

# U.S. Army XM808 21mm Bunker Defeat Munition (BDM) Subcaliber Training System

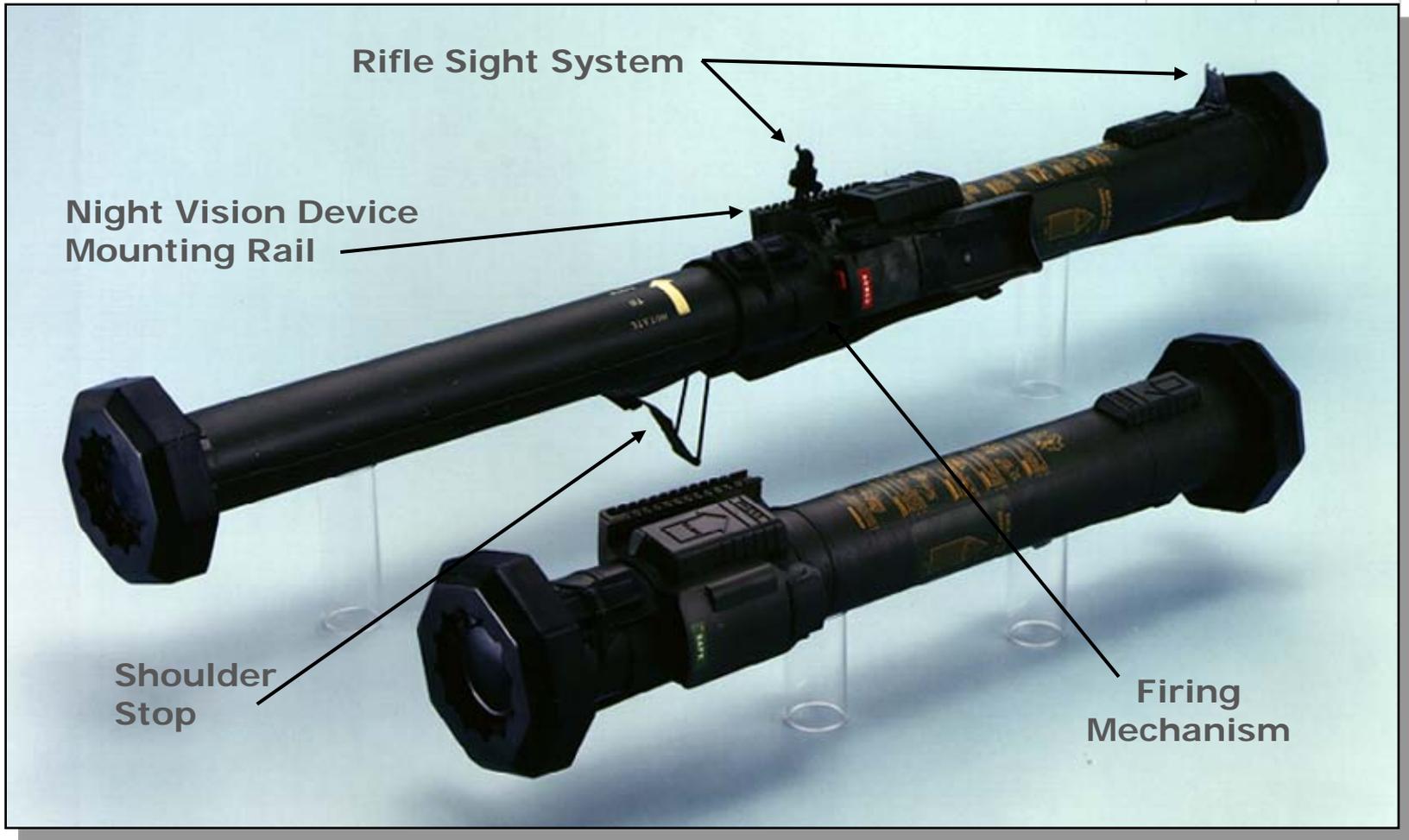
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May 15, 2012*



# Agenda

- BDM Tactical Overview
- 21mm Training System Overview
- XM808 BDM Training System
  - Early Prototype Design
  - Improvements to the Design
  - Testing
  - Current Capabilities
  - Future Capabilities

