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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force										Date: May 2017		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604270F I Electronic Warfare Development							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	0.813	12.476	2.241	0.000	2.241	1.924	2.082	2.118	2.161	Continuing	Continuing
653891: Adv Infrared Counter Measures(Aircm)	-	0.813	12.476	2.241	0.000	2.241	1.924	2.082	2.118	2.161	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program consolidates Air Force funding and management of common Electronic Warfare (EW) systems from Materiel Solutions Analysis through Engineering and Manufacturing Development and transition to operational capability. EW is an integral warfighting effect supporting AF Global Strike, Global Persistent Attack and Global Mobility operations as well as Joint-Coalition operations. EW systems influence, deceive, disrupt, degrade, deny, and destroy threats to air operations throughout the electromagnetic spectrum. This program supports Electronic Support (ES), Electronic Protection (EP), and Electronic Attack (EA). ES programs support the collection, analysis, and dissemination of information related to the detection, geo-location, characterization, and identification of threats to air operations. EP Programs preserve the electromagnetic spectrum for use by friendly forces. EA programs provide self-protection through active and passive measures that deceive threats to air operations using kinetic and non-kinetic means to defeat threats that rely on the electromagnetic spectrum (Radio Frequency (RF), Electro-Optical (EO), Infrared (IR)).

The Miniature Air Launched Decoy (MALD) and Jammer (MALD-J) configurations are key enablers supporting Air Force Global Strike, Global Response, Space and C4ISR, and Air and Space Expeditionary Force Concepts of Operation. MALD is a low cost, powered, expendable decoy designed to represent the kinematics and radar signature characteristics of various combat aircraft. The MALD will be employed from various aircraft platforms to stimulate, saturate, and deceive integrated air defense systems (IADS) thus increasing the survivability of strike aircraft. FY 18 and FY 19 funding will be used to fund critical program development activities to include M Code. This effort will develop and integrate advanced precision, navigation, and timing (PNT) capabilities (e.g. GPS, non-GPS, optical, passive, active, etc.) on MALD-J.

BA5 - This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

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Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
3600: Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)		PE 0604270F I Electronic Warfare Development			
B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.843	12.476	20.435	0.000	20.435
Current President's Budget	0.813	12.476	2.241	0.000	2.241
Total Adjustments	-0.030	0.000	-18.194	0.000	-18.194
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	-0.030	0.000	-18.194	0.000	-18.194
Change Summary Explanation					
M-code receiver funding (\$18.194M) planned for MALD integration was removed.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Air Force										Date: May 2017		
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0604270F / <i>Electronic Warfare Development</i>				Project (Number/Name) 653891 / <i>Adv Infrared Counter Measures(Aircm)</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
653891: <i>Adv Infrared Counter Measures(Aircm)</i>	-	0.813	12.476	2.241	0.000	2.241	1.924	2.082	2.118	2.161	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Advanced Infrared Countermeasure (AIRCm) project contains related aircraft self-protection efforts aimed at increasing aircraft survivability against the increasing threat of sophisticated surface-to-air and air-to-air missiles. These missiles may employ sophisticated next-generation Electro-Optics (EO), Infrared (IR), Radio Frequency (RF), dual-mode (i.e. IR and RF), or multi-mode seekers. AIRCM will provide advanced expendable countermeasures and/or techniques that will be functionally compatible with existing dispenser systems and employed across multiple USAF weapons systems. This also explicitly includes any and all flare, chaff, decoy, and associated components development and testing that may be demanded or needed in current operations supporting the war on terrorism regardless of aircraft platform. Similar activities that are supplementary to this effort may be accomplished ad hoc using platform specific funding or through other activities such as joint services or NATO test groups.

BA5 - This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Countermeasure Testing	0.813	2.476	2.241	0.000	2.241
Description: IR flare testing and qualification on aircraft					
FY 2016 Accomplishments: Activities included testing and qualification of IR flare cocktails on various aircraft.					
FY 2017 Plans: Activities include testing and qualification of IR flare cocktails on various aircraft.					
N/A					
FY 2018 Base Plans: Activities include testing and qualification of expendable countermeasure cocktails on various aircraft.					
FY 2018 OCO Plans:					

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Appropriation/Budget Activity 3600 / 5		R-1 Program Element (Number/Name) PE 0604270F / <i>Electronic Warfare Development</i>		Project (Number/Name) 653891 / <i>Adv Infrared Counter Measures(Aircm)</i>							
B. Accomplishments/Planned Programs (\$ in Millions)											
	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total						
N/A											
Title: Military Code (M code) receiver Description: The development and integration of a GPS receiver capable of receiving a Military Code (M code). FY 2016 Accomplishments: N/A FY 2017 Plans: Prototype development/component level testing. FY 2018 Base Plans: N/A FY 2018 OCO Plans: N/A	0.000	10.000	0.000	0.000	0.000						
Accomplishments/Planned Programs Subtotals	0.813	12.476	2.241	0.000	2.241						
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PAAF: BA01: Line Item # 356010: <i>Flares</i>	121.606	115.706	124.850	0.000	124.850	107.482	93.042	106.905	146.033	Continuing	Continuing
Remarks Qualified flares, if not in AF inventory, will be procured under program 0208030F War Reserve Munitions, Flares.											
D. Acquisition Strategy N/A											
E. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											