

UNCLASSIFIED

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BUDGET ITEM JUSTIFICATION SHEET							DATE					
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE				SUBHEAD	
OP,N - BA2 COMMUNICATIONS & ELECTRONIC EQUIPMENT							BLI: 3010 SHIP TACTICAL COMMUNICATIONS				52DN	
			FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	TO COMP	TOTAL	
QUANTITY												
COST (in millions)				\$40.0	\$14.1	\$5.9	\$5.2	\$102.9	\$137.2			
<p>JUSTIFICATION OF BUDGET YEAR REQUIREMENTS: Beginning in FY04, HFRG, HF Tilt Mechanisms and Joint Tactical Radios System will transfer from BLI 3057 Comm Items Under \$5M and BLI 3215 Satellite Communications respectively to BLI 3010 Ship Tactical Communications.</p> <p>HF TILT MECHANISMS - Devices to enable vertical whip antenna to be lowered to a horizontal position during flight operations.</p> <p>HIGH FREQUENCY RADIO GROUP (HFRG) BROADBAND - Will allow fully automated operation of the HF communications system. The system will reduce the number of topside antennas used, reduce electromagnetic interference and reduce manning requirements.</p> <p>JTRS: The Joint Tactical Radio System-Maritime and Fixed Station (JTRS-M/F) provides tactical Joint interoperable communications. JTRS-M/F replaces all non-compliant, mostly 1970's design radios and multiplexers, with a software programmable radio that can meet present and future requirements in a cost effective and forward thinking manner. JTRS-M/F initial baseline provides the framework for meeting the planned future SATCOM, Line of Sight (LOS) and Beyond LOS communications requirements in the 2 MHz to 2 GHz spectrum. Additionally, JTRS-M/F provides advanced higher data rate and capacity waveforms in the UHF spectrum critical to supporting the Navy IT-21 Network Centric strategy and Joint Vision 2010 and provides the radio for incorporation of the developing Advanced Narrowband System (ANS) waveform, the next generation UHF follow-on satellite constellation. The Maritime and Fixed Station JTRS (JTRS-M/F) will be evolutionary in development. FY03 and prior is implemented under the Digital Modular Radio (DMR) Program as JTRS-M/F Block 0. JTRS-M/F Block I will consist of a modification of the DMR to JTRS software compliance and will meet narrowband requirements of the Navy tactical communications. JTRS-M/F Block II will be a newly developed radio system that will meet both narrowband and wideband requirements in the 2 MHz to 2 GHz frequency spectrum. The new system will replace a multitude of systems (HFRG, DWTS, UHF SATCOM, etc.). NOTE: In November 2003, USD (ATL) directed the merge of Clusters 3 &amp;4 (Navy &amp; Air Force) to establish a combined JTRS Cluster, to be renamed AMF JTRS, Airborne Maritime/Fixed JTRS. Funding represents Navy's portion of AMF JTRS.</p> <p>DMR: The Digital Modular Radio (DMR) provides improvements for fleet radio requirements in the HF, VHF, and UHF frequency band. The DMR replaces and will be interoperable and backwards compatible with legacy systems. The DMR is a digital, modular, software programmable, multi-channel, multi-function and multi-band (2MHz-2 GHz) radio system.</p>												

