ammunition loads according to the proposed procedures. During their descent, they lowered the case on its lowering line. Then, after landing, they derigged and placed their SAWs in operation.

All of these were timed exercises.

The SAW systems were inspected before they were put in operation and, if no damage was apparent, they were fired to determine functioning and the retention of zero.

Data was collected on the ability of the test soldiers to rig their SAWs for airdrop according to the proposed procedures; any personnel injuries or damage to the SAW and its ammunition during the airdrop operations; the human factors of the rigging procedures; and any safety hazards noted.

The test results will be used by the decision authorities to prepare and publish Army-wide procedures for SAW airdrop rigging.

• **Extended Cold/Wet Clothing System and Formal Sleeping System.** The joint working group that is responsible for the Integrated Individual Fighting System Program (IIFSP) continues to search for better clothing and equipment for the Army's soldiers. The program's objectives are to reduce the weight of the soldier's load while providing him with better environmental protection over a wide spectrum of climatic conditions, to evaluate it as quickly and efficiently as possible, and to recommend particular items for procurement.

The latest clothing system to be evaluated by the Board is designed to provide environmental protection in temperatures ranging between 40 degrees and minus 25 degrees Fahrenheit when the ambient relative humidity tends toward saturation. This system is supposed to be substantially lighter than the current cold/wet ensemble, and it should give the soldier increased environmental protection.

At the same time, three sleeping systems were considered. All of these were designed to make a soldier's sleep more comfortable and restful under the same climatic conditions. Each was lighter than the current sleeping bag with cover and foam pad and was said to provide increased protection.

The Board conducted its tests at Camp Ethan Allen, Vermont, where the temperatures varied from a high of 41 degrees F. to a low of minus 23 degrees F. The test soldiers were members of two infantry platoons — one a

30-man Army platoon and the other a 28-man Marine Corps platoon. A five-week winter warfare training program served as the scenario for the test.

Each test soldier used the clothing ensemble and alternated using the sleeping systems while taking part in the training program. Test observers collected data pertaining to functional performance, compatibility, durability, maintainability, human factors, and safety.

The data obtained will be used by the Infantry School and by the Marine Corps Development and Education Command in making decisions concerning the future development of cold/wet clothing systems and formal sleeping wear.

THE FOLLOWING NEWS ITEMS were submitted by the Infantry School's Directorate of Combat Developments:

• **Rifle Company TOEs.** The Infantry School is currently reviewing a number of rifle company TOEs to determine how mortars can again be made a part of a company's firepower assets. The infantry community feels that a second level of mortars — at company level — is essential in light of the Army's current and evolving doctrine.

The rifle company of the light infantry battalion, which has a total strength of 124 soldiers, is now being looked at, and several ways of adding a mortar section to the company's TOE are being analyzed. At the moment, the leading proposal would have two 60mm mortars (lightweight company mortar system) and six soldiers organized into two three-man squads. One of the squad leaders would also serve as the section leader. Because of end strength constraints, however, and the need to maintain the light division's current deployability profile, some personnel trade-offs will have to be made to get those six spaces.

The present company structure has six two-man Dragon teams organized as a separate antiarmor section under its own section leader. It might be possible to reduce the number of

Dragon teams to three, which would free the six spaces needed for the mortar section. Or it might be possible to reduce the number of M60 machinegun teams in each rifle platoon headquarters from two to one. These six spaces could then be used to form a mortar section.

There is an inherent risk in each case of trading off one capability for another; each possibility must be weighed in terms of mission essential operational capability.

• **Black Combat Boot.** The Army has adopted a new black combat boot that offers greater comfort and support than the current boot does. The decision to adopt the new boot was the result of a recommendation from the Infantry School, and this recommendation was based on the results of a combined combat boot walk-off test. The test was conducted at Fort Benning, at the San Diego Marine Corps Base, and at the Human Engineering Laboratories at Aberdeen Proving Ground, but soldiers from several other sites also wore the boots and provided data. (Six boots, all from U.S. manufacturers, were evaluated.)

The new boot has a speed lace system and, compared to the present boot, offers improved durability, increased resistance to water, and improved traction.

A date of issue is yet to be determined.

• **Long Range Surveillance Unit.** For the first time since the Vietnam era, the U.S. Army will soon have a long range operational and tactical reconnaissance capability in each division and corps.

Beginning in Fiscal Year 1986, the Army will field and train a company for each corps and a small detachment for each division. The key building blocks of this organization will be six-man patrol teams designed to operate in a passive mode 15 to 150 kilometers behind enemy lines.

