

PRECISION, PEOPLE AND TECHNOLOGY



## Enhancing War Fighter Shoulder Fired Weapon Training

NDIA Gun & Missile Systems Conference April 21-24 2008 New Orleans, LA

# Talley supports NATO's Militaries!

- Focusing on Defense Since 1947
  - New Nammo Products/Technologies Benefit NATO Armed Forces
- We Develop, Produce, and Integrate
  - Systems, Subsystems, Components
- Complete Product Life Cycle Capabilities
  - Energetics, Pyrotechnics, Fuzing, Warheads, Propulsion
  - Research, Engineering, Testing, Qualification, Production, Training
- Reliable and Dependable One Shot Devices
  - Lethal Shoulder-Launched Munitions
  - Gas Generators, Actuators, Dispersion Systems, Rocket Motors
- Nammo Talley
  - Only US producer of Shoulder-Launched Munitions

# Introduction - Subcaliber Training

- Subcaliber Rocket
  - Close replication of tactical round firing
    - Blast overpressure
    - Back blast
    - Recoil
- Why Train with Subcaliber Munitions ?
  - Provides for more realistic training
  - Improved gunner target hit percentage with tactical weapon
  - Lower cost than tactical
  - Environmentally friendlier to training bases/installations

# Shoulder Launched Mmunition Training



**M72 LAW**



# Shoulder Launched Mmunition Training



## M141 Bunker Defeat Munition (BDM)



# M72 LAW - Weapon Characteristics



Caliber . . . . .	66 mm
Carry Length . . . .	30.5 in.
Firing Length . . . .	38.6 in.
Weight . . . . .	7.9 lbs
Range . . . . .	10 to 500 m
Max Effective . . . .	350 m

# M72 LAW History

M72 LAW has been used in every United States conflict since Vietnam



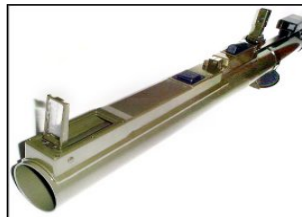
USArmy TC  
Basic LAW

1962



1991

1972



1993



USArmy TC  
M72A4-A5-A6



USMC Fields  
M72A7 OEF OIF

2004



2008

Advanced  
M72E8 & 10  
Qualification

2006



USSOCOM & UK  
Field M72A9 ASM



# M72 LAW - Subcaliber Rocket Trainer

Caliber . . . . . 21 mm  
Carry Length . . . . 30.5 in.  
Firing Length . . . . 38.6 in.  
Weight . . . . . 7.9 lbs  
Range . . . . . 15 to 250 m





# M72 Trainer Weapon Overview

- **Duplicates Tactical Weapon Features in Reusable Form:**
  - Compact and lightweight (constructed from used tactical launcher)
  - Fires both right or left handed without modification
  - Identical gunner interfaces, weight and center of gravity
- **Replicates Tactical Weapon Performance:**
  - All propulsion occurs within the launcher tube
  - Trainer round ballistically matched with tactical rounds
- **Training System Type Classified by US Army and Navy**

# M141 BDM - Weapon Characteristics

**Caliber . . . . . 83 mm**  
**Carry Length . . . . 32 in.**  
**Firing Length . . . . 54 in.**  
**Weight . . . . . 15.7 lbs**  
**Range . . . . . 15 to 500 m**  
**Max Effective . . . . 300 m**



# M141 BDM - Subcaliber Rocket Trainer

Caliber . . . . . 21 mm  
Carry Length . . . . 32 in.  
Firing Length . . . . 54 in.  
Weight . . . . . 15.7 lbs  
Range . . . . . 15 to 250 m



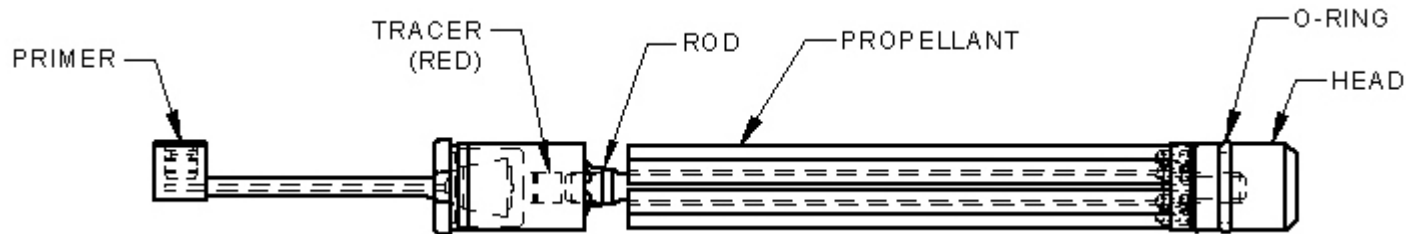
# A Common 21 mm Trainer Rocket





# 21mm Training Rocket Overview

- Trainer Rocket



Issued as round of ammunition, requires no maintenance or tools  
Prepackaged at the factory in protective, throw-away aluminum tube  
Transport by rail, air, sea, road - tactical tracked or wheeled vehicles  
Certified for air delivery - individual parachutist or air-dropped pallet  
Same round used for M72, BDM, and USMC SMAW

# M72 Training Overview



- Replicates tactical acoustic signature without full energy content
- Permits more than 100 shots/day with single hearing protection
- Replicates back blast field, but safer for training environment

# Training with Subcaliber System

- Classroom and Field Learning Objectives:
  - Familiarization with training weapon and ammunition
  - Perform pre-fire serviceability inspection
  - Prepare weapon for firing
  - Firing positions and correct sight picture
  - Engaging stationary and moving targets
  - Misfire procedures
  - Reloading and unloading of trainer weapon
  - Returning weapon to carry configuration

# Training Program Summary

- Nammo Talley has developed a pair of 21-mm sub-caliber training systems that approximate the 66-mm M72 LAW and 83-mm M141 BDM (SMAW-D) and USMC SMAW tactical round firing effects for gunner training purposes.
- These training systems complement classroom instruction with field handling trainers and allow for a cost-effective alternative to training with the tactical round with inert warheads.
- Nammo Talley offers a comprehensive training curriculum designed to enhance the benefits of training under the military's currently established doctrine, tactics, and techniques.



# Subcaliber Rocket Training Contacts

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