

# SOPMOD

## Program Overview



PRESENTED TO

**NDIA**

**Joint Services Small  
Arms Symposium**

**16 August, 2001**

**Mr. Gus Taylor**





# *MISSION*



The SOPMOD Program Management Office at NSWC Crane, IN, will provide standardized, versatile weapons accessories to meet needs across SOF mission scenarios. These accessories will increase operator survivability and lethality by enhanced weapon performance, target acquisition, signature suppression, and fire control. SOPMOD PMO will provide these accessories when they are operationally suitable, affordable, sustainable, and funded.



# ***HISTORIC BACKGROUND***



- 1970-1990, Duct tape and hose clamps for carbine and rifle accessories. Multitude of non-standard optical sights, flashlights, etc.
- SOST Modular Close Combat Carbine Project, funded Sept 1989
- SOPMOD MNS, 15 May 1992
- BOIP's were originally low, since component commands were cautious about buy-in to a new joint program
- Original ORD, validated 15 September 1993
- As commands accepted SOPMOD, demand for capabilities and quantities of items increased, funding did not. ORD was amended 4 times between 1994 and 1998



# ***RECENT BACKGROUND***



- May 99, USCINCSOC/PEO-SP Directive to SOPMOD PMO to study and improve the M4A1 Carbine. Extraction Parts Set #1 fielded to Navy and Air Force in July 1999
- ORD Amendment 5, 29 October 1999, added MNVS, SPR, UPM, Soft and Hard Cases, and increased BOIP from 1961 kits to 2972 kits
- September 2000, Congressional Plus-up, \$5M in general procurement and \$0.9M earmarked for Grenade Launcher research.

# SOPMOD M4 Accessory Kit

## DESCRIPTION

### Capabilities Required:

- *Standardized versatile weapons accessories*
- *Modular- meets needs across SOF mission scenarios*
- *Increased operator survivability and lethality by weapon improvements, enhanced target acquisition, signature suppression, and fire control*
- *Evolutionary Acquisition Block Upgrades*
  - *Block I*
  - *Block II*
  - *Block III and IV*

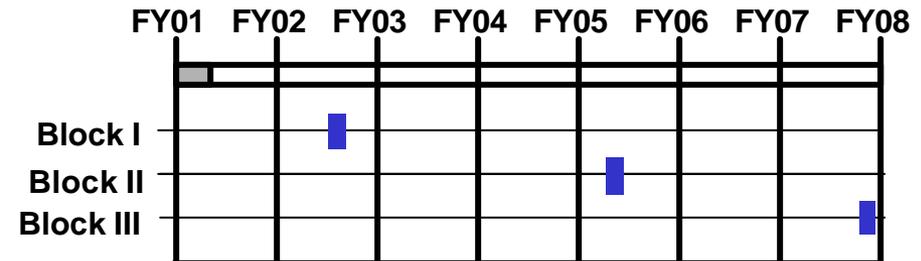


## PPBES: FY02 BES (\$M)

\$M	PRIOR	FY01	FY02	FY03	FY04	FY05	FY06	FY07	Total
RDTE	1.24	1.50	0.00	0.25	0.00	0.25	0.00	0.25	3.49
PROC	30.43	8.14	1.78	2.21	1.97	9.61	10.77	11.02	75.93
O&M	3.35	0.88	1.32	1.58	1.67	1.73	1.77	1.80	14.10
<b>TOTAL</b>	<b>35.02</b>	<b>10.53</b>	<b>3.09</b>	<b>4.05</b>	<b>3.64</b>	<b>11.59</b>	<b>12.54</b>	<b>13.08</b>	<b>93.52</b>
Cost Each	\$17.3								
Proc (Obj)	2,972								
Proc (Thr)	1962+								
Proc (O)	Army	1874		Navy	553		AF	209	
Proc (T)	Army	1874		Navy	553		AF	209	
Proc (O)	JOS	163		SFS	173				
Proc (T)	JOS	163		SFS	173				