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<b>COST ANALYSIS</b>	<b>DATE</b> February 2004
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<b>APPROPRIATION ACTIVITY</b> OP,N - BA-2 COMMUNICATIONS AND ELECTRONIC EQUIPMENT	<b>P-1 ITEM NOMENCLATURE</b> BLI: 3010 SHIP TACTICAL COMMUNICATIONS	<b>SUBHEAD</b> 52DN
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COST CODE	ELEMENT OF COST	ID CODE	FY 2003			FY 2004			FY 2005		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
DN013 NU013	HF Tilt Mechanism HF Tilt Mechanism*	A				18	135	2,421	10	136	1,355
DN016 NU016	HFRG Broadband HFRG Broadband*	A	[1]	[4491]	[4491]	4	4,436	17,745			
DN105	DMR	B				9	1,025	9,227	0		0
DN555	<b>Production Support</b>							<b>2,922</b>			<b>1,309</b>
	HF Tilt				[310]			428			439
	HFRG				[780]			1,900			672
	DMR				[1087]			594			198
DN777	<b>INSTALLATION</b>							<b>7,721</b>			<b>11,413</b>
	FMP							4,719			10,777
	HF Tilt							736			822
	HFRG				[210]			2,022			8,900
	DMR							1,961			1,055
DN777	<b>DSA</b>							<b>3,002</b>			<b>636</b>
	HF Tilt							82			92
	HFRG				[255]			2,800			247
	DMR							120			297
<b>Total SPAWAR CONTROL</b>								<b>40,036</b>			<b>14,077</b>

FY03 and Prior: HF Tilt and HFRG budget is included under BLI 3057 Comm Items Under \$5M. Provided for informational purposes only  
 FY04 HFRG buy includes 2 procurements plus an Engineering Change Order to upgrade a 12kw HFRG system (Bellewood LHA-3) into two HFRG (8kw & 4kw) systems for the CVN67 and the CG-60.  
 FY04 Unit cost includes 3 HF ALE upgrades and 16 VRC-104  
 FY03 and Prior: DMR reflected in BLI 321500. Provided for informational purposes only

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PROCUREMENT HISTORY AND PLANNING											A. DATE		
B. APPROPRIATION/BUDGET ACTIVITY											C. P-1 ITEM NOMENCLATURE		SUBHEAD
OP,N - BA2 COMMUNICATIONS & ELECTRONIC EQUIPMENT											BLI: 3010 SHIP TACTICAL COMMUNICATIONS		52DN
COST CODE	ELEMENT OF COST	FY	CONTRACTOR AND LOCATION	CONTRACT METHOD & TYPE	LOCATION OF PCO	RFP ISSUE DATE	AWARD DATE	DATE OF FIRST Delivery	QTY	UNIT COST	SPECS AVAILABLE NOW	DATE REVISIONS AVAILABLE	
DN013	HF Tilt Mechanism	04	El Dyne	FFP/O	SPAWAR		Jan-04	Jan-05	18	135	YES		
DN013	HF Tilt Mechanism	05	El Dyne	FFP/O	SPAWAR		Jan-05	Jan-06	10	136	YES		
DN016	HFRG Broadband	04	HARRIS Corp, Rochester NY	FFP/O	SPAWAR		Oct-03	Oct-04	4	4,436	YES		
DN105	Digital Modular Radio (DMR)	04	General Dynamics Decision Systems (formerly Motorola)	CPIF	SPAWAR	N/A	Jul-04	Jul-05	9	1,025	YES		
D. REMARKS													

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MODIFICATION TITLE:  
 COST CODE  
 MODELS OF SYSTEMS AFFECTED:  
 DESCRIPTION/JUSTIFICATION:

**SHIP TACTICAL COMMUNICATIONS**  
**DN013**  
**HF TILT MECHANISMS**  
 Installation on ships to allow vertical whip antennas to be lowered to a horizontal position during flight operations.

February 2004

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:  
 FINANCIAL PLAN: (\$ in millions)

