

## UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE <b>February 2003</b>		
BUDGET ACTIVITY <b>07 - Operational System Development</b>					PE NUMBER AND TITLE <b>0207131F A-10 SQUADRONS</b>					PROJECT <b>4809</b>	
COST (\$ in Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
4809	A-10 Squadrons	9,297	7,503	29,729	22,649	9,079	9,241	0	0	Continuing	TBD
Quantity of RDT&E Articles		0	0	0	0	0	0	0	0	0	0

(U) **A. Mission Description**

The A/OA-10 is the USAF's primary aircraft for Close Air Support (CAS) and Forward Air Control (FAC) supporting the ground battle including special forces, with a secondary mission of Combat Search and Rescue (CSAR) and the capability to perform interdiction under certain circumstances. Currently, all RDT&E funding supports the Precision Engagement (PE) Program (MN-9805). The PE program is a spiral development program installing a Digital Stores Management System (DSMS), integrated capabilities for smart weapons delivery, targeting pod integration, increased DC power system and joint-service battlefield interface via digital data link. The result of PE is increased tactical effectiveness (more targets destroyed), greater survivability, and decreased chance of fratricide. These modifications are mandatory for the A/OA-10 to adhere to the regional CINC's requirement for a CAS platform.

Spiral #1 of the PE modification integrates 1760 BUS, Joint Direct Attack Munition (JDAM), Wind Corrected Munitions Dispenser (WCMD), LITENING and SNIPER targeting pods, increases the current DC power system by 100% and creates a Digital Stores Management System (DSMS) for the A-10. The DSMS replaces the current Armament Control Panel (ACP) and the Interstation Control Unit (ICU) and adds two Multi-Function Color Displays (MFCD) to replace the existing ACP and Television Monitor and replaces the current stick and throttle with improved Hands on Throttle and Stick Capable controls reducing 'heads down' time in the cockpit. During spiral #1, the ICU will be replaced with a new processor: the Central Interface Control Unit (CICU). This program does not purchase JDAM/WCMD munitions, targeting pods or their associated support equipment.

Spiral #2 of the PE modification is Digital Data Link MN-37120. Funding control for the DDL was transferred from the A-10 System Program Office (SPO) to the Tactical Data Links (TDL) SPO for an enterprise management approach to data links however, it is still part of the PE modification. OSD has directed the integration of the Army Joint Tactical Radio Set (JTRS) Cluster 1 radio onto the A-10 as part of the PE modification. Spiral #2 of this modification integrates tests and fields the JTRS Cluster 1 radio with the Enhanced Position Location Reporting System (EPLRS) waveform into the PE program. The EPLRS waveform provides connectivity to the digital battlefield to ensure joint forces communication, reduced fratricide and interoperability with forward C2 platform centers.

\*Note: Funding spike between FY03 and FY04 is caused by increase in developmental/integration efforts. FY02/FY03 consisted mainly of requirement definition design, and preliminary design and software build leading to program Preliminary Design Review. In FY04/FY05 the majority of the engineering design, build and development efforts occur. Actual hardware build, software design, and systems engineering occur as well as developmental flight test efforts during these years.

Project 4809

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<p>(U) <b><u>A. Mission Description Continued</u></b>            Funding in these years also include systems integration lab build, testing, and demonstration.</p> <p>* Note: The decision to make PE a spiral program was based on differing PE and JTRS IOC schedules. Although JTRS will be part of the PE program, it will be flight tested and fielded as a separate spiral. Spiral #1 is PE without JTRS, Spiral # 2 is PE with JTRS. Initial aircraft will have JTRS installed as a field level TCTO, the remaining aircraft will come out of the modification line with JTRS.            Aircraft Breakdown: Active 207, Reserve 50, ANG 100, Total 357</p> <p>PDR slipped from 3rd Qtr 02 to 2nd QTR 03 due to lack of funding and the OSD redirection from SADL to JTRs.</p> <p>(U) <b><u>FY 2002 (\$ in Thousands)</u></b>            (U) \$0 Accomplishments/Planned Program            (U) \$9,297 Initial development/integration efforts for the A-10's largest avionics modification program Precision Engagement (PE); combines six modifications into one comprehensive modification. Requirement definition and initial integration design include JDAM/WCMD, Targeting Pod, DSMS, DC Power, digital data link and 1760 efforts. Tasks include: PVI design requirements, maintenance design, initial hardware design concepts, ILS activities and software concept.            (U) \$9,297 Total</p> <p>(U) <b><u>FY 2003 (\$ in Thousands)</u></b>            (U) \$0 Accomplishments/Planned Program            (U) \$7,503 Further development/integration requirements efforts for the A-10's largest avionics modification program PE; combines six modifications into one comprehensive modification A-10 Precision Engagement definition and initial integration design of JDAM/WCMD, Targeting Pod, DSMS, DC Power and 1760 Bus. PE Spiral #1 efforts include Preliminary Design Review, further refinement of PVI design, maintenance concept, installation design, ILS tasks, and design tasks leading to Critical Design Review. PE Spiral #2 efforts include initial research and development efforts for the Joint Tactical Radio System to include initial interface control documentation and initial integration design.            (U) \$7,503 Total</p> <p>(U) <b><u>FY 2004 (\$ in Thousands)</u></b>            (U) \$0 Accomplishments/Planned Program            (U) \$29,729 Development/integration tasks for the A-10's largest avionics modification program Precision Engagement; combines six modifications into one comprehensive modification A-10 Precision Engagement definition and initial integration design of JDAM/WCMD, Targeting Pod, DSMS, DC Power and 1760 Bus systems. Spiral #1 efforts include Critical Design Review, hardware design and test, software coding and test, initial Group</p>		
<div style="display: flex; justify-content: space-between;"> <span>Project 4809</span> <span>Page 2 of 6 Pages</span> <span>Exhibit R-2 (PE 0207131F)</span> </div>		