## IOC

## SCHEDULE



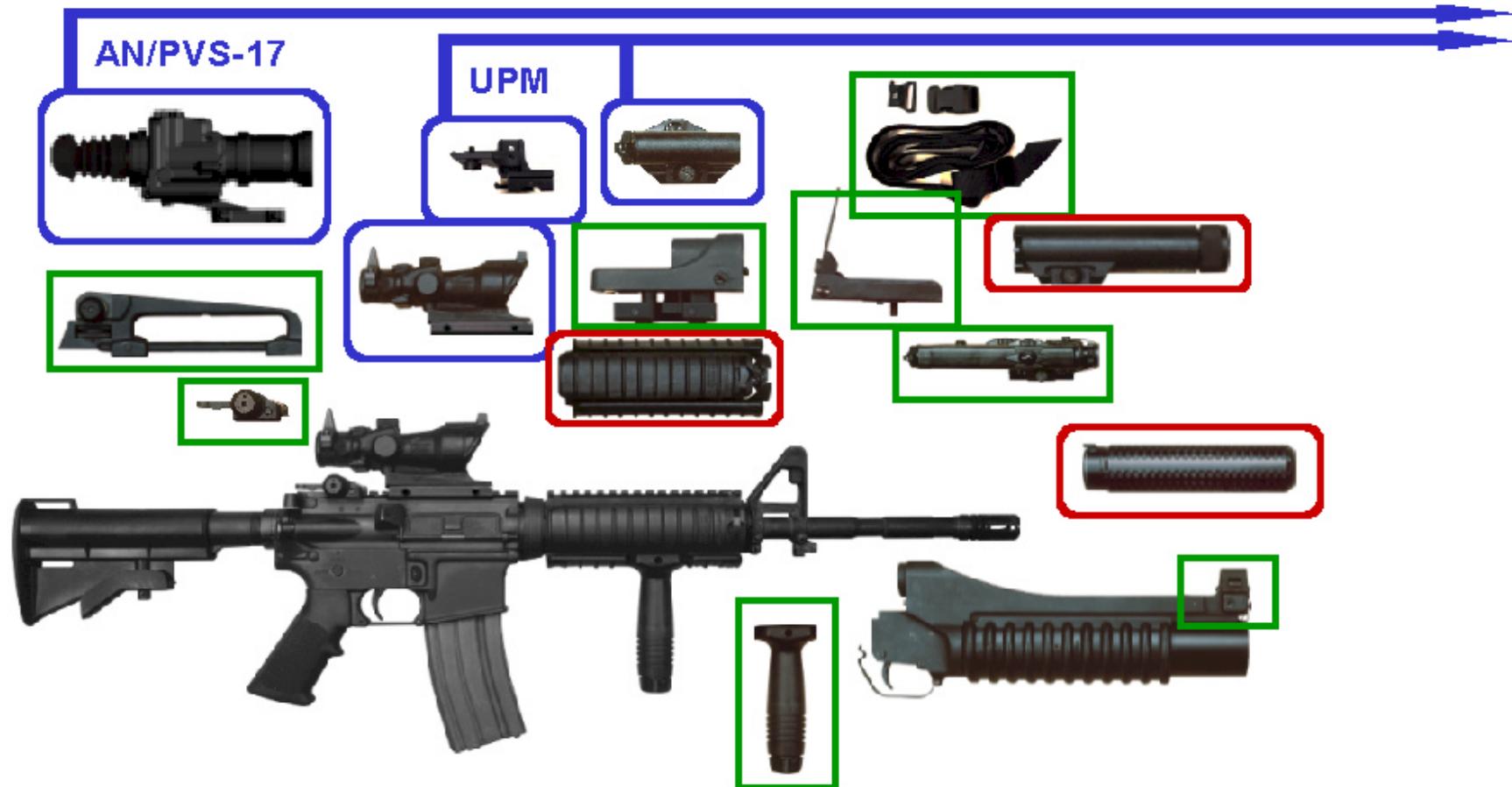
# BLOCK I PLAN

Blue = Future Legacy System

Green=MWS Standardization

Red=Replace with Block II System

FY 94-01    FY 02    FY 03    FY 04    FY 05    FY 06    FY 07



# SOPMOD Block I



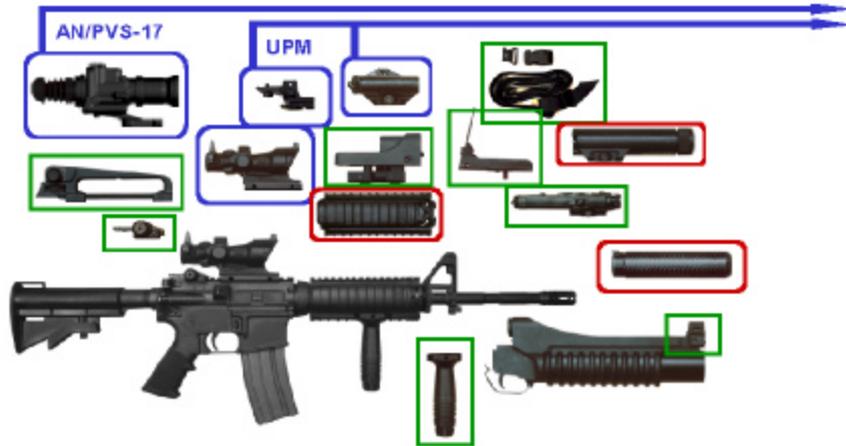
## BLOCK I PLAN

Blue= Remains in Block II

Green=MWS Standardization

Red=Replace with Block II System

FY 94-01 FY 02 FY 03 FY 04 FY 05 FY 06 FY 07



One Kit per 4 Carbines

## PPBES: FY02 BES (\$M)

\$M	PRIOR	FY01	FY02	FY03	FY04	FY05	FY06	FY07	TOTAL
RDTE	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
PROC	29.66	1.71	0.85	1.87	0.17	0.17	0.14	0.06	34.62
O&M	3.32	0.79	0.84	1.09	1.17	1.21	1.23	1.25	10.91
