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## Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-421



# Airborne & Maritime/Fixed Station Joint Tactical Radio System (AMF JTRS)

As of FY 2020 President's Budget

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

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## Sensitivity Originator

No originator info Available at this time.

## Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance  
ACAT - Acquisition Category  
ADM - Acquisition Decision Memorandum  
APB - Acquisition Program Baseline  
APPN - Appropriation  
APUC - Average Procurement Unit Cost  
\$B - Billions of Dollars  
BA - Budget Authority/Budget Activity  
Blk - Block  
BY - Base Year  
CAPE - Cost Assessment and Program Evaluation  
CARD - Cost Analysis Requirements Description  
CDD - Capability Development Document  
CLIN - Contract Line Item Number  
CPD - Capability Production Document  
CY - Calendar Year  
DAB - Defense Acquisition Board  
DAE - Defense Acquisition Executive  
DAMIR - Defense Acquisition Management Information Retrieval  
DoD - Department of Defense  
DSN - Defense Switched Network  
EMD - Engineering and Manufacturing Development  
EVM - Earned Value Management  
FOC - Full Operational Capability  
FMS - Foreign Military Sales  
FRP - Full Rate Production  
FY - Fiscal Year  
FYDP - Future Years Defense Program  
ICE - Independent Cost Estimate  
IOC - Initial Operational Capability  
Inc - Increment  
JROC - Joint Requirements Oversight Council  
\$K - Thousands of Dollars  
KPP - Key Performance Parameter  
LRIP - Low Rate Initial Production  
\$M - Millions of Dollars  
MDA - Milestone Decision Authority  
MDAP - Major Defense Acquisition Program  
MILCON - Military Construction  
N/A - Not Applicable  
O&M - Operations and Maintenance  
ORD - Operational Requirements Document  
OSD - Office of the Secretary of Defense  
O&S - Operating and Support  
PAUC - Program Acquisition Unit Cost

PB - President's Budget  
PE - Program Element  
PEO - Program Executive Officer  
PM - Program Manager  
POE - Program Office Estimate  
RDT&E - Research, Development, Test, and Evaluation  
SAR - Selected Acquisition Report  
SCP - Service Cost Position  
TBD - To Be Determined  
TY - Then Year  
UCR - Unit Cost Reporting  
U.S. - United States  
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)  
USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)

## Program Information

**Program Name**

Airborne & Maritime/Fixed Station Joint Tactical Radio System (AMF JTRS)

**DoD Component**

Army

## Responsible Office

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**Date Assigned:** July 12, 2018

## References

**SAR Baseline (Development Estimate)**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated October 17, 2008

**Approved APB**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated May 1, 2014

## Mission and Description

Airborne & Maritime/Fixed Station Joint Tactical Radio System (AMF JTRS) products are software programmable, multiband, multi-mode, mobile ad hoc networking radios providing simultaneous voice and data communications for Army aviation platforms. The radios will operate in networks supporting the Common Operational Picture, situational awareness and interoperability of Mission Command systems throughout the battlefield. AMF must ensure the Soldier's ability to communicate both horizontally and vertically via voice and data within all mission areas and Combat Operational Environments. AMF helps close capability gaps by extending data networking to company echelons and below, enabling network services to the platform and connecting Army aviation platforms to Army ground and Joint air network domains. Per MDA direction, the restructured AMF program will procure radios as Non-Developmental Items.

AMF will procure the Small Airborne Networking Radio (SANR). The SANR is a two-channel, software-defined, National Security Agency Type 1-certified networking radio providing seamless real-time information for operation in mobile and dynamic combat environments that will meet tactical communications requirements as validated by the Army aviation community. SANR will provide increased data throughput to Army aviation platforms via advanced networking capabilities supporting Mid-Tier and Lower Tier tactical networks and maintain Single Channel Ground and Airborne Radio System (SINCGARS) capability. SANR will replace the current SINCGARS ARC-201D radios on Army aviation platforms (reconnaissance, attack, cargo, and utility). SANR is planned for implementation on the following platforms: Apache (AH-64E), Black Hawk (UH-60V, UH-60M, HH-60M, and MH-60M), Chinook (CH-47F and MH-47G) and Gray Eagle Unmanned Aircraft System (MQ-1C). SANR will enhance and further enable the ability of the maneuver commander to integrate and synchronize aviation forces with land based operational forces. SANR, employed on Army aviation platforms, will enable aviation combat elements (Combat Aviation Brigades, Theater Aviation Brigades, and Special Operations Aviation Regiment) to better utilize the inherent versatility of airborne communications as a complement to the unique capabilities of the other combat arms. SANR will give commanders enhanced situational awareness and mission command in a package that provides a more responsive means of directing aircraft to match changing maneuver force situations and missions.



