

INFANTRY NEWS



THE U.S. ARMY REGIMENTAL System, under AR 600-82, requires that Infantry personnel make regimental affiliation selections, but many are not doing this. Eligible individuals are encouraged to affiliate with the regiment of their choice as early as possible. There is no ceiling on the number of soldiers who can affiliate with a particular regiment.

While no assignment guarantees will be made, regimental affiliation will be a primary assignment consideration. Regimental affiliation may be changed at any time.

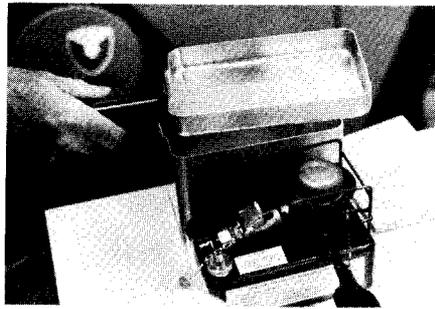
FIELD MANUAL 5-34, Engineer Field Data, was recently published and distributed to the field, and infantrymen should make a point of looking at it.

In particular, the chapters on combat operations, mine warfare, obstacle breaching, reconnaissance, demolitions, and survivability are excellent for the amount of useful data they contain.

A MULTIFUEL SQUAD STOVE has been developed by the Natick Research, Development, and Engineering Center, Natick, Massachusetts. This small lightweight cooking and heating device is capable of burning a variety of fuels including all grades of gasoline, kerosene, JP 4/5/8, and diesel fuel without the use of special starting fluids or pastes, and will do so even at low temperatures.

The stove is assembled from commercially available components including a vaporizing burner and an atomizing preheater installed on a steel tank. It holds 10 ounces of fuel and enough air to preheat. The stove is rectangular and fits neatly inside a two-quart container that doubles as a cooking pot, can be used for melting snow,

and is shaped for heating four or five MREs (meals, ready to eat). The container lid attaches to a handle and serves as a small skillet.



The stove is currently being tested at the Cold Regions Test Center, the Tropic Test Center, and the Mountain Warfare Training Center. Type classification is planned for the fourth quarter of Fiscal Year 1988.

A NEW INEXPENSIVE PRACTICE round for the Bradley Fighting Vehicle's 25mm gun will soon make gunner training available at some 35 military installations.

The Bradley's standard armor piercing (AP) 25mm round, the M791, has been the only round available for performing AP gunnery practice, including qualification firing, and it requires a downrange distance of 14,000 meters. Although other posts have the required fire and maneuver space, stateside only Fort Hood, Texas, has a range that can accommodate BFV 25mm firing without seriously affecting other training.

This inexpensive practice round, called the M910, has a trajectory that is identical to the AP munition to 2,000 meters and has a maximum range of less than 8,000 meters. This shorter maximum range means that no limits will have to be placed on gun elevations as would be the case with the standard round. It also simulates the standard munition in linking and loading and in the storage of rounds in the vehicle.

The fielding of the M910 will allow most 25mm live fire training exercises to be conducted on existing maneuver and gunnery ranges, opening up some 35 posts in the U.S. and Germany for both M2 and M3 BFV firing.

NEW CAMOUFLAGE PATTERNS using three colors have been designed for all the tactical equipment in the Army's inventory. The three-year program required 413 drawing packages to meet camouflage needs for 834 different items of equipment. All told, 225,000 drawings are being distributed to Army units worldwide.

A drawing package consists of six pages: A drawing for each major view of the item—the four sides and top—and an inspection sheet to ensure that the pattern is applied correctly.

To minimize the number of drawings, engineers at the Belvoir Research, Development, and Engineering Center consolidated similar items. For example, nine drawing packages provided the camouflage patterns for 132 shelter-mounted communications systems.

The three-color pattern, which is more effective than the four-color pattern the Army has been using since the early 1970s, was developed by the Center in cooperation with the Federal Republic of Germany. The Germans have completed their pattern design program and are now repainting their equipment. Other NATO countries are also considering the three-color pattern.

As the U.S. conversion is completed, the designs will be applied using a chemical agent-resistant coating that will allow soldiers to decontaminate equipment in the field.

Patterns for new equipment will be developed as the items are fielded. As the leading agency for camouflage, the Center is also working on patterns for

Navy, Air Force, and Marine Corps ground-support equipment.

