

INFANTRY NEWS



THE NATIONAL INFANTRY MUSEUM opened its doors at Fort Benning in 1959. Since then, tens of thousands of visitors from every state and from many foreign countries have toured its displays.

The Museum is much more than a collection of things painted OD. There is a broad spectrum of items on exhibit ranging from oil paintings, oriental rugs, fine bronzes, and sterling silver to atomic weapons, C-rations, uniforms, dominos, and documents signed by more than half of the Presidents of the United States.

The Museum also houses one of the most complete collections of military small arms in the United States, including entire families of weapons from the first prototype to the last one issued.

To assist the Museum by providing financial and volunteer support, the National Infantry Museum Society was formed at Fort Benning shortly after the Museum opened. Membership in the Society is open to anyone who is interested. The cost is \$2.00 for a one-year membership, or \$10.00 for a lifetime membership. All Infantrymen are encouraged to join the Society, which, over the years, has contributed so much to the National Infantry Museum.

Additional information about the Museum and the Society is available from the Curator, National Infantry Museum, Fort Benning, Georgia 31905; commercial telephone 404/545-4762 or AUTOVON 835-4762.

AS THE BRADLEY Infantry Fighting Vehicle reaches the field, units must seriously consider storage and maintenance facilities for both the vehicle and its firing port weapons (the M231 5.56mm).

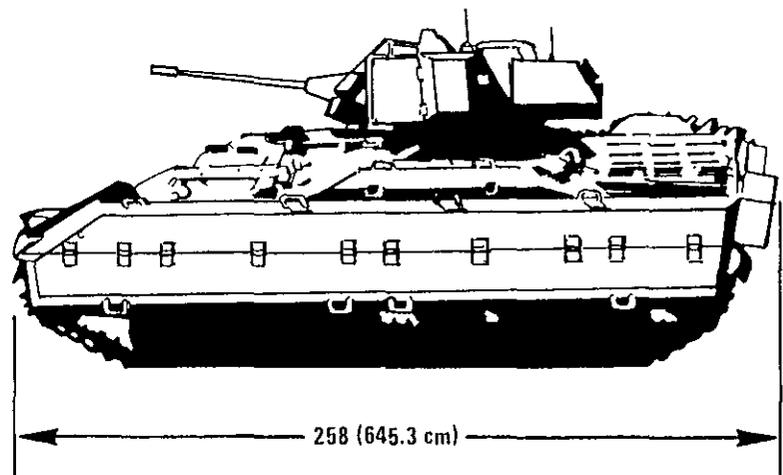
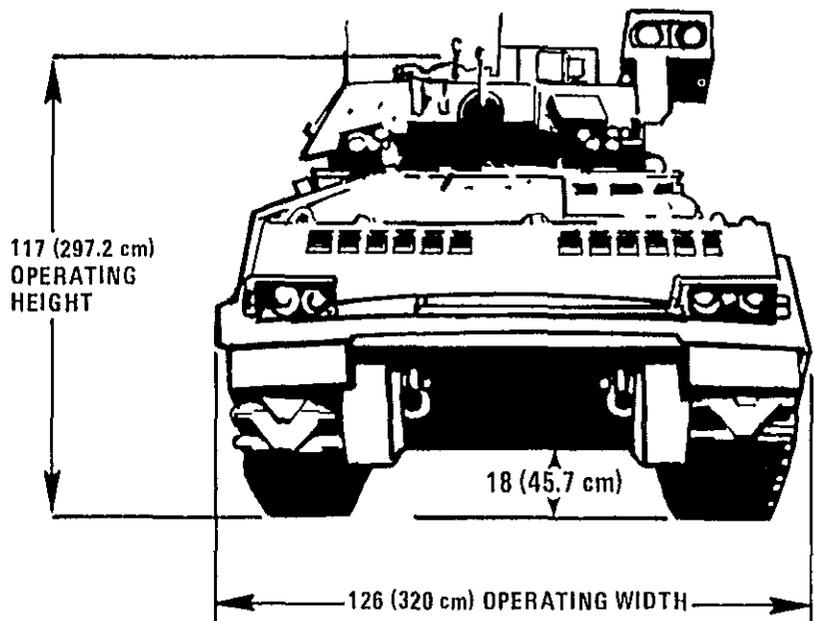
Maintenance bays in motor pools,

