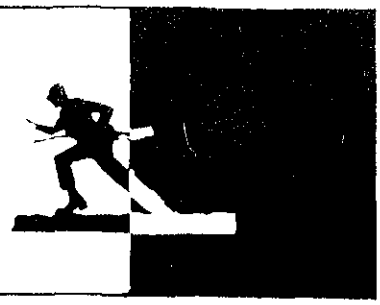
# INFANTRY NEWS



A UNIT RIFLE MARKSMANSHIP Training Guide, Field Circular 23-11, was recently distributed to all major Active Army and Reserve Component units.

The Guide is designed to improve the shooting performance of soldiers. It includes the latest marksmanship doctrine, provides guidance on the use of all new targets and aids, and presents the guidance units need to improve their marksmanship programs.

The Guide also addresses basic and advanced marksmanship subjects, making it useful for basic rifle marksmanship and advanced rifle marksmanship training programs. The Guide also includes information the marksmanship developer or trainer needs to understand effective training procedures better.

Copies of three different versions of the Guide have had limited circulation: an ARI coordinating draft, dated May 1984, and two versions of FC 23-11, dated August 1984. The three are similar, but the latest is the one that has a letter from the Commandant of the Infantry School (MG John Foss) as its first page. This latest copy, therefore, is the one that should be used for local reproduction.

A limited number of copies may be available from the Infantry School or the Army Research Institute. Requestors should use DA Form 17 and mail it to the Commandant, U.S. Army Infantry School, ATTN: ATSH-SE-TSD, Fort Benning, GA 31905, or mail a request to the Army Research Institute, P.O. Box 2086, Fort Benning, GA 31905.

Two videotapes are also available for use in illustrating basic marksmanship instructional techniques: TEACHING RIFLE MARKSMANSHIP: PART ONE AND PART TWO. These tapes are fully compatible with the new FC 23-11. Part One presents a detailed overview of marksmanship fundamentals and preparatory marksmanship training. Part Two covers zeroing, shot group analysis, remedial training, and coaching during live fire marksmanship training.

The videotapes can be obtained from the Audiovisual Support Center, U.S. Army Infantry Center, ATTN: ATZB-DPT-TASC-AVSC, Fort Benning, GA 31905-5273.

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THE FOLLOWING NEWS ITEMS were submitted by the Director of the National Infantry Museum:

Exhibits that feature World War I and World War II uniforms have been placed at the Infantry Training Center's Reception Station by the Museum. The display also includes the uniform and equipment that belonged to the first enlisted man to parachute into Grenada. This type of display helps to give the soldier a knowledge of his military heritage and to promote esprit de corps and branch identification.

The monument to Calculator has been moved to the National Infantry Museum's grounds from the Old Infantry School building — Building 35 — where it had been since the mid-1970s. INFANTRY readers may recall that Calculator was a favorite pet dog of the troops at Fort Benning in the early 1920s. He received his name because of the way he walked — "putting down three (legs) and carrying one."

Calculator was eulogized as "a veritable child of destiny, waif of the world, soldier of fortune, and postgraduate of the Infantry School." The monument is inscribed "He made better dogs of us all."

The larger volume of traffic at the Museum will enable more people to see the monument, and it will thus get the attention it deserves. The monument was originally funded with 25-cent contributions that poured in from U.S. infantrymen around the world.

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, GA 31905, telephone AUTOVON 835-2958, or commercial 404/545-2958.

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THE FOLLOWING NEWS ITEMS were submitted by the Directorate of Combat Developments:

**•Battlefield Management System.** A DCD task force has been established to investigate C²I requirements at and below the infantry battalion level. A number of separate TRADOC and Infantry School initiatives will attempt to document total communications traffic, operational imperatives, and automation possiblilities.

The task force will undertake a task and functional area analysis to consolidate and review the results of these initiatives in conjunction with a study of soldier and crew tasks and functional area requirements to determine potential resource savings and increases in operational effectiveness.

Present technology will permit the automation of many routine functions to speed personnel and logistic actions. That technology will also serve as a decision-making aid for commanders and leaders and may revolutionize the handling of target data and intelligence information.

Although referred to as the Battlefield Management System by maneuver proponents, it is essentially the application of an innovative C³I approach through automation.

•**Living TOE.** The 1982 DAIG Force Modernization Inspection reported that the pressures of force modernization had broken the Army's system for documenting organizations. To correct this, the Vice Chief of Staff of the Army initiated the Documentation Modernization (DOCMOD) program to redesign the system.