THE INFANTRY SCHOOL is making an unprecedented effort to provide the field with training literature that links home station "training to standard" with combat training center "training to standard." This effort involves two types of products—drill books and mission training plans (MTPs).

Both the drill and MTP books represent a departure from past Infantry School products. From an exhaustive analysis, the common elements of all types of infantry have been identified and consolidated into a single source document. Units throughout the Army will therefore have a common standard to apply to all mounted and dismounted operations. This standardization effort should reduce confusion, redundancy, and waste in our training literature programs.

The school's analysis has shown that consolidation into a single publication is prudent for drill books and the infantry squad/platoon MTP. This consolidation reduces the number of references from 13 to 4.

The standards contained in the MTPs are observable, measurable, and quantifiable, and they apply to each task. These standards, in many cases very rigorous, are vital to productive training focused on success in combat.

Detailed opposing force (OPFOR) standards have been added to each operation, which provides for more effective force-on-force training. Complementary standards create an environment that allows greater free-play and a situation in which either force can win.

The status of the various publications is shown in the accompanying chart. The proponent is the Unit Training Branch, Training Division, Directorate of Training and Doctrine, U.S. Army Infantry School.

TRAINING LITERATURE UPDATE

PUBLICATION	POC	STATUS	REMARKS
ARTEP 7-8-Drill, Battle Drills for the Infantry Rifle Platoon and Squad	CPT Snyder AV 835-4848	Final draft approved. Published version expected to field by end of June 88	Supersedes ARTEPs 7-17-10-Drill, 7-247-10-Drill, 7-247-11-Drill; FCs 7-22, 7-15, 7-14. Contains 12 battle drills for all infantry squads and platoons (six common and six mounted).
ARTEP 7-91-Drill, Battle Drills for the Antiarmor Platoon	SFC Fisher AV 835-1317	Final draft approved. Published version expected to field by end of June 88	Supersedes ARTEP 7-16-13-Drill. Battle drills for all antiarmor platoons. Does not include Bradley drills.
ARTEP 7-90-Drill, Battle Drills for the Infantry Mortar Platoon, Section and Squad	CPT Ayala AV 835-4848	Final draft completed, awaiting approval	Supersedes drills in FMs 23-36, 23-90, 23-92, 23-93 and ARTEP 7-16-12-Drill. Single source for battle drills for 60mm, 81mm, 181mm, and 107mm mortars. Differences resulting from equipment peculiarities are highlighted.
ARTEP 7-8-MTP, MTP for the Infantry Rifle Platoon and Squad	CPT McGinnis SSG Taylor AV 835-1317	Final draft completed April 88	Supersedes ARTEPs 7-247-10-MTP, 7-247-11-MTP, 7-17-10-MTP. Applies to all infantry platoons and squads.
ARTEP 7-10-MTP, MTP for the Infantry Rifle Company	Mr. Lemon AV 835-4848	Coordinating draft distributed for field comments December 87	Dismounted infantry only; mounted infantry company MTP is a joint effort with the Armor School (ARTEP 71-1-MTP).
ARTEP 7-16-32-MTP, MTP for the HHC Infantry Battalion Combat Service Support Platoons	CPT Snyder AV 835-4848	Preliminary draft complete by end of May 88	
ARTEP 7-20-MTP, MTP for the Infantry Battalion	MAJ Bennett AV 835-4848	Coordinating draft to be completed by end of May 88	Supersedes ARTEP 7-15 (June 1979).
ARTEP 71-2-MTP, MTP for the Tank and Mechanized Infantry Battalion Task Force	MAJ Bennett AV 835-4848	Coordinating draft distributed for comments January 88	Joint effort with Armor School.
ARTEP 7-30-MTP, MTP for the Infantry Brigade	MAJ Bennett AV 835-4848	Coordinating draft to be completed by end of June 88	Dismounted infantry.
ARTEP 7-90-MTP, MTP for the Infantry Mortar Platoon, Section, and Squad	CPT Ayala AV 835-4848	Coordinating draft completed February 88; to field for comment March 88	
ARTEP 7-91-MTP, MTP for the Mechanized Infantry Antiarmor Company/Platoon ITV equipped	SFC Fisher AV 835-1317	Coordinating draft completed April 88	Supersedes ARTEP 7-115-MTP.

