



Project Manager Soldier Weapons

The Soldier

Our Strength and Purpose

PM Crew Served Weapons LTC Paul E. Alessio



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Product Manager Crew Served Weapons



Current



Near Term



*Compact Semi-Automatic
Sniper System (CSASS)*



*M3 & M3E1 Carl Gustaf
(MAAWS)*



*Non-Standard
Weapons*



CROWS Low Profile



*Mounted Machine Gun
Optic (MMO)*



*XM1112
40mm Airburst
NLM (ANLM)*



CROWS INC II

Future

**Ammo and Configuration
Study Feeds Common
Caliber Crew Served Weapon
and Lightweight Medium
Machine Gun**



*Next Generation Squad-AR/ Common Caliber
Served Weapon*



Lightweight Machine Gun - Medium



Externally Powered Weapon



Lightweight Machine Gun - Heavy



Precision Sniper Rifle

Fire Control



*Crew
Weapons*

*Precision
Weapons*

Multi-Spectral Technologies

Active Denial

“Provide premier Soldier weapons systems enabling battlefield dominance”



Path Forward



Near Term

- Continue to increase capability by introducing product improvements including advanced enablers (i.e., optics), lightweight materials, barrels, and ammunition improvements to legacy weapons
- Develop Precision and Crew Served Small Arms Fire Control
- Continue efforts to inform new requirements

Mid Term

- Significantly increase Soldier lethality through Small Arms Fire Control and Optics
- Integrate technology advances from S&T programs and product improvements into current and next generation small arms systems
- Develop Increment II CROWS and enter production
- Divest legacy Precision Weapons and replace with a single, multi-caliber capability

Far Term:

- Apply emerging (“revolutionary”) technologies to the design/development of new types of weapons including command/self guided systems and directed energy solutions if soldier portable



M249 Then and Now



Then (1984)



- Improved Extractor
- Gas system redesign
- Hydraulic Buffer
- Improved trigger guard
- Improved Barrel heat shield
- 100 and 200 round soft packs
- Feed tray cover rail
- Improved bipod
- Forward Rails
- Short Barrel and BFA
- Collapsible Buttstock
- Lightweight charging handle
- Lightweight feed tray
- 3.25" shorter
- Improved capability with no weight increase

25 Major Performance-related Engineering Changes Since 1984

Now

Short Barrel

- ✓ 14" vs. 20"
- ✓ 0.35 lbs Less than Standard
- ✓ Accuracy is Equiva to 600 Meters

Improved Bipod

- ✓ Ruggedized Design
- ✓ Compatible with Forward Rails and Forward Pistol Grip

Forward Rail System

- ✓ MIL-STD-1913 "Picatinny Rails"
- ✓ Aiming Lights/Lasers

Integral Picatinny Rail

- ✓ MIL-STD-1913 "Picatinny Rail"
- ✓ Day/Night/Thermal Sights
- ✓ Retains Iron Sight

Improved Sling

- ✓ 5 Positions (3" Range)
- ✓ One-Hand Operation
- ✓ Removable Cheek Rest
- ✓ Flip-Up Shoulder Rest
- ✓ Hydraulic Buffer
- ✓ 50% Parts Commonality with M240 Collapsible Buttstock

Improved Forward Grip

- ✓ Increased Ergonomics
- ✓ More Durable than Vertical Grip
- ✓ Simple, Secure Attach/Detach Mechanism

200- Round Soft Pack

- ✓ Reduces Noise
- ✓ Increased Durability
- ✓ Increased Weapon Retention
- ✓ Reusable

Other Improvements:

- ✓ Feed Tray w/ Pawls – Easier Loading
- ✓ Lightweight Charging Handle
- ✓ Lightweight Feed Tray Cover
- ✓ Lightweight Feed Lever
- ✓ Captive Buttstock Retaining Pins
- ✓ Short Barrel Blank Firing Adapter
- ✓ Feedbox Support Improvement Kit
- ✓ 3D Technical Data Package

Future Improvements:
 Barrel – Life and Heat dissipation
 Lighter parts –rails, top cover, bipod, buttstock



M240 Then and Now



Then (1994)



M240B

- Hydraulic Buffer
 - Front Accessory Rails
 - Combat Ammo Pack
 - Improved sling
 - Improved barrel bag
 - Collapsible Buttstock
 - Short Barrel
 - Adjustable Bipod
 - Titanium Receiver
- (5.8 lbs lighter and 4" shorter)