for instance, should have a height clearance of at least 10 feet, because the vehicle measures 116 inches from tread to turret. The operating width of the Bradley is 10.5 feet, so some modifications to the present maintenance facilities may be necessary.

The significant characteristics of

the Bradley are:

- Operating height: 117 inches.
- Operating width: 126 inches.
- Total length: 258 inches.
- Weight, combat loaded: 49,000 pounds.
- Weight, less fuel, crew, and OVE: 40,650 pounds.
- Ground pressure, combat load-

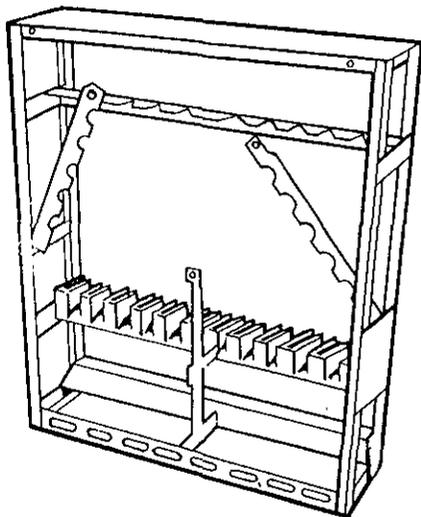


ed: 7.4 pounds per square inch.

As the M88 armored recovery vehicle will also be issued to mechanized infantry units under Division 86 TOEs, the concrete flooring both inside and outside the motor pool bays must be strong enough to support its weight. The thickness of the flooring should vary from nine inches of reinforced concrete for hardstands to ten inches for bay floorings.

The BIFV has six M231 5.56mm firing port weapons and one M240C 7.62mm coaxial machinegun that must be secured in unit arms rooms. The Bradley Cavalry Fighting Vehicle (BCFV) has the M240C but does not have the firing port weapons.

The firing port weapons will fit the current M12 weapons rack, which is designed to take the M16 rifle. They can be put in the rack in either their extended or normal mode.



M-12 Rifle Rack.

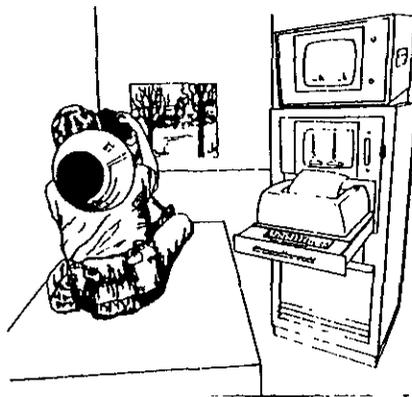
There is no weapons rack for the M240C; these weapons should be stored in wall lockers or in some other configuration according to a unit's local physical security SOP.

THE DIRECTORATE OF TRAINING DEVELOPMENTS at the Infantry School has given us the following item, which should be of interest to the infantry community:

About a year ago, the Project Manager for Training Devices (PM-

TRADE), working with the United States Marine Corps, began an exploratory program aimed at developing a high fidelity Dragon gunnery training system.

The system consists of a student station with platform and a simulated Dragon weapon, a three-dimension model board with a scale model tank that moves in response to commands from a micro-processor, and an instructor's station with a keyboard and monitors that provide real-time



information relating to the firing and simulated flight of the Dragon and its round.

When a gunner fires the device, he hears the initial explosion of the rocket motor. He also experiences a weight loss as the simulated rocket leaves his firing position, and his sight picture is momentarily obscured by simulated smoke. The gunner must overcome these launch problems and must smoothly track his target, ignoring the simulated missile that he can see in his sight.

