

# INFANTRY NEWS



THE U.S. ARMY MARKSMANSHIP UNIT at Fort Benning is asking soldiers in the rank of staff sergeant and below who have had competitive shooting experience with a rifle, pistol, or shotgun to apply for assignment to the Unit.

Applicants should be highly motivated and have a winning spirit, a clean civilian and military record, and proper military appearance. To apply, interested soldiers are asked to send a resume of their shooting experience, including scores from matches, if available; a recent photo; and a copy of their DA Forms 2 and 2-1 to the Commander, USAMU, Fort Benning, GA 31905.

FOR ALMOST A YEAR, the Infantry Center has been working on a program that will rekindle an awareness, a pride, and an esprit de corps regarding the Infantry, its regiments with their officers and men, and the history they share.

As an outward and visible sign of that effort, the Center has now established a Trophy Room within the main officers club at Fort Benning and has renamed the club's half-century-old ballroom the Regimental Hall. When completed, the Hall will feature the flags of distinguished infantry regiments, while stained glass windows will depict the shoulder patches of 24 infantry divisions. Crests or shields of some 100 regiments also will be painted, carved, or preserved in stained glass in this special area at the Home of the Infantry.

Additionally, portraits of distinguished military leaders will serve to remind today's infantrymen of their heritage.

The Infantry Center would like your thoughts and suggestions on this project. For example, which regi-

ments and divisions should be honored? Which distinguished military leaders should be represented? Why have these units or individuals earned a special place in the Regimental Hall? The Center also would appreciate information on the location of regimental colors and other artifacts that might be exhibited at Fort Benning.

Comments, suggestions, ideas, and recommendations concerning the Regimental Hall should be addressed to the Directorate of Plans, Training, and Mobilization, ATTN: Director, National Infantry Museum, Fort Benning, GA 31905.

THE U.S. ARMY Infantry Board submitted the following news items:

• **Bradley Infantry Fighting Vehicle: Gowen South.** The Infantry Board recently tested several programs of instruction (POIs) that involved the use of training devices for certain BIFV sustainment gunnery training events.

Four POIs were evaluated with four BIFV crews assigned to each POI. Each POI consisted of a preliminary gunnery exercise, a vehicle team sub-caliber exercise (VTSE), a vehicle team combat exercise (VTCE), and a squad combat qualification exercise (SCQE). One of the evaluated POIs was used as a control POI and was designated the Baseline POI. The Baseline POI crews used the actual BIFV and live ammunition to fire the VTSE, VTCE, and SCQE events. For the VTSE, these crews used the Reavis sub-caliber device mounted on the BIFV and 5.56mm ammunition.

The other three POIs substituted training devices for the VTSE and VTCE events and did not use any live fire during those events. Three training devices were evaluated: the Unit Con-

duct of Fire Trainer (UCOFT), the Precision Gunnery System (PGS), and the Bradley Gunnery and Missile Target System (BGMTS). Each of these three training devices provided the test crews — Bradley commander and gunner — with 25mm, 7.62mm, and TOW weapon systems engagements.

The UCOFT POI crews were trained on the device at the contractor's facility in Florida. The UCOFT consisted of a crew station, an instructor and operator station, a crew briefing station, and a computer system. The UCOFT provided both visual and printed performance results.

The PGS POI crews used the actual vehicle with the PGS training device on a range. The PGS consisted of an eye-safe laser firing unit mounted on the vehicle's 25mm gun and hit-recording detection modules mounted on full scale targets. The PGS provided printed performance results.

The BGMTS POI crews used the actual BIFV and the BGMTS training device inside a large building. The device consisted of a rear projection screen unit, a moving and stationary target control console, and a line-of-sight firing unit for each turret sight. The BGMTS did not provide visual or printed performance data.

For their preliminary gunnery training, the crews that were going to use the training devices employed the table top Video Disc Gunnery Simulator (VIGS), which consisted of a gunner's console, a video disc player, and a floppy disc drive. The VIGS provided visual performance results. The Baseline POI crews used an actual vehicle and conducted standard turret manipulation exercises for their preliminary gunnery training.

After all of the test crews had completed the preliminary gunnery exercise, the VTSE, and the VTCE they conducted a live fire SCQE using

actual vehicles and full caliber ammunition for all of the on-board weapon systems.

The SCQE performance results of the crews that had used the training devices were then compared to the performance results of the Baseline POI crews.