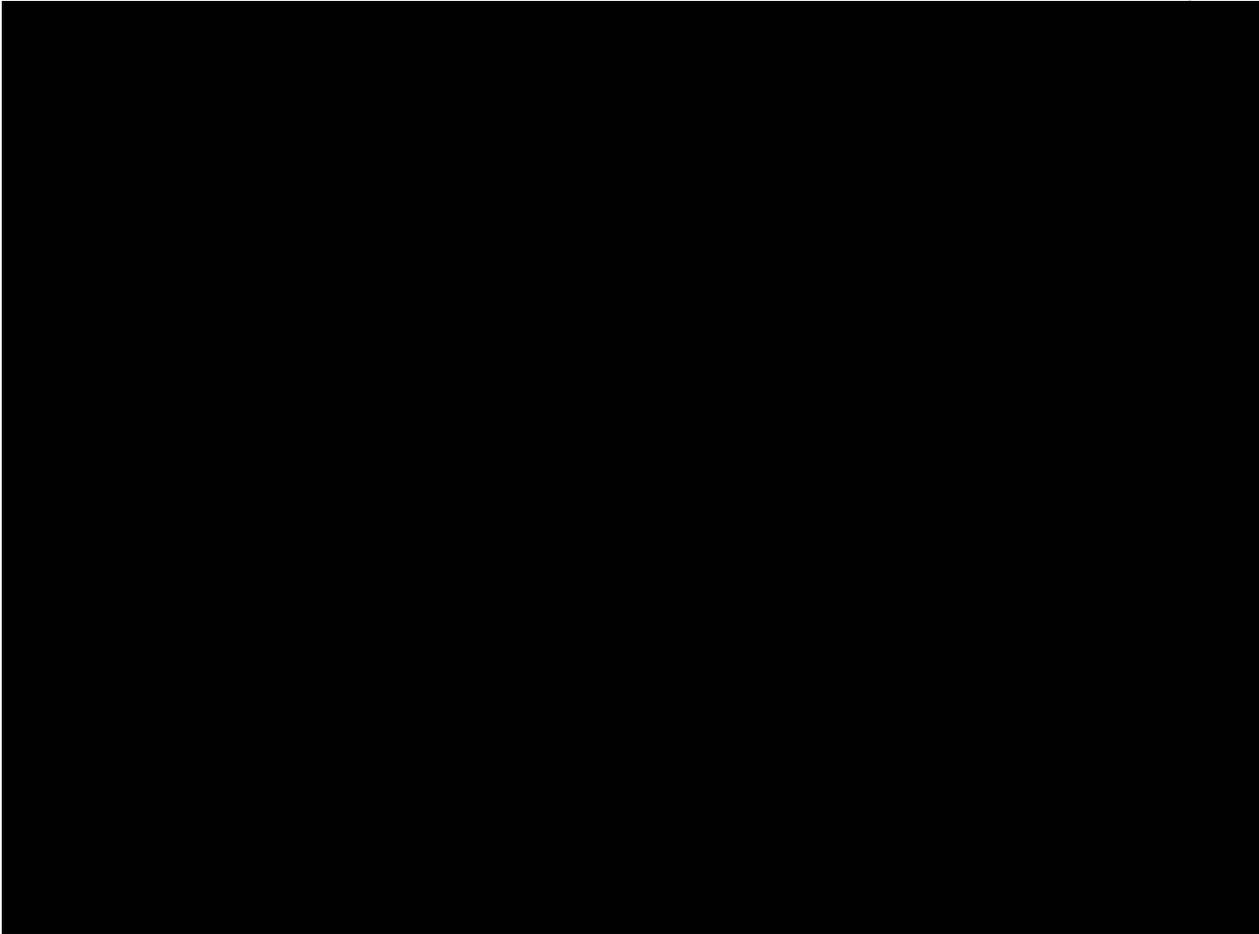
# BDM Tactical Launcher



# Key Characteristics Tactical BDM

Rocket and Launcher, 83mm, HEDP (BDM), M141  
NSN 1340-01-443-5477 DODIC HA-08

- Length: 812 mm (32.0 in.) Carry Mode  
1372 mm (54.0 in.) Ready to Fire
- Weight: 7.2 kg (16.0 lb.)
- Warhead: 1.1 kg (2.3 lb.) Aluminized High Explosive
- Fuze: Dual Safe, Self Discriminating on Impact
- Velocity: 220 m/s (722 ft/s) @ Muzzle
- Range: 2500 m Maximum  
1000 m Effective (Area Targets)  
250 m Effective (Bunker Targets)  
15 m Minimum
- Sights: Front 3 Post, Rear Peep Adjustable to 500m  
Integral Universal NVD Rail (Picatinny Rail)
- Shelf Life: Exceeds 10 Years
- Hazard Class: 1.2 E UN Serial Number: 0182