One result of the DOCMOD is the Living Table of Organization and Equipment (LTOE), which consists of using a series of intermediate TOEs (ITOEs) to develop a fully modernized objective for a particular type of unit. Each ITOE must be a doctrinally sound, supportable organization and must represent a significant increase in capability. The intent of the program is to ensure that all like units are modernized through the same series of steps to facilitate management and programming. The ITOE will become an authorization document when the MACOM adds area and mission requirements and publishes the appropriate general orders.

The LTOE system will provide a basis for standardization, will support programming and budgeting, and will reduce the involvement of the MACOMs in the documentation process.

Living TOEs have been documented for the light and air assault infantry battalions. The current mechanized infantry, airborne, and ranger infantry battalions are scheduled for documentation as Living TOEs this year.

•**M16A2 Rifle.** The Directorate is presently coordinating the technology and directing the development of the M16A2 rifle. This rifle is a big improvement over the M16A1 the infantryman now carries. (See INFANTRY, *July-August 1983*, pages 3-4.)

The M16A2 rifle will be given initially to all combat riflemen in the forward combat areas as a replacement for their M16A1s. Although little effect on personnel strength and only minor logistic changes will result from the introduction of the new rifle, training concepts and strategies could be greatly affected.

The preliminary testing of prototype developmental hardware is scheduled to begin at Fort Benning during the second quarter of fiscal year 1986.

•**JANUS.** For years, simulations have provided combat developers with a tool for modeling the battlefield, and the ability to simulate more complex relationships on the battlefield continues to improve.

Today's simulations can be divided into three categories — manual games, such as DUNN KEMPF; computer-assisted games, such as BATTLE; and pure computer games, such as CARMONET. Each type has its strengths and weaknesses.

Today there is a new simulation called JANUS. It will help developers by providing them with better insight into the modern battlefield's complex relationships. JANUS is one of the few pure computer simulations that permit tactical interaction during the model run. This capability allows the user to make changes based on the tactical situation so that successes can be exploited and weaknesses mitigated.

To achieve this, the model uses high resolution graphics that show the terrain and the allocated forces. Opposing players deploy their forces on the basis of the scenario and the terrain before the simulation run starts. Once the simulation begins, each player is free to re-deploy his forces as the situation develops within the limits of his operational orders and doctrinal teachings. A controller monitors the simulation to make sure the players adhere to the constraints imposed by order and doctrine.

**INFANTRY HOTLINE**

**To get answers to infantry-related questions or to pass on information of an immediate nature, call AUTOVON 835-7693, commercial 404/545-7693.**

**For lengthy questions or comments, send in writing to Commandant, U.S. Army Infantry School, ATTN: ATSH-ES, Fort Benning, GA 31905.**

JANUS will be used to test n
weapons and equipment to det
their effectiveness on an inte
battlefield. The results, whe
anced against the costs, will h
determine the infantry's needs a
support procurement requests.

The plan is for the Infantry S
to receive JANUS within a year
should allow the School's co
developers to better support and
infantrymen throughout the wo

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THE FOLLOWING NI
ITEMS were submitted by the
Army Infantry Board:

• **Rigging Procedures for M16A2 Rifle.** After the suggeste
provements were incorporated
the design of the M16A1 rifle, it
tested by the Marine Corps at Q
tico, Virginia, and by the Army's
and Evaluation Command at A
deen Proving Ground, Maryl
After the test results were analy
both the Army Training and Doct
Command and the Army Mat
Command recommended that the
be classified Standard A
designated the M16A2.

The tests, however, did not incl
an airdrop of the rifle. Its phys
changes — a heavier barrel, a sligh
longer buttstock, redesigned front
rear sights, and a redesigned ha
guard — led the Infantry School
evaluate the Army's current airdr
procedures to see if they were suita
for parachutists to use when th
jumped with the new rifle and its a
munition.

The Infantry Board conducted t
evaluation at Fort Benning. In t
test, 13 parachutists made 84 jum
while carrying combat equipment a
the M16A2 rifle and its ammunitio

Two rigging methods were teste
One with the rifle exposed and th
other with it in the M1950 adjustab
weapons case. After the first
jumps, each M16A2 rifle was inspec
ed, and a bore straightness gauge w
used to make sure the barrel was n
bent. If a rifle passed all of the safe
tests, it was fired to see if it had r
tained its zero.

Questionnaires, interviews, observations, and comments by trained data collectors were used to collect data regarding the ability of the test soldiers to rig and de-rig the M16A2 rifle for airdrop according to established procedures and regarding injuries to personnel; damages to the weapons or ammunition; human factors aspects of the rigging and de-rigging procedures; retention of zero; and any safety hazards that were noted.