The test results will be used by the Infantry Board to develop the best possible training strategies and to begin the actions needed to develop or obtain the appropriate training devices.

• **Simulated Tank Antiarmor Gun-  
nery System — Dragon (STAGS-D).** The Dragon launch effects trainer (LET) was type classified standard in 1975. At the time, it was recognized that the trainer did not fully satisfy the Army's need for a Dragon training system. The training and materiel development communities agreed that any second-generation training system should provide simulation of the Dragon missile in both launch and flight characteristics. But since no agreement could be reached on the specific functions required in the flight simulator portion of the system, a decision was made to develop a separate launch simulator — the Launch Environment Simulator (LES) — while efforts continued to develop a workable flight simulator.

An exploratory program that began in 1980 has resulted in the development of the STAGS-D, which consists of an instructor station and a student station. The instructor station has video displays that show aiming errors and sight pictures, a sound system to generate missile and other battlefield noises, a keyboard to enter commands and other data, and a printer to provide hard copies of selected information.

The student station has a simulated Dragon weapon system and a terrain table station with three target tracks. The simulated weapon system provides the noise, blast, and weight shift that would occur in an actual missile launch. A missile's flight and target strike are simulated in the gunner's sight, and the tracking run can be replayed for the gunner and the instructor.

The Board conducted an operational test of the STAGS-D from August through November 1984. More than 250 Fort Benning initial entry soldiers who were attending the regularly scheduled Dragon gunner qualification course took part in this test, which compared the training effectiveness of three alternative qualification programs.

Each program used a different type or combination of training devices. One used the STAGS-D, another a combination of STAGS-D and LES, and the third, a combination of LET and LES. The results were compared on the basis of live fire first round hit probability and gunner qualification score correlation with live fire hit probability.

The Infantry School and the Project Manager for Training Devices will use the test results to formulate a recommendation for a development assistance in-process review.

• **Remote Sensing Chemical Agent Alarm (RSCAAL) XM21.** The history of the XM21 RSCAAL dates back to 1954 when the possibility of detecting toxic gases by natural radiant energy was first suggested through research by military contractors. But it was not until the 1970s that the technology for a sensor and signal processor had matured to the point of being practical.

The XM21 RSCAAL is a manportable, passive infrared detection and alarm system that is designed to detect nerve agent clouds up to five kilometers away.

It consists of a tripod-mounted detector powered by a thermoelectric generator (TEG), which can be set up and operated by soldiers who have not had extensive training with the alarm. It can also give a company-sized unit an unattended warning capability for 12 hours.

The operator positions the detector to scan a 60-degree horizontal arc that is centered on the prevailing upwind direction and reorients it when the prevailing wind changes. If a toxic agent cloud is detected, the RSCAAL gives both a visual and an audible signal to warn personnel to take protective measures.

The detector is an infrared radiation measurement device that includes an infrared sensor, a signal processor, and a cryogenic cooler. It is 19.25 inches long, 17.25 inches wide, and 12.25 inches high and weighs 50.5 pounds. It is carried in a transit case that weighs an additional 50 pounds; the base is 30 inches long, 30 inches wide, and 20.5 inches high. The tripod with case weighs 16 pounds and can be extended from 30 inches to 46.75 inches in height. The TEG measures 16.5 inches by 9 inches, weighs 40.25 pounds with fuel, and provides 28 volts of direct current. The total weight of the system is 156.75 pounds.

The XM21 RSCAAL was tested at Fort Benning from January through March 1985 in a simulated tactical NBC environment against standards established by the Chemical School. Six soldiers, who were serving as designated operators in support of an infantry company, moved, set up, operated, and serviced the alarm. Sulphur hexafluoride was used to simulate a nerve agent to test the alarm's detection and warning functions while contaminants such as smoke and exhaust fumes were used to test for false detections and detection degradation. Functional performance, human factors, safety, reliability, and maintainability data were collected throughout the test.

The results of the test will be used by the Chemical School to make decisions regarding the full-scale development of this system.