## Executive Summary

### Program Highlights Since Last Report

This is the final SAR submission for the Airborne & Maritime/Fixed Station Joint Tactical Radio System (AMF JTRS).

Pursuant to section 2432 of title 10, United States Code, this is the final SAR submission for AMF JTRS program because the program is cancelled. On July 17, 2018, the Army Acquisition Executive (AAE) issued an ADM terminating the AMF Small Airborne Networking Radio (SANR) subprogram. Therefore, the Army cannot certify that requirements are stable for this program in accordance with section 2430(4)(A) of title 10, U.S. Code.

The Army's network modernization strategy includes halting programs that do not or are not likely to address operational requirements and pivoting to a new acquisition methodology that fosters rapid insertion of new technology. As a result of assessment of the AMF SANR program, and in line with this strategy, the AAE directed program cancellation. All funding in FY 2020 and beyond was withdrawn from AMF SANR budget lines in the FY 2020 PB request.

Schedule and cost breaches reported in this SAR are the result of program termination. There is no Nunn-McCurdy unit cost breach.

The remaining FY 2018 RDT&E SANR funding will support program close out activities and ongoing efforts in support of the Army's network modernization approach as justified in the SANR Budget Justification documents. This funding includes a Congressional add of \$10.0M in FY 2018 SANR RDT&E funding to support investments in the Link 16 Handheld Radio to address air-ground integration. FY 2019 SANR RDT&E funding of \$15.059M is not required for SANR close out activities; however, Army leadership is working to repurpose this funding for higher priorities.

The Army continues evaluation of all network components to reduce vulnerabilities and focus on solutions needed to address air-to-ground communications capability gaps. Emerging Army airborne communications needs may be met by establishing a new acquisition program when requirements are solidified.

There are no significant software-related issues with this program at this time.

History of Significant Developments Since Program Initiation	
History of Significant Developments Since Program Initiation	
Date	Significant Development Description
February 2005	All Joint Tactical Radio Systems (JTRS) programs were re-aligned under the Joint PEO (JPEO) JTRS.
March 2008	Milestone B Decision and a contract was awarded to Lockheed Martin Corporation for System Design and Demonstration (SDD).
November 2009	AMF JTRS system level Critical Design Review was completed on November 25, 2009.
December 2010	AMF JTRS reported threshold schedule breaches to the October 8, 2008, APB. The breaches were due to schedule delays as a result of an unresolved Congressional Mark amounting to one-quarter of the contractor's FY 2011 allocated budget.
September 2011	USD(AT&L) issued an ADM directing the delay of the Maritime/Fixed (M/F) form factor and requesting that the JROC reconsider the M/F requirement.
May 2012	USD(AT&L) issued an ADM approving the Army recommendation to execute a smart closeout of all remaining efforts under the current AMF SDD contract.
July 2012	MDA directed AMF to execute a modified Non-Developmental Item (NDI) acquisition strategy in order to leverage the Government's prior investment and to conduct a full and open competition for a two-channel small airborne modified NDI radio capable of addressing requirements as validated by the user community.
July 2012	USD(AT&L) ADM directed JPEO JTRS organizational restructure and realignment of mission responsibilities, including transitioning AMF to the Army by the end of FY 2012.
August 2012	The Army directed the alignment of AMF under PEO Command Control and Communications Tactical.
May 2013	USD(AT&L) approved the plan to split AMF into two separate subprograms, Small Airborne Link 16 Terminal (SALT) and Small Airborne Networking Radio (SANR).
March 2014	The FY 2015 PB reduced AMF funding by 73% in RDT&E and 85% in Procurement for FY 2015 through FY 2019.
May 2014	APB Change 1 approved on 1 May 2014.
May 2014	On May 2, 2014, USD(AT&L) issued an ADM designating SALT and SANR as subprograms within the AMF JTRS Program. ADM identifies MDA for SANR as the DAE, while MDA for SALT is delegated to the Army Acquisition Executive.
February 2015	PB 2016 restores SANR funding beginning in FY 2016 based on Network Capability Review.
August 2015	The SALT MDA issued an ADM directing an orderly close out of the SALT subprogram.
September 2015	RDT&E cost threshold breach reported in an Quarterly SAR. The deviation is due to sunk cost transfer from the SALT to SANR subprogram at SALT closeout, as well as reinstatement of SANR RDT&E funding.
October 2016	SANR acquisition activities resumed in FY 2016.
December 2016	Army network evaluation to address capability gaps and reduce vulnerabilities includes SANR. AMF SANR, and all other network components, are being assessed in an effort to enhance, adjust and modernize the Army network and address today's requirements as well as emerging threats.
November 2017	USD(AT&L) delegated milestone decision authority for SANR to the Secretary of the Army and designated SANR ACAT IC.
July 2018	As part of the Army's modernization strategy the SANR program was terminated as it was unlikely to