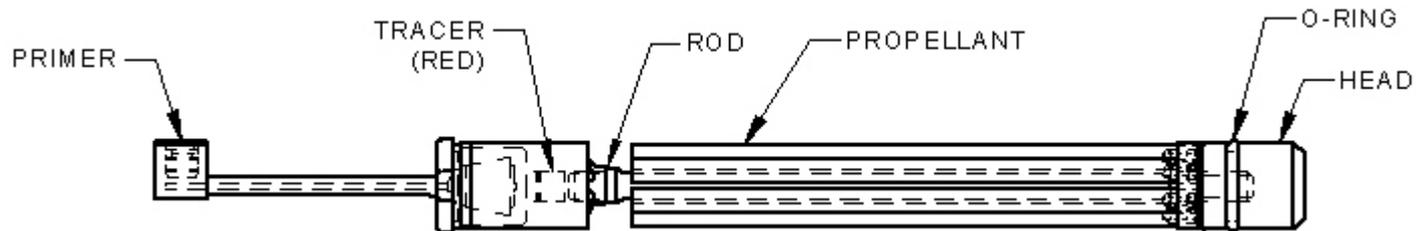
# 21mm Subcaliber Training Overview

- Subcaliber Rocket
  - First developed for M72 LAW training by Marines
    - Type classified for Army and Navy service released in 1993
    - Currently in use by Marines, Army, and Special Forces
  - Close simulation of tactical round firing
    - Blast overpressure
    - Back blast
    - Recoil
    - Sound
- Why Train with Subcaliber Munitions ?
  - Provides for more realistic training
  - Lower cost than tactical
  - More environmentally friendly to training bases/installations
  - Non-dud producing round

# 21mm Subcaliber Training System



# 21mm Rocket



# XM808 21mm BDM Subcaliber Trainer Launcher



# 21mm BDM Training History

- Early Prototype Launcher
  - First prototypes proved that 21mm Rocket could be fired in a BDM
    - Able to convert one-time-use BDM to allow multiple firings
    - Mechanically fire the 21mm rocket
      - BDM is normally electrically fired
  - Prototype launchers were supplied to the Army
    - Obtained Limited Safety Release
    - Used in New Equipment Training (NET)
    - Prototypes were in the field for 5 years
    - Gained valuable field experience

# XM808 BDM Trainer Launcher Development

- Improvements to the prototype
  - Improved reliability
    - New Outer Tube material allows for more firings without damage
    - Some features now made from billet aluminum to last longer
  - Improved safety
    - Internal safeties prevent inadvertent firing
    - Allow for loading the launcher in the collapsed position
  - More closely replicates Tactical BDM
    - Once the rocket is loaded, firing procedure is identical to Tactical BDM
    - No negative training



# XM808 BDM Trainer Launcher Development

- Army safety release testing
  - Hot and Cold Static Firings
    - Functions from -25°F to 120°F
  - Drop Testing
    - Tested at hot and cold
    - Dropped in several configurations (both Collapsed and Extended)
    - Passed all testing, rocket will not inadvertently fire when dropped
- Army safety release for
  - Instructor and Key Personnel Training (I&KPT)
  - Mobile Training Teams (MTT)
  - Mission Essential Training (MET)
  - Other training activities

# XM808 BDM Trainer Launcher Capabilities

- Currently in use By the Army for MET Training
  - Up to 100 firings per day per gunner allowed
  - Barrel proven in the field to fire over 900 rockets
  - Some XM808's already have 400 rockets through them
  - Can be cleaned just like any other firearm



# XM808 BDM Trainer Future

- Planning for full qualification testing
  - More extensive safety and reliability testing
  - Will become Type Classified
- Non-Pyrotechnic Rocket
  - No burning tracer element
  - No fire hazards downrange
  - Non-toxic (green)
  - Illuminated marker head
  - Visible range not limited to tracer burn time