	Prior Yrs		FY 02		FY 03		FY 04		FY 05		FY 06		FY 07		FY 08		FY 09		TC		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																						
PROCUREMENT:																						
Kit Quantity																						
Installation Kits																						
Installation Kits Nonrecurring																						
Equipment	[27]	[2.7]	[2]	[0.3]	[0]	[0.0]	18	2.4	10	1.4	18	2.2	14	1.7	0	0.0	0	0.0	231	34.2	291	41.9
Equipment Nonrecurring																						
Engineering Change Order																						
Data																						
Training Equipment																						
<b>Production Support</b>		[1.1]		[0.6]		[0.3]		0.4		0.4		0.5		0.5		0.2				1.2		3.3
<b>Other (DSA)</b>				[0.0]		[0.0]		0.1		0.1		0.1		0.2		0.1				2.1		2.5
Interm Contractor Support																						
Installation of Hardware	[13]	[1.2]	[0]	[0.0]	[0]	[0.0]	16	0.7	18	0.8	10	0.5	18	0.9	14	0.7	0	0.0	231	11.6	307	15.3
PRIOR YR EQUIP	[13]	[1.2]					14	0.6													14	0.6
FY 02 EQUIP							2	0.1													2	0
FY 03 EQUIP																					0	0.0
FY 04 EQUIP									18	0.8											18	0.8
FY 05 EQUIP										10	0.5										10	0.5
FY 06 EQUIP												18	0.9								18	0.9
FY 07 EQUIP														14	0.7						14	0.7
FY 08 EQUIP																					0	0.0
FY 09 EQUIP																					0	0.0
FY TC EQUIP																					231	11.6
TOTAL INSTALLATION COST		[1.2]		[0.0]		[0.0]		0.7		0.8		0.5		0.9		0.7		0.0			11.6	15.3
TOTAL PROCUREMENT COST		[5.0]		[0.9]		[0.3]		3.7		2.7		3.3		3.3		1.0		0.0			49.1	62.9

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME: 5 mos PRODUCTION LEADTIME: 12 mos

CONTRACT DATES:	FY 2002:	May-02	FY 2003:	N/A	FY 2004:	Jan-04	FY 2005:	Jan-05
DELIVERY DATES:	FY 2002:	May-03	FY 2003:	N/A	FY 2004:	Jan-05	FY 2005:	Jan-06

INSTALLATION SCHEDULE:		<u>FY 04</u>				<u>FY 05</u>				<u>FY 06</u>					
	<u>PY</u>	1	2	3	4	1	2	3	4	1	2	3	4		
INPUT	[13]	3	4	6	3	6	6	6		7	3				
OUTPUT	[13]	3	4	6	3	6	6	6		7	3				

INSTALLATION SCHEDULE:		<u>FY 07</u>				<u>FY 08</u>				<u>FY 09</u>				<u>TC</u>	<u>TOTAL</u>
		1	2	3	4	1	2	3	4	1	2	3	4		
INPUT		6	8	4		7	7							231	307
OUTPUT		6	8	4		7	7							231	307

Notes/Comments  
 FY03 and Prior: HF Tilt budget is included under BLI 3057 Comm Items Under \$5M. Provided for informational purposes only  
 Total inventory objective is 320 units. 29 units procured under BLI 3057. 291 will be procured under BLI 3010.

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MODIFICATION TITLE: SHIP TACTICAL COMMUNICATIONS  
 COST CODE: DN016/NU016  
 MODELS OF SYSTEMS AFFECTED: HIGH FREQUENCY RADIO GROUP  
 DESCRIPTION/JUSTIFICATION: Provides for fully automated operation of the High Frequency Communications System.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:  
 FINANCIAL PLAN: (\$ in millions)