address operational requirements. Therefore the Army Acquisition Executive directed an orderly close out of the program in a July 17, 2018 ADM.

### Threshold Breaches

#### APB Breaches

<b>Schedule</b>		<input checked="" type="checkbox"/>
<b>Performance</b>		<input type="checkbox"/>
<b>Cost</b>	RDT&E	<input checked="" type="checkbox"/>
	Procurement	<input type="checkbox"/>
	MILCON	<input type="checkbox"/>
	Acq O&M	<input type="checkbox"/>
<b>O&amp;S Cost</b>		<input type="checkbox"/>
<b>Unit Cost</b>	PAUC	<input type="checkbox"/>
	APUC	<input type="checkbox"/>

#### Explanation of Breach

The Schedule deviations for FRP and IOC were previously reported in the December 2017 SAR. A Program Deviation Report (PDR) for both was submitted in March 2018. The Schedule deviations for Contract Award and Milestone C decision were caused by the July 2018 program cancellation decision. The RDT&E Cost deviation was previously reported in the September 2015 SAR. A PDR was submitted to the MDA in January 2016. There is no Nunn-McCurdy unit cost breach.

#### Nunn-McCurdy Breaches

<b>Current UCR Baseline</b>		
	PAUC	None
	APUC	None
<b>Original UCR Baseline</b>		
	PAUC	None
	APUC	None

## Schedule



Schedule Events					
Events	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	
Milestone B Decision	Dec 2007	Mar 2008	Mar 2008	Mar 2008	
Contract Award	Feb 2008	Nov 2021	May 2022	N/A <sup>†</sup>	(Ch-1)
Milestone C Decision	Nov 2011	Oct 2022	Apr 2023	N/A <sup>†</sup>	(Ch-1)
FRP	Jul 2014	Jun 2023	Dec 2023	N/A <sup>†</sup>	(Ch-1)
IOC	Aug 2014	Apr 2026	Oct 2026	N/A <sup>†</sup>	(Ch-1)

<sup>†</sup> APB Breach

### Change Explanations

(Ch-1) The Current Estimates for Contract Award, Milestone C, FRP and IOC changed to N/A due to program cancellation.

### Notes

The schedule events are no longer applicable as a result of a July 17, 2018 ADM directing an orderly close out of the AMF Small Airborne Networking Radio (SANR) subprogram.

## Performance

Performance Characteristics				
SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
<b>Have an internal growth capability</b>				
Open system architecture IAW DISR; Modular, Scalable, Flexible Form Factors	Open system architecture IAW DISR; Modular, Scalable, Flexible Form Factors	Open system architecture IAW DISR; Modular, Scalable, Flexible Form Factors	N/A	N/A
<b>JTR set modes / capabilities configuration and reconfiguration via software</b>				
By operators in their operational environment	By operators in their operational environment	By operators in their operational environment	N/A	N/A
<b>Multi-channel routing and retransmission</b>				
Objective waveforms that are same in mode (voice, data, or video) and use like data rates and operate at permissible security classification levels	Objective waveforms that are same in mode (voice, data, or video) and use like data rates and operate at permissible security classification levels	KPP waveforms that are same in mode (voice, data, or video) and use like data rates and operate at permissible security classification levels	N/A	N/A
<b>Support waveforms.</b>				
Maritime / Fixed: Same as Threshold. Small Airborne: Threshold plus UHF SATCOM, SINGARS, Havequick II, EPLRS	Maritime / Fixed: Same as Threshold. Small Airborne: Threshold plus UHF SATCOM, SINGARS, Havequick II, EPLRS	Maritime / Fixed: UHF SATCOM, MUOS. Small Airborne: MUOS, SRW, WNW, Link 16	N/A	N/A
<b>To operate on designated number of channels at the same time.</b>				
Small Airborne: 10 channels. Maritime / Fixed (full duplex): 10 channels	Small Airborne: 10 channels. Maritime / Fixed (full duplex): 10 channels	Small Airborne: 2 channels. Maritime / Fixed (full duplex): 4 channels	N/A	N/A
<b>Scaleable networking services</b>				
All domains	All domains	All domains	N/A	N/A
<b>Network extension / coverage</b>				
Across organizational boundaries	Across organizational boundaries	Across organizational boundaries	N/A	N/A
<b>JTR system network interoperability</b>				
Interoperate with Allied / Coalition and commercial networks; satisfy 100% of top-level IER	Interoperate with Allied / Coalition and commercial networks; satisfy 100% of top-level IER	Interoperate with Service and Joint networks; satisfy 100% of critical top-level IERs	N/A	N/A
<b>Sustainment - Operational Availability (Ao)</b>				
0.99 (channel)	0.99 (channel)	0.96 (channel)	N/A	N/A