THE U.S. ARMY INFANTRY Board has submitted the following item:

Thermal Weapon Sight. As early as 1978 the Infantry School stated an interest in the application of thermal imaging technology to meet the surveillance and sighting needs of the infantry. Subsequently, the Center for Night Vision and Electro-Optics (CNVEO) conducted technology explorations to determine the best way to fulfill these needs. Night imaging thermal equipment (NITE) was developed, and in 1985 the program name was changed to thermal weapon sight (TWS).

The current TWS is a lightweight, low-power, self-contained, direct fire weapon sight that provides a thermal image to the viewer and can be used day or night. It is designed with a common sensor body and interchangeable telescopes and reticles to allow maximum operational flexibility with a minimal logistical burden. The TWS includes both an individual weapon thermal sight (IWTS) and a crew-served weapon thermal sight (CSWTS) configuration.

From 21 September 1987 through 4 January 1988, the Board conducted an early user test and experimentation of the TWS at Fort Benning to assess the operational effectiveness and military utility of the TWS prototypes compared to that of the systems they are intended to replace (the individual weapon sight, AN/PVS-4, and the crew-served weapon sight, AN/TVS-5).

Fifty firers from the 197th Infantry Brigade were trained by the Infantry School and CNVEO on the use of the TWS. The test soldiers then used the TWS and the standard sight systems during day and night nonfiring detection and recognition exercises and live fire hit probability exercises.

The detection and recognition exercises were conducted using actual soldiers and vehicles as targets positioned at ranges out to 2,500 meters. The test results were used to compare times to detect/recognize and rates of detection/recognition of the IWTS and CSWTS with those of the AN/PVS-4 and AN/TVS-5, respectively, at night

and to compare these measures for each sight with those for the unaided eye during the day. Some exercises were conducted at night under artificial illumination, some with personnel and vehicles in lightly foliated woodlines and some with personnel and vehicles obscured by smoke.

The live fire hit probability exercises were conducted to compare the performance achieved with the IWTS and CSWTS with that achieved with the AN/PVS-4 and AN/TVS-5, respectively, at night and the performance of each of these target weapon systems with that of the weapon's iron sights during the day.

Hit performance exercises were conducted using the M16A2 rifle, the M249 SAW, and the M2 machinegun. Thermal vehicular sights and personnel silhouette targets were located at ranges from 200 to 1,750 meters. Targets appropriate for each type of weapon were engaged within the weapon's maximum effective range.

Portability, human factors, safety, reliability, and maintainability data were also collected. The Infantry School will use the test results to provide an independent evaluation to an in-process review.

THE NATIONAL INFANTRY Museum has a new display in its Gallery of Military Art entitled "Russo-Japanese Block Prints." The original prints, from the U.S. Army Art Collection, depict scenes from the Russo-Japanese War of 1905 and are noted for their vivid colors and realistic detail.



The Museum's outside exhibit areas are nearing the final stages of renovation. After a year of work by the Museum staff, with assistance from many of the organizations on Fort Ben-

ning, new concrete pads and support frames have been constructed for the protection of the artifacts. In addition to the construction, all of the tactical combat vehicles and artillery pieces have been re-painted in the proper color schemes for the time periods in which they were used. These new paint schemes include many of the disruptive color schemes used during World Wars I and II by the U.S. Army and its opponents.

Many of the items in the Museum are on loan from other sources, and recent changes in governing regulations require that the Museum change the way it handles loans in the future. When the Museum was established in 1959, there was no collection as we know it today, and the Museum borrowed many artifacts to fill interpretive gaps in its exhibit areas until it could acquire items on its own through donation or purchase. Because of the new regulations, the Museum staff is now working on returning loaned items to private individuals with a sincere "thank you" for the use of the artifacts over the years to help portray the story of the infantryman.

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 and \$10.00 for a lifetime membership.

Additional information about the Museum and the Society is available from the Director, National Infantry Museum, Fort Benning, GA 31905-5273; AUTOVON 835-2958 or commercial (404) 545-2958.

THE DIRECTORATE OF COMBAT Developments at the Infantry School submitted the following notes:

Night Vision Goggles. With the increased emphasis on night operations, a soldier must have equipment that will enable him to operate as efficiently at night as during the day.