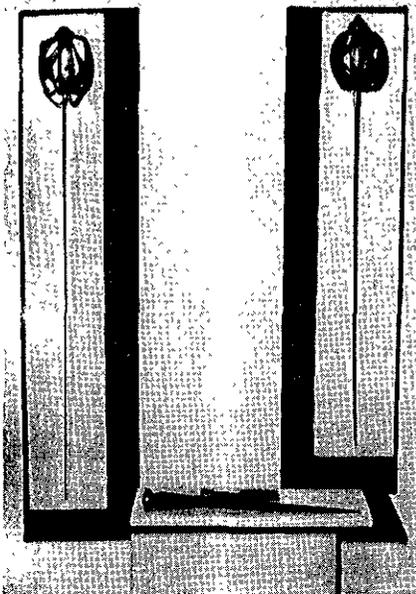
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THE NATIONAL INFANTRY MUSEUM has given us the following notes of interest:

Among the special exhibits at the National Infantry Museum recently was one that recognized the 40th anniversary of Victory in Europe (VE)-Day. Another special exhibit was shown at the Scottish festival held in Shellman, Georgia, to commemorate the Battle of Culloden. This exhibit, which includes 16th century Scottish weapons and accoutrements, is now on display in the Museum itself.

The accompanying photograph shows one of the weapons that are included in this particular exhibit.

A special retreat ceremony honoring the 63d Infantry Division was held



recently at the museum. The Division's association presented to the Museum a stained glass panel depicting the division's shoulder patch. (If other division associations are interested in having their units represented in this way, their spokesmen should contact the Director of the Museum.)

The Museum has on loan uniform items that belonged to German Field Marshal Erwin Rommel. A tunic, hat, and goggles that belonged to him were loaned by the Panzer Museum Munster through an arrangement made by Lieutenant Colonel F. Schulz, the German representative at the Infantry School. Also recently added to the Museum's German collection is a display of World War II German airborne uniforms, equipment, and insignia.

Other interesting acquisitions for the Museum's ever growing collection of military artifacts are a German fire police tunic, dress bayonet, sword with scabbard, metal Nazi eagle, and Labor Service flag; U.S. Civil War period badges; a shooting medal awarded during the mid-1840s during the war with Mexico; the jump knife issued to Colonel Edward H. Lahti in

January 1943 when the 511th Parachute Infantry Regiment was being organized and which he carried throughout World War II on New Guinea, Leyte, Luzon, Japan; military items that had belonged to Major General (Retired) Numa A. Watson; and military uniform items donated by Major General (Retired) Albert H. Smith, Jr., who also gave the Museum a set of Brigadier General stars that had belonged to Brigadier General George A. Taylor. (As a Colonel, Taylor commanded the 16th Infantry Regiment, 1st Infantry Division, on 6 June 1944 at Omaha Beach.)

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 the Society is available from the Director, National Infantry Museum, Fort Benning, Georgia 31905-5273, AUTOVON 835-2958, or commercial 404/545-2958.

THE DIRECTORATE OF COMBAT DEVELOPMENTS has furnished the following news items:

- **Physiological and Psychological Effects of NBC and Extended Operations (P<sup>2</sup>NBC<sup>2</sup> — Infantry Testing.** P<sup>2</sup>NBC<sup>2</sup> is a major Army study project that concentrates on conducting extended operations in a contaminated environment. It is expected to:

- Provide a commander with planning factors and decision-making criteria.

- Provide a commander with ways to extend both individual and crew endurance and performance.

- Provide a commander with indicators of significant performance degradation.

- Provide implications and insight on how we should fight.

As part of the P<sup>2</sup>NBC<sup>2</sup> program, the Infantry School has planned a two-phase test in conjunction with the Infantry Board. Phase I, which

took place in June 1985, established the baseline performance data for BIFV crewmen operating in a static environment.

Phase II, which will take place in September 1985, will evaluate BIFV squads, mounted and dismounted, in a 72-hour ARTEP scenario. Medical instrumentation has been provided by the Medical Research and Development Command to capture the physiological and psychological stress indicators.

The results of this testing program will be combined with information collected from an extensive review of the existing literature and assembled into a chapter of a draft field circular that is expected to be published in late September by the Combined Arms Center.

Testing in Fiscal Year 1986 will examine training and doctrinal fixes that were identified in the Fiscal Year 1985 testing program. Further testing will examine mortar, antiarmor, and scout operations, as well as light infantry, air assault, and airborne operations.

- **DLTOE Infantry Battalion (Airborne).** A draft living table of organization and equipment (DLTOE) was recently developed as a proposed replacement for the current TOE for an airborne battalion. The proposed changes revolve around three issues: modernization, standardization, and force reduction. (These changes are to take place without detracting from the capability of an airborne battalion to perform its mission.)