**Requirements Reference**

JTRS ORD Increment 1 Version 3.2 dated April 9, 2003 / v.3.2.1 errata dated August 28, 2006 and as modified by JROC Memorandum 063-11 dated April 29, 2011

**Change Explanations**

None

**Notes**

The Performance Characteristics for the Small Airborne Networking Radio (SANR) subprogram are not applicable. A July 17, 2018 ADM directed an orderly close out of the AMF Small Airborne Networking Radio (SANR) subprogram.

**Acronyms and Abbreviations**

DISR - DoD Information Technology Standards Registry  
EPLRS - Enhanced Position Location Reporting System  
IAW - In Accordance With  
IER - Information Exchange Requirement  
JTR - Joint Tactical Radio  
MUOS - Mobile User Objective System  
SATCOM - Satellite Communications  
SINGARS - Single Channel Ground and Airborne Radio System  
SRW - Soldier Radio Waveform  
UHF - Ultra High Frequency  
WNW - Wideband Networking Waveform

## Track to Budget

### RDT&E

Appn	BA	PE		
Navy	1319	05	0604280N	
	<b>Project</b>		<b>Name</b>	
	3073		AMF JTRS	(Sunk)
Army	2040	05	0604280A	
	<b>Project</b>		<b>Name</b>	
	162		Joint Tactical Radio / Network Enterprise Domain	(Sunk)
Army	2040	05	0605380A	
	<b>Project</b>		<b>Name</b>	
	EA9		Airborne Maritime Fixed Small Airborne (AMF-SA)	(Sunk)
	EG6		Small Airborne Networking Radio (SANR)	(Sunk)
Air Force	3600	05	0604280F	
	<b>Project</b>		<b>Name</b>	
	655068		Joint Tactical Radio System (JTRS)	(Sunk)

### Procurement

Appn	BA	PE		
Army	2035	02	0204380A	
	<b>Line Item</b>		<b>Name</b>	
	B90902		AMF JTRS	(Sunk)
	B90904		AMF JTRS	(Sunk)

### Notes

B90900 is the parent Line Item number to B90902 and B90904.

### Acq O&M

Appn	BA	PE		
Army	2020	04	0702806A	
	<b>Subactivity Group</b>		<b>Name</b>	
	435		Acquisition and Management Support: Tactical Radios	(Sunk)



## Cost and Funding

### Cost Summary

Total Acquisition Cost							
Appropriation	BY 2008 \$M			BY 2008 \$M	TY \$M		
	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Development Objective	Current Estimate
RDT&E	1681.6	1256.2	1381.8	1423.0 <sup>1</sup>	1764.2	1279.1	1454.6
Procurement	5459.7	1387.1	1525.8	0.0	6569.8	2092.1	0.0
Flyaway	--	--	--	0.0	--	--	0.0
Recurring	--	--	--	0.0	--	--	0.0
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	0.0	--	--	0.0
Other Support	--	--	--	0.0	--	--	0.0
Initial Spares	--	--	--	0.0	--	--	0.0
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.2	0.0	0.0	0.2
Total	7141.3	2643.3	N/A	1423.2	8334.0	3371.2	1454.8

<sup>1</sup> APB Breach

#### Current APB Cost Estimate Reference

Program Office Estimate aligned with FY 2015 President's Budget dated March 04, 2014

#### Cost Notes

RDT&E and Procurement lines reflect the FY 2020 PB dated March 11, 2019. All funding in FY 2020 and beyond was withdrawn in the FY 2020 PB request from the Small Airborne Networking Radio (SANR) budget lines.

