

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

February 2002

BUDGET ACTIVITY 3 - Advanced technology development	PE NUMBER AND TITLE 0603607A - JOINT SERVICE SMALL ARMS PROGRAM	PROJECT 627					
COST (In Thousands)	FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate
627 JT SVC SA PROG (JSSAP)	11809	4388	6013	6413	6715	7140	7483

A. Mission Description and Budget Item Justification: This Program Element (PE) matures and demonstrates advanced technologies that integrate into individual and crew-served weapons to provide greater lethality, utility and range at a significantly reduced weight required for the Army Transformation to the Objective Force. Efforts include: the Objective Crew-Served Weapon (OCSW) Advanced Technology Demonstration (ATD) and Objective Individual Combat Weapon (OICW) System Enhancement. OCSW demonstrates the next generation crew-served weapon with improved combat effectiveness such as being able to hit protected personnel targets in defilade (obscured or non-visible), with a reduced weight of 65-75% over M2 machine guns, MK19 grenade machine guns and M240 machine guns. The system enhancement efforts will develop, demonstrate and transition lethality-enhancing and cost-reducing technologies into the OCSW and OICW. All Joint Service Small Arms Program (JSSAP) efforts follow the Joint Service Small Arms Master Plan (JSSAMP) and Service Mission Need Statements and Operational Requirement Documents. The cited work is consistent with the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, and Project Reliance. The program element contains no duplication with any effort within the Military Departments. Work is performed by the US Army Armament Research, Development and Engineering Center, Picatinny Arsenal, NJ. Work in this PE is derived and fully integrated with the 6.2 efforts found in PE 0602623A (Joint Service Small Arms Program) and PE 0602624A (Weapons and Munitions Technology). Transition paths have been established in coordination with Product Manager (PM) Small Arms; USMC Director, Ground Weapons; and US Special Operations Command (SOCOM). This program supports the Objective Force transition path of the Transformation Campaign Plan (TCP).

FY 2001 Accomplishments:

- 1840 - Demonstrated OCSW precision airburst (including rapid fire) with target practice-spotter rounds, utilizing integrated fire control with the first deliverable weapon.
- 1409 - Performed in an operational setting OCSW fire control evaluation and refinement of target tracking coupled laser steering for enhanced target acquisition and hit probability.
- 1060 - Completed OCSW virtual simulator for training support of ATD.
- 7500 - This one year Congressional add demonstrated a significantly more mature and robust OCSW design beyond the preliminary prototype establishing and established a Technology Readiness Level (TRL) of 6 facilitating a transitioning to PM Small Arms for Systems Development and Demonstration phase.

Total 11809

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PROGRAM****627****FY 2002 Planned Program**

- 407 - Demonstrate OCSW gun launched (burst mode), fully functional, precision airburst fuze (including point detonation and self destruct functions) of the airbursting high explosive munition; complete fabrication of deliverable OCSW systems #2 and #3; complete fabrication of OCSW ammunition to support government ATD testing; conduct government technical feasibility and safety tests of OCSW system.
- 3981 - OICW System Enhancement: Update initial designs, fabricate test hardware, and evaluate in inert warheads the performance of micro-electro-mechanical systems (MEMS) based safe and arming (S&A) mechanism employing Micro Energetic Initiation (MEI). MEI provides a 75% volume/50% cost reduction in the fuze S&A.

Total 4388

FY 2003 Planned Program

- 1917 - Complete OCSW transition activities and ATD; conduct OCSW Milestone B Decision Review to initiate System Development and Demonstration phase
- 1996 - OICW System Enhancement: Identify technology solutions to direct airburst munition fragments toward the target to increase operational effectiveness.
- 2100 - OICW System Enhancement: Finalize design, fabricate test hardware and demonstrate in explosive warheads the performance of MEMS based S&A mechanism employing MEI. MEI provides a 75% volume/50% cost reduction in the fuze S&A. This technology will be leveraged by the OICW program.

Total 6013

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<u>B. Program Change Summary</u>	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2002 PB)	4428	5828	5923
Appropriated Value	4469	4428	0
Adjustments to Appropriated Value	0	0	0
a. Congressional General Reductions	0	-40	0
b. SBIR/STTR Program	-119	0	0
c. Omnibus or Other Above Threshold Reprogramming	7500	0	0
d. Below Threshold Reprogramming	0	0	0
e. Rescissions	-41	0	0
Adjustments to Budget Years Since FY2002 PB	0	0	90
Current Budget Submit (FY 2003 PB)	11809	4388	6013

Change Summary Explanation:Funding: FY 2001: Project 627 (+7500) increased to facilitate completion of the Objective Crew Served Weapon Advanced Technology Demonstration transition milestones.