The AN/PVS-7 night vision goggle (NVG) gives the soldier an improved

means for surveillance, target engagement, driving, patrolling, and other manual tasks at night. This new NVG is designed to augment or replace the current AN/PVS-5 NVG at a lower cost and a higher level of performance.

The AN/PVS-7 NVG is designed to be head mounted, lightweight, and operable using ambient moonlight or starlight. When used with the AN/PAQ-4 infrared aiming light, it gives a soldier an accurate method of firing his weapon at night up to a range of 150 meters. The NVG is also equipped with an infrared light source that provides additional illumination to aid in close-in viewing. The design of the AN/PVS-7 allows for the free use of the hands while wearing the goggles.

The major difference an operator will see is that the AN/PVS-7 uses only one image tube and weighs 1.5 pounds



while the AN/PVS-5 goggle has two image tubes and weighs 1.9 pounds. The use of only one image tube helps reduce cost without any detriment to the performance of the system.

There are two versions of the AN/PVS-7 goggle, each manufactured by a different company. Although there is no difference in the use or performance of the A and B models, the parts are not interchangeable. This requires that goggles be issued by division-sized elements to prevent the need for a unit to maintain two distinctly different lines of repair parts.

The first unit to receive the AN/PVS-7A NVGs was the 7th Infan-

try Division at Fort Ord, in February 1988. The 3d Armored Division in Europe is scheduled to receive the first AN/PVS-7B NVGs in September 1988.

HMMWV. In September 1985 the utility variant of the HMMWV (high mobility multipurpose wheeled vehicle) began replacing the "Ole Faithful" M151 series "Jeep," the M880 tactical "pickup" truck and the M561 "Gamma Goat" in combat and combat service support roles. HMMWV variants have also replaced TOW weapon carriers and armament vehicles. Signal shelter carriers and ambulance systems are scheduled for fielding in late Fiscal Year 1988.

The HMMWV was designed as a tactical vehicle that would provide a higher degree of mobility than any of the vehicles it was to replace. Since all variants are on a common chassis, a tactical unit's overall maintenance effort is reduced and it can maintain a higher degree of readiness.

The vehicle is enjoying a high degree of soldier acceptance because of its 6.2-liter V-8 diesel engine, automatic transmission, power assist steering, and four-wheel independent suspension system. These unique features provide the soldier with the best handling and ride characteristics ever associated with a tactical vehicle.

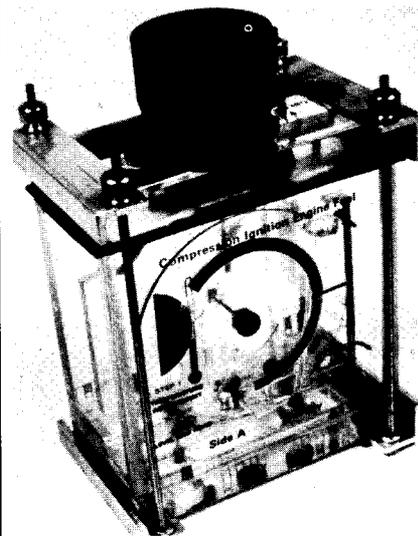
The HMMWV was brought about through improvements in technology and requirements that necessitated a single vehicle to do the job that was being handled by several vehicles in the Army inventory.

On 1 October 1987, proponentcy for the HMMWV family of vehicles was transferred to the U.S. Army Transportation School at Fort Eustis, Virginia.

A PORTABLE FUEL TEST kit has been designed that an unskilled operator can use to determine the density and viscosity of fuels "captured" on the battlefield. A visual check for contamination is also part of the testing criteria.

Fuel density is measured in a funnel-shaped container using a densimeter. A buoyant pointer rotates in the test fluid as fluid density varies.

Viscosity is measured using a falling ball test. Glass tubes are filled with the test fluid and aligned vertically, parallel to identical tubes that are filled with reference fluids representing upper and lower viscosity cut-off limits. When all the tubes are turned upside down simul-



taneously, the sequence in which the balls reach the bottoms of their tubes indicates whether the sample's viscosity is within the desired range.

The carrying case is used to test the visual appearance of the fluid. The inside of the case is painted white, and a series of black lines are painted on the inside bottom of the case. Test fuel is poured into the tester to a certain depth, and the soldier views the lines through a fixed amount of the fuel. If the lines are visible, the fuel passes the visual appearance test.