Included in the simulation are the sounds of the round's thrusters firing and of the round's explosion as it hits the target. In addition, in his sights the gunner can see his rounds strike.

The device, known as the Simulated Tank Antiarmor Gunner System — Dragon (STAGS-D), will become the mainstay of gunner training for the entire antiarmor family of weapons, including the TOW and the Viper. The final version will incorporate the latest video tape and video disc technology and will be adaptable to the fire-and-forget weapons that are now being planned.

The STAGS device should be in the field by January 1984.

THE ARMY'S ELECTRONICS TECHNOLOGY and Devices Laboratory is developing a family of silent, lightweight power sources that operate on the principle of thermoelectric energy conversion.

Two of its G-79 thermoelectric generator units were successfully used in Germany late last year. They were used to heat and light a motor pool garage and a field tent.

The G-79 is only one of a family of portable power units, ranging in power from one-half to 10 kilowatts, that are being developed. The units are known collectively as the Silent Lightweight Electric Energy Plants (SLEEP).

Because there are no moving parts in the heart of the generator, its thermoelectric converter, it needs no lubrication or regularly scheduled maintenance. And it cannot be heard beyond 100 meters.

The generator is expected to be fielded by 1988.

ONE NEW DECORATION and three new service ribbons are now available for award or wear by qualified Army personnel. Interim Change I02 to AR 672-5-1 contains the criteria for earning the Army Achievement Medal, the NCO Professional Development Ribbon, the Army Service Ribbon, and the Overseas Service Ribbon.

The Army Achievement Medal may be awarded to any Army member who, while serving in any capacity with the Army in a noncombat area after 1 August 1981, distinguishes himself by meritorious service or achievement of a lesser degree than required for the award of the Army Commendation Medal. It will not be awarded to general officers.

The NCO Professional Development Ribbon can be worn by soldiers who successfully complete certain designated NCO professional development courses. All active

enlisted members of the Regular Army, the Army National Guard, and the Army Reserve are eligible for this award. Completion of the primary, basic, advanced, and senior level courses designated in the interim change qualify an individual for the award.

The Army Service Ribbon can be worn by soldiers who successfully complete their initial entry training. All active members of the Army, including the Reserve Components, are eligible. Officers can wear this ribbon when they successfully complete their resident basic course, and enlisted soldiers when they successfully complete their initial MOS-producing course.

The Overseas Service Ribbon is authorized for wear by a soldier when he successfully completes an overseas tour in accordance with the provisions of AR 614-30. But the ribbon is not authorized for overseas service that is already recognized with another service ribbon such as the Vietnam Service Medal. Numerals are used to denote second and subsequent awards of the ribbon.

No orders will be published awarding the ribbons, because they are authorized for certain types of service or schooling. Soldiers who meet the qualifications outlined in the interim change to the regulations may immediately purchase and wear the ribbons.

Reservists who need further information should read AR 672-5-1 and its changes or talk with their unit personnel officers. Members of the IRR should contact their personnel management officers or NCOs at RCPAC.

LIVE FIRE GUNNERY will be a major element of Bradley Infantry Fighting Vehicle (BIFV) training. The present concept calls for a mechanized infantry unit to conduct service firing three times a year — once for qualification, once for sustainment, and once during its ARTEP. To lessen the time and expense involved in this annual requirement, subcaliber firing and training devices will be

used to meet a unit's gunnery needs.

Together, the Infantry and Armor Schools have developed FM 71-999A (Draft), *Infantry and Cavalry Fighting Vehicle Gunnery*, which takes into account the different gunnery requirements of the two vehicles caused by the firing port weapons on the BIFV.

The gunnery program will not be cyclic. Therefore, all squads will not have to start the program at the same point. Rather, each commander will have to determine his unit's level of proficiency and adjust his program accordingly.