Remaining FY 2018 RDT&E SANR funding supports program close out activities and ongoing efforts in support of the Army's network modernization approach as justified in the SANR Budget Justification documentation. This funding includes a Congressional add of \$10.0M in FY 2018 SANR RDT&E funding to support investments in the Link 16 Handheld Radio to address air-to-ground integration. FY 2019 SANR RDT&E funding of \$15.059M is not required for SANR close out activities; however, the Army is working to repurpose this funding for higher priorities.

No additional programmatic risks were identified in the current POE.

Total Quantity			
Quantity	SAR Baseline Development Estimate	Current APB Development	Current Estimate
RDT&E	204	192	0
Procurement	24920	14060	0
Total	25124	14252	0

#### Quantity Notes

On July 17, 2018, the Army Acquisition Executive (AAE) issued an ADM canceling the AMF Small Airborne Networking Radio (SANR) subprogram; therefore, procurement quantities are decreased to zero.

**Cost and Funding****Funding Summary**

Appropriation Summary									
FY 2020 President's Budget / December 2018 SAR (TY\$ M)									
Appropriation	Prior	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
RDT&E	1438.6	16.0	0.0	0.0	0.0	0.0	0.0	0.0	1454.6
Procurement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2
PB 2020 Total	1438.6	16.2	0.0	0.0	0.0	0.0	0.0	0.0	1454.8
PB 2019 Total	1429.0	16.9	54.3	77.7	152.0	170.4	207.7	1469.5	3577.5
Delta	9.6	-0.7	-54.3	-77.7	-152.0	-170.4	-207.7	-1469.5	-2122.7

Quantity Summary										
FY 2020 President's Budget / December 2018 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	0	0	0	0	0	0	0	0	0
PB 2020 Total	0	0	0	0	0	0	0	0	0	0
PB 2019 Total	220	0	0	90	608	1256	1198	1220	9808	14400
Delta	-220	0	0	-90	-608	-1256	-1198	-1220	-9808	-14400

**Cost and Funding**

**Annual Funding By Appropriation**

Annual Funding							
1319   RDT&E   Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2003	--	--	--	--	--	--	8.4
2004	--	--	--	--	--	--	43.0
2005	--	--	--	--	--	--	54.3
2006	--	--	--	--	--	--	55.9
2007	--	--	--	--	--	--	53.5
2008	--	--	--	--	--	--	99.3
2009	--	--	--	--	--	--	212.0
2010	--	--	--	--	--	--	306.5
2011	--	--	--	--	--	--	303.2
2012	--	--	--	--	--	--	108.6
2013	--	--	--	--	--	--	9.1
Subtotal	--	--	--	--	--	--	1253.8

Annual Funding 1319   RDT&E   Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2008 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2003	--	--	--	--	--	--	9.4
2004	--	--	--	--	--	--	47.0
2005	--	--	--	--	--	--	57.8
2006	--	--	--	--	--	--	57.7
2007	--	--	--	--	--	--	53.9
2008	--	--	--	--	--	--	98.3
2009	--	--	--	--	--	--	207.1
2010	--	--	--	--	--	--	295.0
2011	--	--	--	--	--	--	285.0
2012	--	--	--	--	--	--	100.4
2013	--	--	--	--	--	--	8.3
Subtotal	--	--	--	--	--	--	1219.9

Annual Funding							
2040   RDT&E   Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2016	--	--	--	--	--	--	8.0
2017	--	--	--	--	--	--	4.1
2018	--	--	--	--	--	--	18.6
2019	--	--	--	--	--	--	16.0
Subtotal	--	--	--	--	--	--	46.7

Annual Funding 2040   RDT&E   Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	BY 2008 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2016	--	--	--	--	--	--	7.0
2017	--	--	--	--	--	--	3.5
2018	--	--	--	--	--	--	15.6
2019	--	--	--	--	--	--	13.2
Subtotal	--	--	--	--	--	--	39.3

Annual Funding 3600   RDT&E   Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2003	--	--	--	--	--	--	12.8
2004	--	--	--	--	--	--	28.1
2005	--	--	--	--	--	--	36.1
2006	--	--	--	--	--	--	77.1
Subtotal	--	--	--	--	--	--	154.1



