XM7 SPIDER NETWORK COMMAND MUNITION DISPENSING SET


LTC Dennis Gaare  
Product Director Area Denial  
PM Close Combat Systems  
973 724 1639  
dennis.gaare@us.army.mil

Ken Heider  
Deputy Product Director Area Denial  
PM Close Combat Systems  
973 724 2622  
kenneth.heider@us.army.mil

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.
XM7 Spider System Overview

Remote Control Unit - RCU
Enables Man-in-the-Loop (MITL) command & control of all munitions in the field

Transceiver
RCU with transceiver (RCUT) makes up the Remote Control Station (RCS)

Munition Control Unit – MCU
Hand emplaced, remotely controlled munitions. Detects intrusions, controls lethal & non-lethal munitions

Standard antenna mast or VHAM

500m

1000m (3500m w/VHAM)

500m

Repeater
Provides for extended range &/or to overcome difficult terrain

Spider System Attachments
- Miniature Grenade Launcher (MGL)
- Extended Range Tripline Sensor (ERTS)

Additional Spider System Hardware
- MCA Trainer, Grenade Training Simulator
- Munition Adapter Module (Elec.)

System Capabilities
- Self-Destruct & Self Deactivate
- Command Reset/Recycle Self-Destruct
- Transfer of Control
- Interface to ABCS via removable media
- Command Destruction
- ON – OFF – ON (safe passage/maint.)
- Multiple Effects (Lethal / NL / Demo)
- Intrusion Detection
- Anti-tamper/Self Protection
- Reuse

SCE Added Hardware
- Non-Lethal Launcher (NLL) (2 variants)
- Variable Height Antenna Mast (VHAM)
- Shock Tube Initiation Capability (STIC)
XM7 Spider Non Lethal Launcher (NLL)

**DESCRIPTION**
- NLL is a Non-Lethal alternative to the lethal Spider MGL
- Provides escalation of force / response capability
- Provides an early warning to the user
- Utilizes existing technology to the maximum extent possible to minimize development cost and risk

**CURRENT STATUS**
- **Successfully conducted** Force Development Test 2 (FDT2), Fort Bliss, TX on 27-29 June 2011
- This test was the **first time that Soldiers employed Non-Lethal Launcher (NLL) grenades.**
- Currently seeking to improve grenade reliability based on the FDT2 results.

**FLASH BANG & STING BALL**
- Flash Bang XM809 DODIC - TS08
- Sting Ball XM810 DODIC - TS07
- MCU with NLLs

**KEY MILESTONES/ ACTIVITIES**
- Force Development Test2 (FDT2) Jun 11
- HECOE NLL GIM Report Mar 12
- Issue Letter of Contemplation Apr 12
- Contract Award Jun 12
- Design Verification Test (DVT) May - Jul 13
- Insensitive Munitions / Final Hazard Classification (IM/FHC) May - Jun 13
- Type Classification Jan 14

- Para 3, page 9 - Lethal and non-lethal Spider munitions are needed to replace the capabilities provided by all current conventional non-self-destructing anti-personnel landmines (APL) and to protect and enhance the combat effectiveness of deployed forces.

- Table B. Attribute 9, page 15, Non Lethal

- Paragraph n, Non-lethal (NL), page 19: DOD desires a companion capability to the lethal Spider component, which can incapacitate or restrain, but not intentionally kill its target. It is desired that the NL Spider component provide the same area coverage as the lethal Spider munition. The restraining mechanism should be uni-directional (threshold) or omni-directional (objective).
Non Lethal Launcher (NLL) Design

XM-104 Non Lethal Bursting Hand Grenade (NLBHG)

The Spider XM7 NLL Leveraged the XM-104 Non Lethal Bursting Grenade Body

Miniature Grenade Launcher (MGL) Lethal

Non Lethal Launcher (NLL)
Questions?