BIFV training will also include a master gunner program, which will be similar in many respects to its armor counterpart. Accordingly, the BIFV master gunner will play a major role in BIFV gunner training and in support of turret and fire control maintenance. He will serve as his unit commander's expert on BIFV gunnery, and will perform the following gunnery functions:

- Assist his commander in preparing an annual BIFV gunnery program and in conducting live fire BIFV gunnery.
- Administer individual and collective gunnery skill tests.
- Assist teams, squads, and platoons in their pre-fire gunnery training and in their gunnery and battle drills.
- Assist vehicle commanders during pre-firing checks, boresighting, and zeroing.
- Supervise and manage the use of the conduct-of-fire trainer (COFT).
- Help his commander to analyze individual and collective gunnery performances.
- Help his commander to identify potential gunners among his Skill Level 1 soldiers.

The master gunner will also be responsible for giving commanders and staff officers an evaluation of the state of readiness of the unit's BIFV mounted weapon and fire control systems. He will see that operator maintenance checks, services, and alignments are accomplished on those systems; he will evaluate the consequences of improper operation or

lack of proper maintenance on those systems; and he will plan for the availability of the BIFV for training purposes and for combat based on the estimates of the time needed for scheduled services, inspections, and repairs at organization and direct support levels, to include any automotive requirements. The master gunner must be able to translate his evaluations into appropriate training and operation plans.

The turret maintenance functions of the master gunner will require considerable scrutiny and evaluation as the BIFV's mechanic program evolves. As it is now planned, the turret mechanic (MOS 45T) will merge with the automotive mechanic (MOS 63T) at Skill Level 3. Consequently, motor sergeants in units equipped with BIFVs will have the training they need to supervise both turret and automotive maintenance. Previously, the inability of motor sergeants in MOS 63C to supervise tank turret maintenance effectively detracted from the quality of the maintenance that was being performed.

Since mechanized infantry units presently do not have master gunners, provisions must be made to incorporate the BIFV master gunner requirements into the mechanized battalion's operations section as a separate position and also into the new equipment training effort. The authorization is expected to be one sergeant first class in the battalion S3 section and one staff sergeant, who would serve as an assistant platoon sergeant as an additional duty, in each line company.

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

- **Pistol Test.** The 9mm pistol program manager recently asked the Infantry Board to conduct a hit probability test on several 9mm pistols that were being considered for adoption by the military services. This was part of a testing program directed by the Army's Materiel Readiness Command.

Thirty-five representative tes

soldiers were used in the Board's test. They were both male and female, and both left- and right-handed firers. Some were expert shooters from the U.S. Army's Marksmanship Unit.

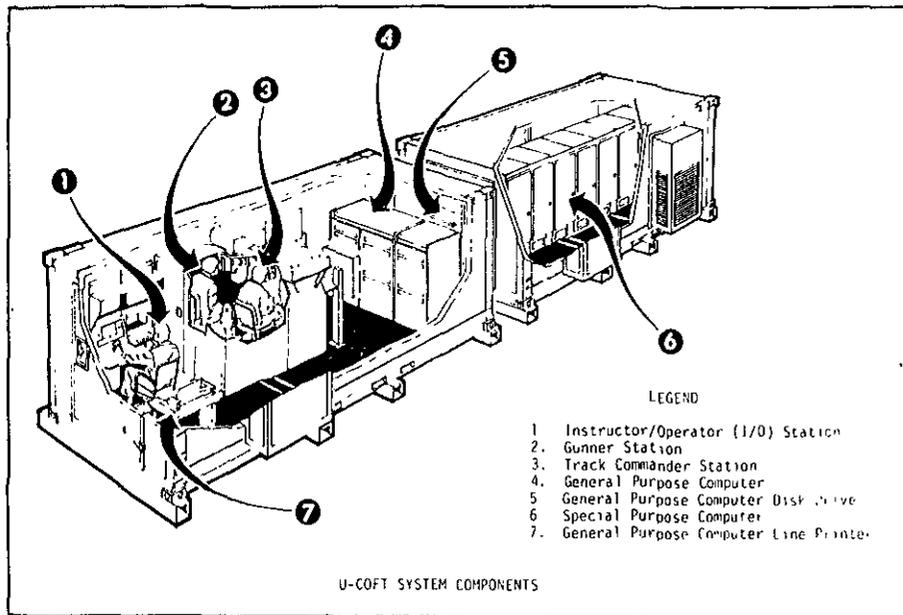
The test soldiers completed familiarization training, fired a known distance course, and then fired on a computerized combat pistol course that was built by the Board. The course had seven lanes with ten targets on each lane at distances ranging from 13 meters to