The modernization issue includes integrating newly developed equipment into a unit.

For example, some of the new equipment includes the HMMWV as a replacement for the M151 quarter-ton trucks and the M561 Gamma Goats; SINCGARS will replace the current AN/VRC-12 family of radios; and the position locating and reporting system (PLRS) will be added.

On the matter of standardization, under the Army of Excellence (AOE) organizational designs, units with similar missions will be organized under similar TOEs. Thus, while the

current airborne battalion is organized under a TOE that calls for 11-man squads, the DLTOE being developed will call for a nine-man squad. Other similarities between types of battalions will call for the standardized organization of a battalion into a headquarters and headquarters company, three rifle companies and one antiarmor company.

And in an Army-wide attempt to standardize personnel and equipment, conceptual packages have been developed by the various MOS-proponent schools to be used in the new TOEs. Examples of these packages include a medical modular package and a field feeding package.

The third goal of the DLTOE that is being developed is force reduction. A major contributor in this issue is the nine-man squad. A zero growth philosophy is also being used to develop vehicle requirements for the airborne battalion.

The DLTOE, when approved by Department of the Army, will become the living TOE for the airborne battalion.

• **The M249 Machinegun.** The Infantry School is constantly searching for ways to increase the infantryman's firepower while decreasing his load. One way of doing this may be to issue the M249 as a machinegun instead of as a squad automatic weapon. If used as a machinegun, the M249 could be issued with a traversing and elevation mechanism, a tripod, a spare barrel, and additional ammunition. The interesting thing about this proposal is that with the M249 machinegun, a crew could carry twice the amount of ammunition it now carries and still carry less weight.

Despite some earlier reports, the M249's accuracy is comparable to that of the M60 machinegun. A test

conducted by the Infantry Board in September and October 1984 confirmed this. (See INFANTRY, March-April 1985, page 9.)

The M249 is also an extremely reliable weapon. And because it fires the same ammunition as most of a platoon's other weapons, the unit's logistical burden would be lessened.

Tests have shown that the M855 bullet fired by the M249 has greater penetration power against hard targets — such as steel and aluminum — than the M80 ball ammunition fired by the M60, although it has slightly less penetration power against wood.

A decision to field the M249 as a machinegun is expected to be made soon.

• **Alaskan Theater Defense Division.** The 6th Infantry Division will be a theater defense division. Stationed in Alaska and built from the 172d Infantry Brigade, it will be uniquely structured and equipped to operate in a cold weather environment and to perform Alaskan defense missions. Currently, it is expected that the division will have one airborne battalion and eight light infantry battalions.

Although the 6th Infantry Division will be based on the light infantry division's operational concepts, it will have certain capabilities not found in any other unit in the Active Army.

Final force design recommendations were presented by proponent service schools in mid-May 1985 at the Combined Arms Center, Fort Leavenworth.

• **The "Enhanced" M16A2.** The Army expects to receive its first M16A2 rifles in 1986. The M16A2 is much more reliable, accurate, and durable than the M16A1. To take full advantage of the new rifle's capabilities, however, a program has begun to "enhance" the M16A2 before

it reaches the field. The program's goal is to give the infantryman a weapon he can aim more easily and therefore more accurately.

The "enhanced" program is currently investigating the possibility of removing the familiar carrying handle from the rifle's upper receiver; in its place a mounting mechanism would be integrated into the receiver. With this system, an optical sight of some kind would be mounted to give a soldier a single point of aim. Thus, once he had properly zeroed the sight, he would need only to place the reticle in the sight on his target; he would not have to worry about a proper sight picture or sight alignment. Studies and tests are being conducted to determine the type of optical sight that is best suited for a combat rifle. Among the sights being considered are rifle scopes and reflex sights.

Additionally, night vision devices would be mounted on the mounting mechanism instead of to the carrying handle, thereby allowing a firer to assume a proper firing position when he used night vision devices.

An added benefit of this mounting concept is that once the optical sight or limited visibility device was zeroed to a rifle, it could be removed and replaced later without having to be zeroed again. In addition, because the concept visualizes a single point of aim, all firers would have the same zero, and a sight would not have to be re-zeroed if a weapon changed hands.

Other issues associated with the "enhanced" program, but not necessarily tied to it, include changing the magazine to a more reliable plastic type. Consideration is also being given to developing a muzzle blast compensator to help reduce or eliminate muzzle climb when a soldier fires three-round bursts.