Annual Funding 3600   RDT&E   Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 2008 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2003	--	--	--	--	--	--	14.4
2004	--	--	--	--	--	--	30.8
2005	--	--	--	--	--	--	38.6
2006	--	--	--	--	--	--	80.0
Subtotal	--	--	--	--	--	--	163.8

Annual Funding		
2020	Acq O&M	Operation and Maintenance, Army
Fiscal Year	TY \$M	
	Total Program	
2019	0.2	
Subtotal	0.2	

Annual Funding 2020   Acq O&M   Operation and Maintenance, Army	
Fiscal Year	BY 2008 \$M
	Total Program
2019	0.2
Subtotal	0.2

## Low Rate Initial Production

LRIP for the Small Airborne Networking Radio (SANR) subprogram is no longer applicable; On July 17, 2018, the Army Acquisition Executive (AAE) issued an ADM canceling the AMF SANR subprogram.

## **Foreign Military Sales**

None

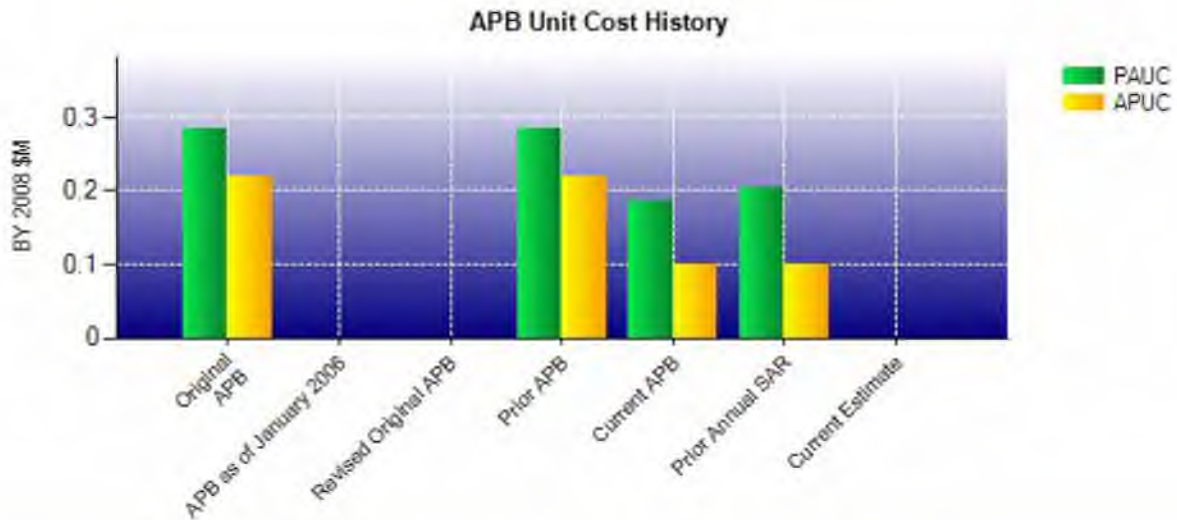
## **Nuclear Costs**

None

**Unit Cost**

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2008 \$M	BY 2008 \$M	% Change
	Current UCR Baseline (May 2014 APB)	Current Estimate (Dec 2018 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	2643.3	1423.2	
Quantity	14252	0	
Unit Cost	0.185	--	--
<b>Average Procurement Unit Cost</b>			
Cost	1387.1	0.0	
Quantity	14060	0	
Unit Cost	0.099	--	--
Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2008 \$M	BY 2008 \$M	% Change
	Original UCR Baseline (Oct 2008 APB)	Current Estimate (Dec 2018 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	7141.3	1423.2	
Quantity	25124	0	
Unit Cost	0.284	--	--
<b>Average Procurement Unit Cost</b>			
Cost	5459.7	0.0	
Quantity	24920	0	
Unit Cost	0.219	--	--

On July 17, 2018, the Army Acquisition Executive (AAE) issued an ADM canceling the AMF Small Airborne Networking Radio (SANR) subprogram. As a result of the ADM, all quantities for the SANR subprogram were decreased to zero, therefore PAUC and APUC are no longer applicable.



APB Unit Cost History					
Item	Date	BY 2008 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Oct 2008	0.284	0.219	0.332	0.264
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Oct 2008	0.284	0.219	0.332	0.264
Current APB	May 2014	0.185	0.099	0.237	0.149
Prior Annual SAR	Dec 2017	0.203	0.100	0.248	0.143
Current Estimate	Dec 2018	N/A	N/A	N/A	N/A

A July 17, 2018 ADM directs an orderly close out of the SANR subprogram. As a result of the ADM, all quantities for the SANR subprogram were decreased to zero and the PAUC and APUC are no longer applicable.