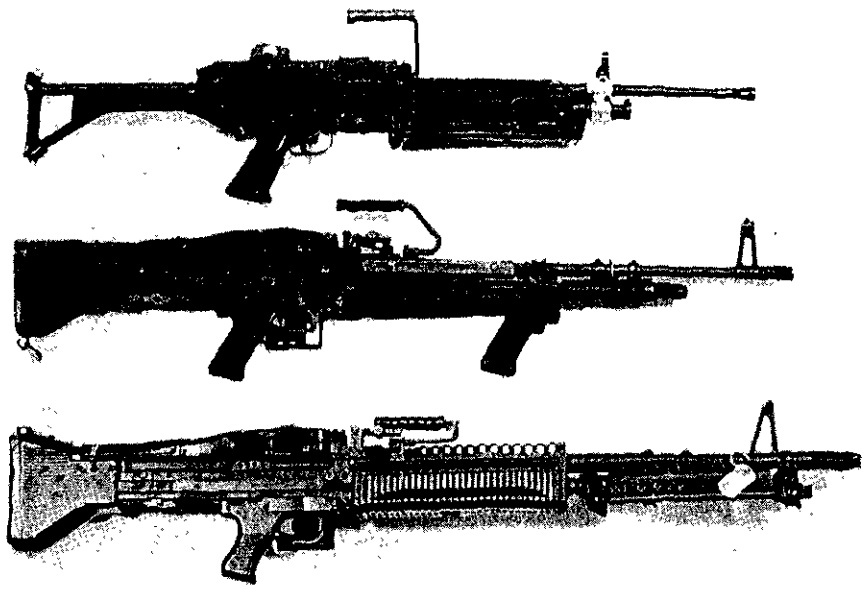
The test results will be used by the Infantry School to prepare and publish Army-wide procedures for rigging the M16A2 rifle.

**M249 Squad Automatic Weapon (SAW) in the Machinegun Role.** The results of tests conducted in the late 1970s indicated that the SAW had operational characteristics similar to those of the current M60 series of machineguns. Senior military officials discussed the possibility of expanding the role of the SAW. As a result of these discussions, the Vice Chief of Staff of the Army requested that a test be conducted to determine whether the SAW could perform the machinegun role in infantry units. The Army's Training and Doctrine Command directed the Infantry Board to conduct this test.

The SAW is now authorized for use as an automatic rifle in infantry rifle squads and for a variety of roles in other Army units. It is a belt-fed 5.56mm weapon, with either a 20- or 30-round magazine-feeding capability. It is gas-operated, air-cooled, and fires from the open bolt position. The SAW has a regulator for selecting normal or maximum cyclic rates of fire, and the gunner controls the rate of fire through trigger manipulation. The bipod-equipped weapon can also be fired from a tripod or from the standing position.

In the Board's test, the SAW was compared with the standard M60 7.62mm machinegun and the M60E3 machinegun. (The latter is an improved, lightweight version of the M60 with generally the same operating principles and design characteristics.)

The performance, reliability, human factors, and safety characteristics of the three weapon systems were compared in what was essentially a side-by-side test under the climatic conditions existing at Fort Benning in August and September 1984.



From top, right side view of M249 SAW, M60E3 machinegun, and M60 machinegun.

Forty-two infantry soldiers, most of whom were recent graduates of infantry one station unit training, completed a special training course with the three weapons before the test began. Then, wearing standard battle dress uniforms and carrying their fighting load equipment, the soldiers fired each weapon under simulated tactical conditions at point and area target arrays. The target arrays were situated at different ranges and on varied terrain over which the soldiers had to move and engage the targets.

The test scenarios, by limiting target engagement times, restricting the amount of ammunition, and varying the number of targets presented at a given time, placed the test soldiers under the type of stress they would encounter in day and night tactical operations.

In addition to firing each of the weapon systems, the test soldiers also negotiated a cross-country course several times to develop portability data and to determine their preferences. Trained data collectors recorded the test results and contributed their observations on the weapon systems.

The Infantry School will use the test results to evaluate the SAW's potential for use in the machinegun role.

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THE NEXT GENERATION of Bradley infantry and cavalry fighting vehicles is currently being tested at Aberdeen Proving Ground, Maryland. Both the M2E1 (BIFV) and the M3E1 (BCFV) embody a number of common changes, with additional improvements being made to the BCFV.

Two major changes that are common to both vehicles involve improvements to the TOW antiarmor missile system and the installation of a gas particulate filter unit. The improvements to the TOW system will allow either version of the E1 to use any of three variants of the TOW system: the basic TOW, the improved TOW, or the TOW-2. The gunner's instrumentation will be changed to indicate which of the three missiles is in the launcher.

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