50 meters. A computer controlled the range's operation and gave immediate hit, miss, and round count data. The course was used to collect hit probability data on the 9mm pistols as well as on the control pistol, the .45 caliber M1911A1 weapon.

The test manager was Captain Charles Pavlick; his assistants were Sergeant First Class Ronald Waldheim and Staff Sergeant Eric Malone.

• **FVU-COFT.** There is a need for a training device that can be used to correct anticipated training deficiencies when the Bradley infantry and cavalry fighting vehicles are fielded. The Board conducted an operational test on such a device, the Fighting

period, the groups were evaluated on the BIFV using live ammunition and firing the main 25mm gun, the coaxial machinegun, and the TOW. The results will be used to recommend, if warranted, the continued development of the FVU-COFT.



Vehicle Unit Conduct of Fire Trainer (FVU-COFT) to evaluate the effectiveness of the training program.

Two groups of test soldiers were trained, one group on the FVU-COFT and the other on the BIFV. Upon completion of the training

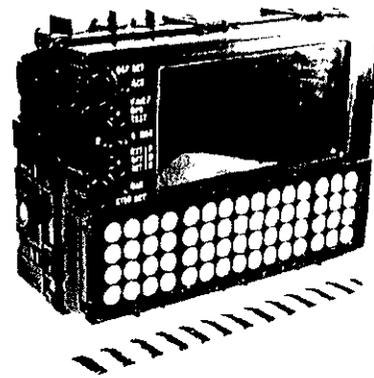
• **DMD/MBC.** The Board conducted a concept evaluation program (CEP) test of the Digital Message Device/Mortar Ballistic Computer (DMD/MBC).

The test evaluated the usefulness of a digital message device after it was

The managers for the operational test were Captain Raymond Jones, Captain James Cambron, and Lieutenant Michael Allison. They were assisted by Sergeants First Class Harlan Selle, Alphonso Millender, and Bruce Smith.

modified and programmed to function as a mortar ballistic computer.

Infantry School mortar instructors were used as test soldiers, and each independently computed firing data for both the 81mm and 107mm mortars. Each computation was timed



The DMD/MBC as tested by the Infantry Board

and evaluated for accuracy.

The Infantry School will use the results of the test in future procurement decisions concerning the mortar ballistic computer.

The test manager was Captain Noble T. Johnson, and his assistants were Sergeant First Class Theodorick Garner and Staff Sergeant Robert Taylor.

• **Brown Boot.** Recently, the Board was tasked to conduct an operational test of a new rough-out brown leather combat boot.

The soldiers selected to take part in the test of the new boots were Ranger Department instructors, initial entry trainees, and members of combat, combat support, and combat service support units. The Ranger instructors wore the new boots daily. Other test soldiers alternated wearing the new boots with their regular black boots. Half of the basic trainees wore the new boot while the other half wore the black boots for a complete 13-week training cycle.

The Board was directed to end the test before its scheduled completion date because numerous manufacturing defects and failures with the soles of the boots had become apparent.

The test manager was Captain Timm Prouty; his assistants were Sergeants First Class Doyle Alford and William McLeod.