<b>TOTAL</b>	<b>33.80</b>	<b>2.50</b>	<b>1.69</b>	<b>2.96</b>	<b>1.34</b>	<b>1.38</b>	<b>1.37</b>	<b>1.31</b>	<b>46.35</b>
Cost Each	\$17.3								
Proc (Obj)	2,972								
Proc (Thr)	1962+								
Proc (O)	Army	1874		Navy	553		AF	209	
Proc (T)	Army	1874		Navy	553		AF	209	
Proc (O)	JOS	163		SFS	173				
Proc (T)	JOS	163		SFS	173				

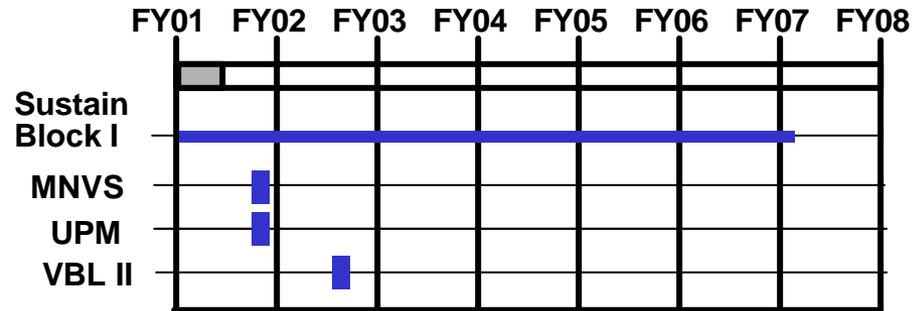
## DESCRIPTION

### Capabilities Provided:

- *Modular active and passive day and night target acquisition, identification, and aiming for the M4A1 Carbine to 600 meters.*
- *M203, day passive aiming only, to 250 meters.*
- *Noise and flash signature reduction by 30 decibels*
- *Ergonomic accessories for CQB*
- *Mobility items*