16 Major Performance-related Engineering Changes Since 1998

Now



M240L

Future Improvements:
Barrel – Life and Heat dissipation



M2 Then and Now



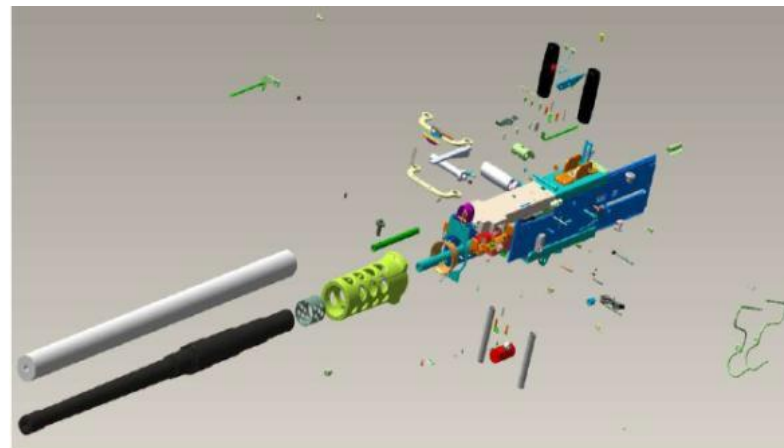
M2 (Then) 84 lbs



M2A1 (Now)



67 lbs



**M2A1 Lightweight
(with titanium parts)**

Warfighter Benefits:

- Reduce the burden of the Soldier
- Allow the Soldier to bring more capability to the fight (ammo, equipment)
- Improve Soldier mobility
- 20% less than the current system (~16-17 lb savings)

Future Improvements:

- 4QFY17 Release RFP for test assets + production options
- 3QFY18 Award base contract for test assets
- 2QFY19 Type Classify Weapon
- 2QFY19 Award production contract



MK19 Then and Now



Then (1968)



Mod Kit is the first significant upgrade since 1968 and has been fielded Army wide

- Completed fielding in FY08
- TWO-PIECE COCKING LEVER
 - FIRING PIN SEAR AND FIRING PIN
 - ADJUSTABLE SECONDARY DRIVE LEVER
 - DOVETAIL FOR MOUNTING ADJUSTABLE SIGHT BRACKET

Now



- Future Improvements:**
MK19 GMG, Mod 5
- NEW BARREL
 - NEW VERTICAL CAM
 - NEW ROUND POSITIONING BLOCK
 - NEW COCKING CAM AND LEVER
 - NEW MECHANICAL SIGHT





CROWS Then and Now



CROWS
(Then)



CROWS
(Now)



Low Profile



Handheld
Control
Grip

Future – RFP for Increment II (3QFY22)

- Increased on-the-move accuracy
- Sensor improvements
- Reconfigure appended trainer as an embedded trainer
- Disable function to render system unusable if over-run
- Addition of smoke grenade launcher
- Reduce weapon mounting time
- Improved rounds counter accuracy
- Digital video recorder
- Escalation of Force kit
- Elevation/Depression improvements
- Ballistic Protection improvements



Fixed Site



Tech Refresh



Precision Sniper Rifle (PSR)



- **Description:**

- Multi-caliber, bolt-action sniper rifle effective against personnel targets at extreme ranges
- New anti-personnel & anti-materiel ammunition
- System will replace the M2010 & M107

- **Requirement:**

- PSR CPD HQDA G3 Approved 28-DEC-15
- Revised Req'm'ts To Be Staffed 3QFY16

- **Desired Capabilities:**

- Precision fire on man-sized targets out to 1500m
- Enhanced/increased adjustability with common ergonomic features
- Modular, multi-barrel design based on METT-TC



- ✓ **New** 2QFY16 SOCOM initiative w/upfront ammunition focus & weapon acquisition to follow
- ✓ Army intimately involved from start



Addresses long and medium-range needs of the modern battlefield in one package



Mounted Machine Gun Optic (MMO)



- **Description:**

- Provides both close combat and long-range engagement capabilities in one optic
- Improves lethality and effectiveness of mounted machine guns in all operational environments

- **Requirement:**

- **Capability Development Document (CPD) in staffing**

- MMO Increment I represents the effort to field a COTS Non-Developmental Item multi-capable sight for vehicle-mounted machine guns

- **Acquisition approach:**

- Full and Open Competition to award contract for a COTS Non-Developmental Item
- Initial Production of the MMO is planned for 1QFY18 with a First Unit Equipped (FUE) of 4QFY18



Crew Served: M240B, M2, MK19
BOI: 63,265
Industry Day #1: Planned for June 2016
Requirement approval: 1QFY17



Fire Control, Crew Served & Precision



- **Description:**

- Integrated fire control optic consisting of direct view optic, ballistic module, atmospheric sensors, range finder, and in-scope display overlay



- **Requirement:**

- **Draft Capability Development Document (CDD) in process**

- Squad, Precision, and Crew Served as one CDD with separate Engineering and Manufacturing Development efforts
- Squad, Precision, and Crew Served as three separate Capability Production Documents CPDs with Production and Deployment efforts



- **Acquisition approach:**

- Full and Open Competition to award contract for a development effort, downselect to single vendor for production

Precision: PSR and CSASS
Crew Served: M240L, M249
Industry Day #2, 2QFY17
Requirement approval, 2QFY17