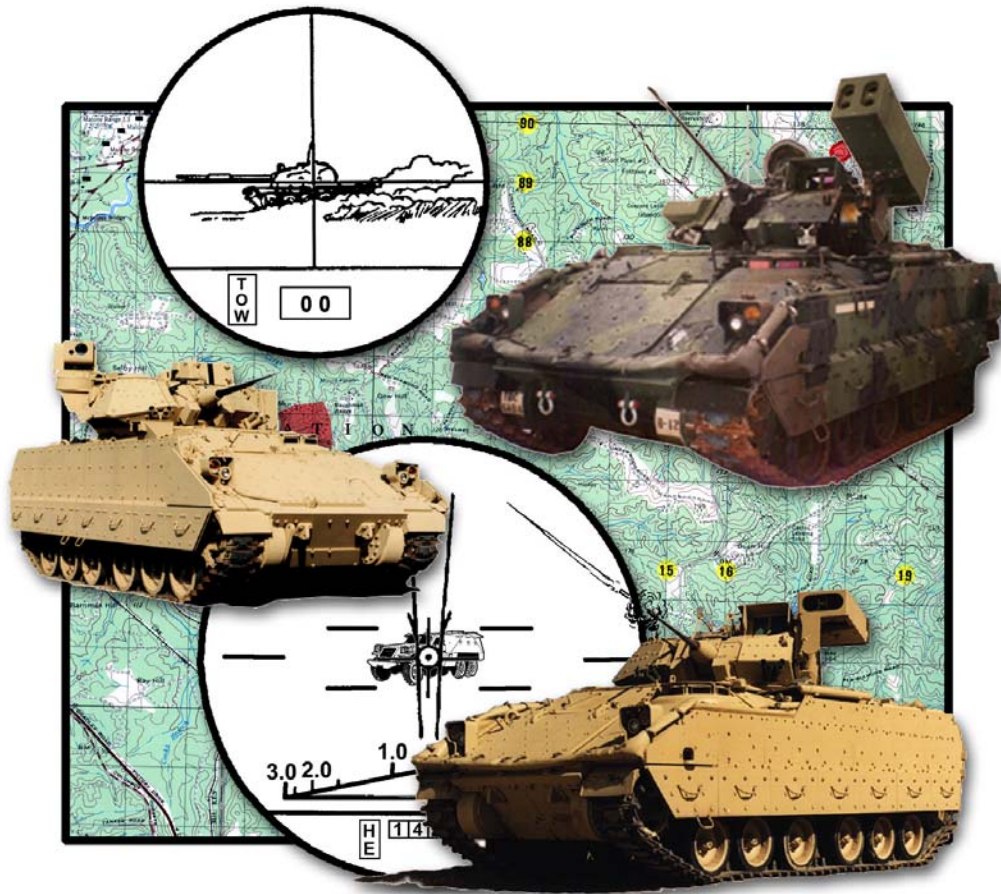


BRADLEY GUNNERY



NOVEMBER 2003

HEADQUARTERS, DEPARTMENT OF THE ARMY

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BRADLEY GUNNERY

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DA Form 7354-R (Revised), Bradley Crew Scoresheet
 DA Form XXX-A-R, Bradley Gunnery Skills Test Scoresheet
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<p>NOTE: Most tables are illustrated only the first time they are discussed; consequently, some page numbers refer only to a text discussion.</p>		

Firing tables in this manual listed in numerical order.

PREFACE

This manual explains Bradley system gunnery doctrine and techniques. Operator's manuals cover everything else. Where procedures conflict, the readers should follow the ones in the technical manuals, because they can obtain priority updates for them.

Except as noted, this text refers not to published editions of ARTEPs, but to those posted in March 2000 (or later) to the Reimer Digital Library (RDL).

Every person who works in any way with BFVs should have access to this manual: commanders, staff, master gunners, and leaders at all levels. With it, they can develop gunnery programs to sustain combat readiness.

The crewmember will find specific information, but training managers and master gunners will find the information they need to develop BFV training. This includes--

- M2 and M3 Bradley gunnery theory, methods, and techniques.
- System features and capabilities.
- Gunnery training and evaluation at all levels.

The first eight chapters apply to all Bradleys. Subsequent chapters provide training strategies and advanced gunnery by MOS.

References to division commands and master gunners include enhanced or separate brigade commands and brigade master gunners. Double vertical lines in the margins (as shown for this paragraph) identify information that pertains only to the Bradley A3.

The proponent for this manual is the United States Army Infantry School. Send comments and recommendations to doctrine@benning.army.mil or on DA Form 2028 to Commandant, USAIS, ATTN: ATSH-ATD, Fort Benning, Georgia 31905-5410.

Unless this manual states otherwise, masculine nouns and pronouns may refer to men or to women.

CHAPTER 1

Vehicular Systems

The Bradley fighting vehicle (BFV) contributes to the combined arms effort. It provides the Infantry, Cavalry, Engineers, Air Defense, and Field Artillery with firepower, armor protection, and battlefield agility.

To employ the Bradley effectively, soldiers must know the characteristics and capabilities of its vehicles. As the Army upgrades and improves the BFV, and as Army doctrine changes, soldiers must stay current on the Bradley's capabilities.