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## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

**07 - Operational System Development****0207131F A-10 SQUADRONS****4809**(U) **A. Mission Description Continued**(U) **FY 2004 (\$ in Thousands) Continued**

A design and build, aircraft trail installation aircraft instrumentation and initial developmental flight test. Spiral #2 efforts include Critical Design Review, integration of prototype Joint Tactial Radio Set (JTRS) into the systems integration lab, software PVI design/build and early developmental model testing of JTRS radios.

(U) \$29,729 Total

(U) **B. Budget Activity Justification**

The A/OA-10 RDT&E program is in budget activity 7 - Operational System Development because it supports an operational system.

(U) **C. Program Change Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>
(U) Previous President's Budget	5,501	7,650	44,275	TBD
(U) Appropriated Value	5,549	7,650		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-48	-81		
b. Small Business Innovative Research	-80			
c. Omnibus or Other Above Threshold Reprogram	0	-66		
d. Below Threshold Reprogram	3,922			
e. Rescissions	-46			
(U) Adjustments to Budget Years Since FY 2003 PBR			-14,546	
(U) Current Budget Submit/FY 2004 PBR	9,297	7,503	29,729	TBD

(U) **Significant Program Changes:**

(U) \$14M reallocated from FY04 to FY05 to smoothflow funding for better program execution.

(U) OSD directed JTRS Cluster #1 integration onto A-10 as part of the PE modification; due to this change PE modification is now a Spiral development program. Spiral #1 PE w/o JTRS. Spiral #2 PE with JTRS.

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BUDGET ACTIVITY <b>07 - Operational System Development</b>					PE NUMBER AND TITLE <b>0207131F A-10 SQUADRONS</b>				PROJECT <b>4809</b>	
<b>(U) D. Other Program Funding Summary (\$ in Thousands)</b>										
	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E	9,297	7,503	29,729	22,649	9,079	9,241			Continuing	Continuing
(U) Other APPN										
(U) Aircraft Procurement, BP-11 (PE 27131F)	20,563	20,950	17,488	48,315	78,933	81,991	52,486	6,837	Continuing	Continuing
<b>(U) E. Acquisition Strategy</b>										
Precision Engagement and Digital Data Link (now under PE 0207445F) development will be conducted under the A-10 Prime Contract which was awarded in Dec 1997 on a full-and-open basis. Cost Plus Award Fee (CPAF) contract awarded for specific modernization efforts.										
<b>(U) F. Schedule Profile</b>										
	<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>					
	1	2	3	4	1	2	3	4	1	2
(U) Precision Engagement Preliminary Design Review (PDR)						X				
(U) Precision Engagement Critical Design Review (CDR)									X	
(U) Precision Engagement Developmental Test										X
* =Completion X=Planned Event										

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003				
BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT			
<b>07 - Operational System Development</b>					<b>0207131F A-10 SQUADRONS</b>			<b>4809</b>			
<b>(U) A. Project Cost Breakdown (\$ in Thousands)</b>											
						<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>	
(U)	Integrated Flight and Fire Control Computer (IFFCC)					0		0		0	
(U)	Precision Engagement					9,297		7,503		29,729	
(U)	Mission Support					0		0		0	
(U)	Total					9,297		7,503		29,729	
<b>(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)</b>											
<b>(U) Performing Organizations:</b>											
	<u>Contractor or Government</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Performing Activity</u>	<u>Project Office</u>	<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
<u>Product Development Organizations</u>											
	Lockheed Martin Systems	Precision	1Q02	79,570	79,570	0	9,297	7,503	29,729	Continuing	TBD
	Integration	Engagement									
	Lockheed Martin Systems	Moving Map	2Q07	9,487	9,487	0	0	0	0	Continuing	TBD
	Integration										
<u>Support and Management Organizations</u>											
<u>Test and Evaluation Organizations</u>											
<b>(U) Government Furnished Property:</b>											
	<u>Item</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Delivery</u>		<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>							
<u>Product Development Property</u>											
<u>Support and Management Property</u>											
<u>Test and Evaluation Property</u>											

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