**SAR Unit Cost History**

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.332	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.264	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	Dec 2007	N/A	Mar 2008
Milestone C	N/A	Nov 2011	N/A	N/A
IOC	N/A	Aug 2014	N/A	N/A
Total Cost (TY \$M)	N/A	8334.0	N/A	1454.8
Total Quantity	N/A	25124	N/A	0
PAUC	N/A	0.332	N/A	N/A



**Cost Variance**

Summary TY \$M					
Item	RDT&E	Procurement	MILCON	Acq O&M	Total
SAR Baseline (Development Estimate)	1764.2	6569.8	--	--	8334.0
Previous Changes					
Economic	-25.7	-65.8	--	--	-91.5
Quantity	-27.6	-2606.6	--	--	-2634.2
Schedule	-131.0	+398.2	--	--	+267.2
Engineering	+12.3	--	--	--	+12.3
Estimating	-59.8	-2644.4	--	+20.9	-2683.3
Other	--	--	--	--	--
Support	--	+373.0	--	--	+373.0
Subtotal	-231.8	-4545.6	--	+20.9	-4756.5
Current Changes					
Economic	+1.2	+19.6	--	+0.5	+21.3
Quantity	-26.0	-4414.7	--	--	-4440.7
Schedule	--	-484.5	--	--	-484.5
Engineering	--	--	--	--	--
Estimating	-53.0	+3216.5	--	-21.2	+3142.3
Other	--	--	--	--	--
Support	--	-361.1	--	--	-361.1
Subtotal	-77.8	-2024.2	--	-20.7	-2122.7
Total Changes	-309.6	-6569.8	--	+0.2	-6879.2
CE - Cost Variance	1454.6	--	--	0.2	1454.8
CE - Cost & Funding	1454.6	--	--	0.2	1454.8

Summary BY 2008 \$M					
Item	RDT&E	Procurement	MILCON	Acq O&M	Total
SAR Baseline (Development Estimate)	1681.6	5459.7	--	--	7141.3
Previous Changes					
Economic	--	--	--	--	--
Quantity	-25.5	-2226.5	--	--	-2252.0
Schedule	-135.3	+26.4	--	--	-108.9
Engineering	+11.0	--	--	--	+11.0
Estimating	-47.4	-2089.5	--	+15.3	-2121.6
Other	--	--	--	--	--
Support	--	+251.6	--	--	+251.6
Subtotal	-197.2	-4038.0	--	+15.3	-4219.9
Current Changes					
Economic	--	--	--	--	--
Quantity	-19.4	-3087.0	--	--	-3106.4
Schedule	--	-339.9	--	--	-339.9
Engineering	--	--	--	--	--
Estimating	-42.0	+2256.8	--	-15.1	+2199.7
Other	--	--	--	--	--
Support	--	-251.6	--	--	-251.6
Subtotal	-61.4	-1421.7	--	-15.1	-1498.2
Total Changes	-258.6	-5459.7	--	+0.2	-5718.1
CE - Cost Variance	1423.0	--	--	0.2	1423.2
CE - Cost & Funding	1423.0	--	--	0.2	1423.2

Previous Estimate: December 2017

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+1.2
Quantity variance due to the decrease of total RDT&E quantities from 220 channels to zero channels in FY 2020 as a result of the July 17, 2018 ADM directing an orderly close out of the SANR subprogram. (Quantity)	-19.4	-26.0
Revised estimate in FY 2020 as a result of SANR subprogram cancelation. (Estimating) (QR)	-41.8	-52.8
Adjustment for current and prior escalation. (Estimating)	-0.2	-0.2
<b>RDT&amp;E Subtotal</b>	<b>-61.4</b>	<b>-77.8</b>