The operational concept has been approved by TRADOC, and a draft TOE is awaiting final review. A formal training program is being jointly developed by the Infantry School and the Special Warfare Center. All com-

manders, operations personnel, and patrol members assigned to these units will be required to take this training.

• **Force Structuring.** The Directorate is applying Army of Excellence (AOE) force structuring guidelines to all active infantry forces. The end result will be a much more streamlined Army than that first envisioned in the Division 86 studies.

The goal of AOE is to restructure the active forces within Congressionally imposed manpower ceilings. The restructuring is being applied to all units, from the squad to the echelons above corps. The light infantry division, for example, is an AOE organization.

AOE structuring either has been or will soon be applied to all active TOEs, and structural changes to units will be apparent by FY 1986 as the new TOEs are approved.

The AOE guidelines are to use real world manpower austerity; dispense with "sacred cows"; determine what missions can best be done and at what level; achieve a total active force within the Army's 780,000 manpower ceiling.

• **The Soldier's Load.** Numerous studies have been made, by the Infantry School and by other military organizations, dealing with the problem of the individual fighting man's combat load. This problem has existed since man first organized armies, but today it has been complicated considerably by the devices and equipment the fighting man needs to survive on the modern battlefield.

In January 1982 Headquarters TRADOC formed a joint working group (JWG) to oversee its integrated individual fighting system program (IIFSP). The Infantry School presently chairs the JWG. The program's objectives are to increase the soldier's ability to accomplish his mission and his survivability and sustainability; to lessen his stress and encumbrance; to give him at least 72 hours of environmental protection; to provide a system

in which the combined weight of the fighting, mission, and existence loads does not exceed 72 pounds; and to reduce the development-to-fielding time by capitalizing on the commercial marketplace.

The IIFSP considers the soldier's load from a total systems viewpoint. The breakdown of the load follows the breakdown of the fighting, existence, and mission loads as discussed in Field Manual 21-15. Studies conducted by the Human Engineering Laboratory have indicated that the average Infantryman's loads in a temperate climate are:

FIGHTING LOAD	62.3 pounds
EXISTENCE LOAD	49.3 pounds
MISSION LOAD	6.6 pounds
(average)	
TOTAL	118.2 pounds

The HEL studies have also shown that the ideal weight for a soldier's load should be no more than 30% of his body weight, and that his heaviest load should not exceed 45% of his body weight. For the 50th percentile soldier (160 pounds), these figures amount to 48 pounds and 72 pounds respectively.

The fighting load represents the clothing and individual equipment — from the skin out — that the infantryman carries into combat. Its components include the rifle with a basic load of ammunition; individual clothing items plus the chemical protective overgarment ensemble; the PASGT vest and helmet; and the load-bearing equipment with the attached individual equipment. It is not expected that any sizable reductions can be made in the weight of the soldier's fighting load, but the IIFSP does hope to improve the positioning of the load and the compatibility of its components. For example, a requirements document for a load-bearing vest has been forwarded to the materiel developer, and a vest should be fielded within the next two years as a replacement for the current

load-bearing equipment.

The existence load contains items that are not needed for immediate combat but that are necessary to sustain and protect the soldier for the duration of missions lasting 72 hours or longer. The components include the ALICE pack with frame; shelter half; sleeping bag; rations; and additional clothing and necessary personal items. Significant reductions in the existence load are now being considered. Space age fabrics and the layering principle are key elements in reducing the weight of the existence load, along with such items as the individual multipurpose shelter, which is expected to replace the shelter half and poncho in two years or less.

The mission load varies considerably according to a soldier's mission, a unit's SOP, and a commander's preferences. It consists mainly of unit equipment and weapons such as radios, AT weapons, and claymore mines. Unit leaders, of course, influence the mission load weight that the soldiers must carry, and often have to make trade-offs in the existence load and the fighting load to keep the total load to a tolerable weight. In the mission load, the aim of the IIFSP is to ensure that existing and developmental items are compatible with the load-bearing equipment. One such example is the new SINCGARS radio, which a soldier will be able to carry with both the developmental load-bearing vest and the present ALICE.

The U.S. Army Infantry School has combat development proponency for hundreds of items of clothing and individual equipment. The IIFSP JWG, which meets at least twice a year, provides the necessary forum and the necessary cooperation between the user community, the combat developer, and the materiel developer so that all three can articulate their needs and move steadfastly toward reducing the soldier's load.