### IOC

## SCHEDULE



- *Resource-constrained fielding quantities*  
*\$19.1 M Procurement shortfall to reach Full Operational Capability*

# BLOCK II PLAN



FY 01    FY 02    FY 03    FY 04    FY 05    FY 06    FY 07



Grenade Launcher

Day-Night Sight Mount  
(GLDNSM)

Enhanced Combat  
Optical Sight (ECOS)

Clip-On Night Vision  
Device (CNVD)

M4A1 Extraction Parts Set

M4A1 Improved Magazine



M4A1 Improved Bolt



Family of Muzzle Brake/  
Suppressors (FMBS)



CQB Receiver (CQBR)



Enhanced Grenade  
Launcher Module (EGLM)

Special Purpose Receiver (SPR)



Many Block I Legacy Systems Remain In Service

# SOPMOD Block II



## BLOCK II PLAN



FY 01    FY 02    FY 03    FY 04    FY 05    FY 06    FY 07



Many Block I Legacy Systems Remain In Service

## DESCRIPTION

### Capabilities Provided:

- Modular active and passive day and night target acquisition, identification, and aiming for the M4A1 Carbine to 800 meters. Integrated and combined systems to replace obsolete systems.
- Enhanced Grenade Launcher day and night passive and active aiming to 400 meters, with first round hit capability.
- Specialized upper receivers for long range and CQB with matching optics and noise and flash signature reduction
- Fixes the M4A1 Carbine within budget constraints and system limitations.

## Customized Kits by Unit Mission

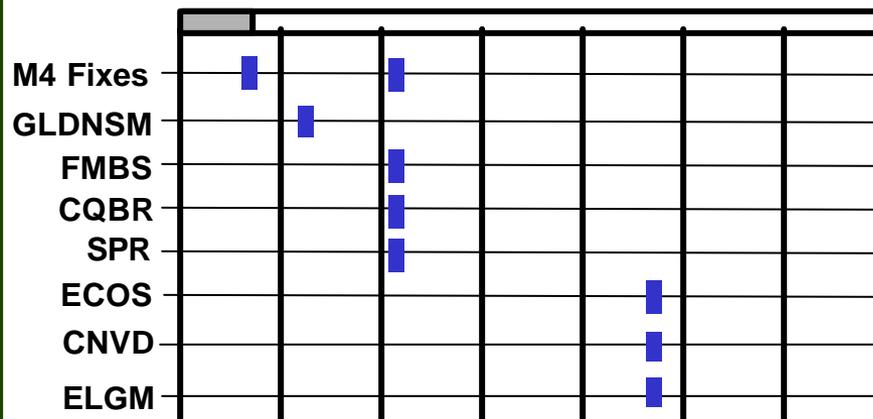
### PPBES: FY02 BES (\$M)

\$M	PRIOR	FY01	FY02	FY03	FY04	FY05	FY06	FY07	TOTAL
RDTE	0.35	1.45	0.00	0.25	0.00	0.25	0.00	0.25	2.55
PROC	0.68	6.43	0.92	0.35	1.80	9.43	10.63	10.97	41.21
O&M	0.01	0.09	0.48	0.49	0.51	0.52	0.54	0.55	3.18
<b>TOTAL</b>	<b>1.04</b>	<b>7.97</b>	<b>1.40</b>	<b>1.09</b>	<b>2.31</b>	<b>10.20</b>	<b>11.16</b>	<b>11.77</b>	<b>46.94</b>
Cost Each	By Item								
Proc (Obj)	By Item								
Proc (Thr)									
Proc (O)	Army			Navy			AF		
Proc (T)	Army			Navy			AF		
Proc (O)	JOS			SFS					
Proc (T)	JOS			SFS					

