

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)						February 2005					
BUDGET ACTIVITY 3 - Advanced technology development				PE NUMBER AND TITLE 0603607A - JOINT SERVICE SMALL ARMS PROGRAM				PROJECT 627			
COST (In Thousands)				FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate
627 JT SVC SA PROG (JSSAP)				9335	9675	6581	6942	7263	7371	7435	7490
<p><u>A. Mission Description and Budget Item Justification:</u> This Program Element (PE) matures and demonstrates advanced technologies that integrate into individual and crew-served weapons for all Services to provide greater lethality, utility and range at a significantly reduced weight for Future Combat Systems (FCS), the Future Force and, where feasible, exploits opportunities to enhance Current Force capabilities. The main effort is the Lightweight Machine Gun and Ammunition (LMGA). The LMGA, complementing both the Objective Individual Combat Weapon(OICW) and Objective Crew-Served Weapon(OCSW), will offer significantly reduced weight over the currently fielded M249 Machine Gun and its associated ammunition. This weapon will lighten the Soldier's load, provide improved battlefield mobility and reduced logistics burden to maximize operational utility and survivability, while maintaining or improving current levels of performance. All Joint Service Small Arms Program (JSSAP) efforts follow the Joint Service Small Arms Master Plan (JSSAMP), the Joint Capabilities Integration Development System (JCIDS) Small Arms Analysis, and the resulting Capabilities Development Documents. The cited work is consistent with the Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP) and the Defense Technology Area Plan (DTAP). Work is performed by the US Army Armament Research, Development and Engineering Center, Picatinny Arsenal, NJ. Work in this PE is related to and fully integrated with the efforts funded in PE 0602623A (Joint Service Small Arms Program) and PE 0602624A (Weapons and Munitions Technology). Transition paths have been established in coordination with Program Executive Officer (PEO) Soldier, Project Manager Soldier Weapons, Product Manager (PM) Crew Served Weapons, PM Individual Weapons, USMC PM Infantry Weapons; and PEO Special Programs, U.S. Special Operations Command (SOCOM).</p>											
<u>Accomplishments/Planned Program</u>								FY 2004	FY 2005	FY 2006	FY 2007
OICW System Enhancement: In FY04, performed Micro Electrical Mechanical Systems (MEMS) based Safe & Arm (S&A) and fuze integration and fuze/warhead performance and safety tests; continued OICW 20mm system integration; conducted test firing of MEMS S&A in test barrel and demonstrated S&A in the Phase IV weapon; performed production cost study.								4256	0	0	0

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<u>Accomplishments/Planned Program A(continued)</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Lightweight Machine Gun and Ammunition (LMGA): In FY04, performed system level trade studies to select concepts for a lightweight, reliable machine gun and ammunition. In FY05, conduct initial integration testing with Future Force Warrior (FFW) Lead Technology Integrator; build weapon and ammunition subsystems, perform preliminary integration and functionality testing to assess weapon operation and ammunition lethality and establish reliability baseline; use virtual prototyping (dynamic models) to advance the design and analysis of system level trade offs. In FY06, will build integrated weapon prototypes to test weapon and ammunition functionality and human factors and validate/update virtual prototypes; will adjust weapon system to incorporate improvements, mature weapon system to increase reliability; will modify ammunition as necessary to attain required lethality; assess maintenance and training issues and make modifications as necessary. In FY07, will perform final integration testing to demonstrate lethality and reliability of the lightweight weapons and ammo; will conduct user demonstration to update and complete human factors, maintenance, and training assessment, providing necessary data for Milestone B decision.	1710	5735	6581	6942
Anti-material Sniper Rifle (AMSR): This one year Congressional add evaluated weapon technologies in the areas of light weight materials, recoil mitigation and energy recovery, and demonstrated these in 25mm Anti-Material Sniper Rifle technology based on the XM107 .50 caliber Sniper Rifle. No additional funding is required to complete this effort.	3369	0	0	0
Advanced Demining Technology: This one year Congressional add is for maturation of an integrated, remote controlled mine detection and neutralization system. No additional funding is required to complete this project.	0	3940	0	0
Totals	9335	9675	6581	6942

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627**B. Program Change Summary**

	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2005)	5968	6844	7160
Current Budget (FY 2006/2007 PB)	9675	6581	6942
Total Adjustments	3707	-263	-218
Net of Program/Database Changes			
Congressional Program Reductions	-141		
Congressional Rescissions			
Congressional Increases	4100		
Reprogrammings			
SBIR/STTR Transfer	-252		
Adjustments to Budget Years		-263	-218

Change Summary Explanation:

One FY05 Congressional add totaling \$4100 was added to this PE in Project 627; Advanced Demining Technology.