1-1. OVERVIEW OF MODELS

The original BFV models are the M2 Infantry fighting vehicle (IFV) and the M3 Cavalry fighting vehicle (CFV), both of which fielded in 1983. Later model numbers represent upgrades or differences in system configurations and capabilities. These include the following. (Table 1-1, page 1-2, shows BFV technical data by model):

- M2 and M3.
- M2A2 and M3A2.
- M2A3 and M3A3.
- M2A2 ODS, M2A2 ODS-E, M3A2 ODS.
- M6 Linebacker.
- M7 BFIST.

1-2. M2A2 AND M3A2 MODELS

The A2 models offered several improvements over its predecessors. These improvements included an increase of 100 HP in the power train, 30-mm armor protection, armored-tile protection capability, and spall liners.

1-3. M2A2 ODS AND ODS-E, AND M3A2 ODS

Lessons learned during Operation Desert Storm inspired the development of two new Bradley models, the M2A2 ODS and M3A2 ODS. The M2A2 ODS-E model is tailored specifically for Engineer use. The ODS upgrades include the following:

a. **Eye-Safe Laser Range Finder.** The eye-safe laser range finder (ELRF) is part of the vehicle's integrated-sight unit (ISU). Using the ELRF, the crew can determine target ranges from 200 to 9,995 meters, accurate within 10 meters. The ELRF induces the weapon systems to superelevate for the determined range.

b. **Tactical Navigation System.** The TACNAV system comprises the precision lightweight GPS receiver (PLGR) and the digital compass system (DCS). It reports the vehicle's position in three dimensions: longitude and latitude, grid location, and elevation. The PLGR works with the DCS to provide the BFV's hull and turret azimuths, location, directions, distance to way points, and steer-to data. This information shows up on both the commander's and driver's compass displays.

CHARACTERISTICS	M2, M2A2	M3, M3A2	M2A2 ODS, ODS-E	M3A2 ODS	M2A3	M3A3	M6	M7
Weight (Combat, Pounds)	50,259 63,982	49,945 64,204	66,401	64,204	66,000	66,000	66,000	66,000
Ground Pressure	7.7	7.7	9.9	9.9	9.93	9.93	10.2	10.2
Fuel Capacity (Gallons)	175	175	175	175	175	175	175	175
Cruising Range (Miles, KM)	300, 483	300, 483	250, 400	250, 441	250, 441	250, 441	250, 441	250, 441
Engine	VTA-903T	VTA-903T	VTA-903T	VTA-903T	VTA-903T	VTA-903T	VTA-903T	VTA-903T
Gross Horsepower (HP)	500	500	600	600	600	600	600	600
Gross HP-to-Weight (Tons)	20.62	20.62	18.9	18.9	18.7	18.7	18.2	18.2
Transmission	500	500	500-3EC	500-3EC	500-3EC	500-3EC	500-3EC	500-3EC
Speed (MPH, KPH) Land	41, 66	41, 66	38, 61	38, 61	38, 61	38, 61	38, 61	38, 61
Speed (MPH, KPH) Water	4.5, 7	4.5, 7	5, 8	5, 8	NA	NA	NA	NA
Slope Climb	60%	60%	60%	60%	60%	60%	60%	60%
Trench Crossing	8'4"	8'4"	8'4"	8'4"	8'4"	8'4"	8'4"	8'4"
Vertical Wall Climb (Inches)	36	36	36	36	36	36	36	36
Personnel Capacity (Crewmembers)	3	3	3	3	3	3	4	4
Personnel Capacity (Passengers)	7, 6	2	7	2	7	2	1	1
Total Personnel Capacity (Passengers + Crewmembers)	10, 9	5	10	5	10	5	5	5
Firing Ports	6, 2	0	2	0	2	0	0	0
TOW Missile Variant	*All	*All	All	All	All	All	NA	NA
TOW Missile Ready	2	2	2	2	2	2	NA	NA
TOW Missile Stowed	5	10	5	10	5	10	NA	NA
25-mm Ammo Ready	300	300	300	300	300	300	300	300
25-mm Ammo Stowed	600	1,200	600	1,200	600	1,200	300	300
M240C 7.62-mm Coax Ready	800	800	800	800	800, 400**	800, 400**	400	800
M240C 7.62-mm Coax Ammo Stowed	1,400	3,600	1,400	3,400	1,400	3,400	2,800	2,800
M60 7.62-mm Ammo Stowed	2,200	3,200	2,200	3,400	2,200	3,400	NA	NA
M231 FPW 5.56-mm Ammo Stowed	4,200	0	2,200	0	2,520	0	NA	NA
M16 5.56-mm Ammo Stowed	2,520	1,680	2,520	1,680	2,520	1,680	1,680	1,680
Stinger Missile Ready	NA	NA	NA	NA	NA	NA	4	NA
Stinger Missile Stowed	NA	NA	NA	NA	NA	NA	6	NA
* Firing the TOW 2, TOW 2A and TOW 2B missiles from the basic TOW launcher is possible; however, the missile will have a reduced probability of hit.			** The Bradley A3 command vehicle will have 400 7.62 rounds in the ready.					

Table 1-1. Comparison of BFV technical data by model.