M2/M3A2/A3 BRADLEY FIGHTING VEHICLE, (MILES XXI)

PICTURE NOT AVAILABLE

Functional Description:
The MILES XXI family employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of combat vehicles, rifles, machine gun, and other direct-fire weapons. Small battery operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of the specific weapons) invisible laser pulses instead of lice ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual indications of a kill, hit, or near miss. Kill indicators on personnel or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition. The Combat Vehicle, Simulator System, Firing, Laser on the M2/M3 Bradley Fighting Vehicle are equipment with a laser transmitter that are fired using normal operating procedures. Special detector belts on the vehicle's exterior sense opposing force fire. Crewmembers wear man-worn devices that detect incoming fire against them. Outgoing Direct Fire from the vehicle main gun, coax, and missile is simulated by "firing" coded laser beams from laser transmitters mounted on the front of the turret. Each weapon (missile, 25mm Main Gun, and Coax Machine Gun) has a different MILES XXI code. Muzzle flash from the 25mm main gun is simulated by the FLASHWESS, a high-intensity light mounted next to the laser transmitter, which flashes each time the main gunfire's. The fire, smoke, and backblast of a weapon firing is simulated by one of four ATWESS devices that are part of the Signature Simulator, which fires pyrotechnic cartridges each time a simulated weapon is "launched". Incoming fire, the MILES XXI system simulates the effects of both direct and indirect fire engagements. Direct fire is simulated by receiving coded laser beams "fired" from laser transmitters. Indirect fire (artillery, nuclear, chemical, and mines) is simulated by receiving radio signals transmitted from the Mission Control Station (MCS). When incoming fire is received, the console will determine whether your vehicle sustains a NEAR MISS, HIT, or KILL. The visual message on the console will display Miles Code and Player Identification (PID). The MILES Code is a 2-digit MILES XXI code number used to identify simulated weapons. The PID is a 4-digit number that is a unique Player Identification of the player engaging you. This event information is stored in the console and downloaded after exercises for use in After Action Reviews. The MILES Code and PID accurately show the performance of specific troops and weapons. KILL simulates total disability to your vehicle. In addition to incoming fire, disconnecting or interrupting power to vehicle console will also cause a KILL. Vehicles can sustain 4 types of HIT — FIREPOWER KILL on the weapon simulates damage to the Main Gun, Coax, and STINGER. MOBILITY KILL simulates power train, track, wheel or other damage that would keep the vehicle from driving. COMMO KILL simulates loss of radio communications. HIT NO DAMAGE simulates vehicles being engaged, but your vehicle received no damage as a result of the engagement. NEAR MISS means direct or indirect fire was close, but did not hit vehicle.

DVC 23-95

Purpose of Trainer:

The devise is a component of the Multiple Integrated Laser Engagement System (MILES). MILES XXI is a family of training systems, accurately, and in real time, simulates the effect of direct and indirect fire (artillery, nuclear, or chemical weapons, and mines) as they would affect a vehicle/soldier in combat. This permits realistic combat training without the hazards of live ammunition. MILES XXI provides the capability for two-sided, realtime tactical engagement at unit sizes up to battalion and for realistic casualty assessments. Firing the weapon simulators is much like firing the actual weapons. However, instead for firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machine guns use blank ammunition, and the missiles and main gun use weapon effect simulators to simulate the noise, blast, and smoke of the actual weapons.

Physical Information:

Transit case: 46” L x 40” W x 17” H

Equipment Required, Not Supplied:

Battery
Blank Ammunition
Weapon

Special Installation Requirements:

None

Power Requirements:

Lithium Ion

Training Category/Level Utilized:

Armor/Level 3

Training Requirements Supported:

ARTEPs	7-15, 15-55, 71-2
MOSCs	11B, 11Z, 19D, 19E, 19Z

Applicable Publications:

TM Number TBD

Reference Publications:

None

Source and Method of Obtaining:

Available through local TSC

Logistic Responsible Command, Service, or Agency:

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