## SCHEDULE

IOC

FY01    FY02    FY03    FY04    FY05    FY06    FY07    FY08



# SOPMOD Block III



FY 05 FY 06 FY 07 FY 08 FY 09 FY 10 FY 11

## Enhanced Carbine (EC)



## DESCRIPTION

### Capabilities Provided:

- *Enhanced Carbine, Light Sniper, CQB, and Automatic Rifle System, possibly with integrated laser and white-light systems*
- *Integrated range finding/ballistic solution (Objective)*
- *Over-The Beach Capable with standard ammunition*

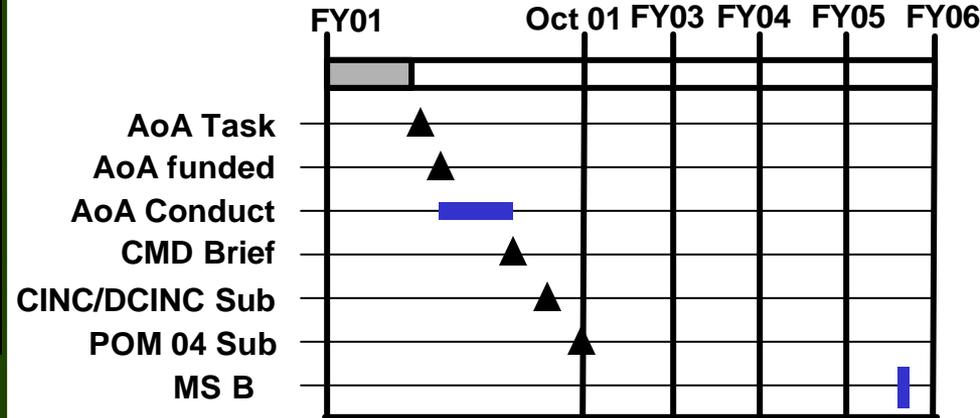
## PPBES: FY02 BES (\$M)

\$M	PRIOR	FY01	FY02	FY03	FY04	FY05	FY06	FY07	TOTAL
RDTE	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.13
PROC	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
O&M	0.00	.320*	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>0.17</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>
Cost Each	By Item								
Proc (Obj)	By Item								
Proc (Thr)									
Proc (O)	Army			Navy			AF		
Proc (T)	Army			Navy			AF		
Proc (O)	JOS			SFS					
Proc (T)	JOS			SFS					

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\*SOOP-RV Funded

## SCHEDULE





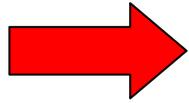
## EC/ISAR Alternatives:



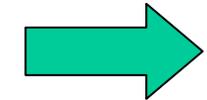
- *Incremental Fixes to M4A1*
- **Block Upgrade M4A1**



- *Incidental to EGLM/SPR/CQBR*
- **ARDEC Study Upgrade**



- **Re-compete the basic Carbine requirement**



- **Develop/compete requirement for electro-optic integrated carbine**

**Blue= currently funded or partially funded by SOPMOD or ARDEC**





**Standard**



**CQB Variant**



**Light Sniper /  
Automatic Rifle  
Variant**

# VISION

## EVOLUTIONARY ACQUISITION TOP MAP

FY 05-11

**BLOCK 3**

FY 00-07

**BLOCK 2**

FY 94-04

**BLOCK 1**

(Funded Requirements Only)



CQBR & SPR



EC

FMBS



ECOS



EGLM



CNVD



EIFM



GLSNSM



### Block 1 Sub-Systems

- M4A1 Carbine (Army System)
- Backup Iron Sight
- Rail Interface System
- Forward Handgrip
- QD Suppressor
- AN/PEQ-5
- AN/PEQ-2 (Upgrade)
- Visible Bright Light (VBL I & 2)
- Dayscope
- Reflex Sight
- M203 Grenade Launcher Mount/Sight
- 9" 203 Barrel
- Universal Pocketscope Mount (UPM)
- Mini Night Vision Sight (MNVS)
- 16 Gun Hard Case
- 4 Gun Hard Case