(QR) Quantity Related

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+19.6
Total Quantity variance resulting from a decrease of 14,180 channels to zero as a result of the July 17, 2018 ADM directing an orderly close out of the SANR subprogram. (Subtotal)	-1170.0	-1682.1
Quantity variance resulting from a decrease of 14,180 channels from 14,180 to zero as a result of the July 17, 2018 ADM directing an orderly close out of the SANR subprogram. (Quantity)	(-3087.0)	(-4414.7)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-339.9)	(-484.5)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+2256.9)	(+3217.1)
Revised estimate to reflect the July 17, 2018 ADM directing an orderly close out of the SANR subprogram. (Estimating) (QR)	-0.1	-0.6
Decrease in Other Support to offset decrease in Flyaway in FYDP due to reducing all quantities to zero as a result of the July 17, 2018 ADM directing an orderly close out of the SANR subprogram. (Support) (QR)	-139.0	-199.8
Decrease in Initial Spares due to reducing all quantities to zero as a result of the July 17, 2018 ADM directing an orderly close out of the SANR subprogram. (Support) (QR)	-112.6	-161.3
<b>Procurement Subtotal</b>	<b>-1421.7</b>	<b>-2024.2</b>

(QR) Quantity Related

Acq O&M	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+0.5
Revised estimate based on a July 17, 2018 ADM directing an orderly close out of the SANR subprogram. (Estimating)	-15.0	-21.1
Adjustment for current and prior escalation. (Estimating)	-0.1	-0.1
<b>Acq O&amp;M Subtotal</b>	<b>-15.1</b>	<b>-20.7</b>

## Contracts

### General Notes

There are no active SANR contracts at this time.

## Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	0	0	0	--
Total Program Quantity Delivered	0	0	0	--

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	1454.8	Years Appropriated	17
Expended to Date	1424.2	Percent Years Appropriated	100.00%
Percent Expended	97.90%	Appropriated to Date	1454.8
Total Funding Years	17	Percent Appropriated	100.00%

The above data is current as of March 11, 2019.

### Notes

The remaining FY 2018 RDT&E Small Airborne Networking Radio (SANR) funding supports program close out activities and ongoing efforts in support of the Army's network modernization approach as justified in the SANR Budget Justification documents. This funding includes a Congressional add of \$10.0M in FY 2018 SANR RDT&E funding to support investments in the Link 16 Handheld Radio to address air-to-ground integration. FY 2019 SANR RDT&E funding of \$15.059M is not required for SANR close out activities; however, the Army is working to repurpose this funding for higher priorities.

All funding in FY 2020 and beyond is withdrawn from SANR budget lines in the FY 2020 PB.

## Operating and Support Cost

### Cost Estimate Details

**Date of Estimate:** October 10, 2018  
**Source of Estimate:** POE  
**Quantity to Sustain:** 0  
**Unit of Measure:** Channels  
**Service Life per Unit:** 0.00 Years  
**Fiscal Years in Service:**

On July 17, 2018, the Army Acquisition Executive issued an ADM canceling the AMF Small Airborne Networking Radio (SANR) subprogram. As a result of the ADM, all SANR quantities were decreased to zero and therefore no quantities will be sustained.

### Sustainment Strategy

A sustainment strategy is no longer applicable to the SANR subprogram.

### Antecedent Information

None

Cost Element	Annual O&S Costs BY2008 \$M	
	Small Airborne Networking Radio (SANR) Average Annual Cost Per Channels	No Antecedent (Antecedent)
Unit-Level Manpower	--	--
Unit Operations	--	--
Maintenance	--	--
Sustaining Support	--	--
Continuing System Improvements	--	--
Indirect Support	--	--
Other	--	--
<b>Total</b>	--	--

Sustainment costs are no longer applicable to the SANR subprogram.

Item	Total O&S Cost \$M			
	Small Airborne Networking Radio (SANR)		No Antecedent (Antecedent)	
	Current Development APB Objective/Threshold	Current Estimate		
<b>Base Year</b>	2887.4	3176.1	N/A	N/A
<b>Then Year</b>	5311.8	N/A	N/A	N/A

Sustainment costs are no longer applicable to the SANR subprogram.

### Equation to Translate Annual Cost to Total Cost

Sustainment costs are no longer applicable to the SANR subprogram.

O&S Cost Variance		
Category	BY 2008 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2017 SAR	1549.0	
Programmatic/Planning Factors	-1549.0	All SANR quantities were decreased to zero and therefore no quantities will be sustained.
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	0.0	
Other	0.0	
Total Changes	-1549.0	
Current Estimate	0.0	

### Disposal Estimate Details

**Date of Estimate:** October 10, 2018  
**Source of Estimate:** POE  
**Disposal/Demilitarization Total Cost (BY 2008 \$M):**

On July 17, 2018, the Army Acquisition Executive (AAE) issued an ADM canceling the AMF Small Airborne Networking Radio (SANR) subprogram. As a result of the ADM, all SANR quantities were decreased to zero and therefore no quantities will be sustained and hence no disposal costs.