	Prior Yrs		FY 02		FY 03		FY 04		FY 05		FY 06		FY 07		FY 08		FY 09		IC		Total			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
RDT&E																								
PROCUREMENT:																								
Kit Quantity																								
Installation Kits																								
Installation Kits Nonrecurring																								
Equipment	[33]	[41.5]	[0]	[0.0]	[1]	[3.5]	2	6.4	0	0.0											2	6.4		
Equipment Nonrecurring - HF ALE (URC 109)						[0.5]																0.0		
Equipment Nonrecurring - HF ALE (VRC104)						[0.6]		8.6																
ECO-Upgrade CV-67 ad CG-60							2	2.7														2	2.7	
Data																								
Training Equipment																								
Production Support		[1.4]		[1.3]		[0.8]		1.9		0.7													2.6	
Other (DSA)		[0.7]		[0.5]		[0.3]		2.8		0.2													3.0	
Interm Contractor Support																								
Installation of Hardware	[31]	[41.6]	[1]	[2.2]	[0]	[0.2]	1	2.0	4	8.9	0	0.0	0	0.0	0	0.0	0	0.0					5	10.9
PRIOR YR EQUIP	[31]	[41.6]	[1]	[2.2]																			0	0.0
FY 02 EQUIP																							0	0.0
FY 03 EQUIP					[0]	[0.2]	1	2.0															1	2.0
FY 04 EQUIP									4	8.9													4	8.9
FY 05 EQUIP																							0	0.0
FY 06 EQUIP																							0	0.0
FY 07 EQUIP																							0	0.0
FY 08 EQUIP																							0	0.0
FY 09 EQUIP																							0	0.0
FY TC EQUIP																							0	0.0
TOTAL INSTALLATION COST		[41.6]		[2.2]		[0.2]		2.0		8.9		0.0		0.0		0.0		0.0		0.0				10.9
TOTAL PROCUREMENT COST		[85.2]		[4.0]		[5.7]		24.5		9.8		0.0		0.0		0.0		0.0		0.0				34.3

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 1 mos PRODUCTION LEADTIME: 12 mos

CONTRACT DATES: FY 2002: N/A FY 2003: Sep-03 FY 2004: Jan-04 FY 2005: N/A  
 DELIVERY DATES: FY 2002: N/A FY 2003: Nov-04 FY 2004: Mar-05 FY 2005: N/A

INSTALLATION SCHEDULE:	PY	FY 04				FY 05				FY 06			
		1	2	3	4	1	2	3	4	1	2	3	4
INPUT	[32]				1		2	2					
OUTPUT	[32]					1		2	2				

INSTALLATION SCHEDULE:		FY 07				FY 08				FY 09				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4		
INPUT															5
OUTPUT															5

Notes/Comments  
 1/ FY03 and Prior: The HFRG budget was included under BLI 3057 Comm Items Under \$5M. Provided for informational purposes only. Total inventory objective is 36 units. 34 units procured under BLI 3057. 2 units will be procured under BLI 3010.  
 2/ The installation of the FY01 procurement of a 12 KW system was cancelled due to ship being decommissioned (LHA-3). This asset is being converted into two HFRG (8kw & 4kw) systems in FY04 via an Engineering Change Order for the CV-67 and the CG-60.  
 3/ FY03 install includes installation of the HF ALE upgrades.  
 4/ FY04 production support increases due to new version of system requiring additional initial ILS documentation.  
 6/ FY05 install includes the FY04 HFALE procurements  
 7/ FY04 Procurements includes 47 VRC104s

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MODIFICATION TITLE: **SHIP TACTICAL COMMUNICATIONS**  
 COST CODE: **DN105/NR105**  
 MODELS OF SYSTEMS AFFECTED: **DMR**  
 DESCRIPTION/JUSTIFICATION: Provides four channel SATCOM terminal built to open systems architecture maximizing COTS/ND with the ability to evolve as commercial technology advances and supports future proofing.

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DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:  
 FINANCIAL PLAN: (\$ in millions)

	FY 01		FY 02		FY 03		FY 04		FY 05		FY 06		FY 07		FY 08		FY 09		TC	Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$			
RDT&E																					
PROCUREMENT:																					
Kit Quantity																					
Installation Kits																					
Installation Kits Nonrecurring																					
Equipment	[41]	[26.2]	[Var]	[.3]	[0]	[0]	9	9.2	0	0.0	0	0.0								9	9.2
Equipment Nonrecurring (Racks)	[58]	[3.3]																			
Engineering Nonrecurring						[1.087]															
Engineering Change Orders						(See Note 6)															
Data																					
Training Equipment																					
Production Support		[12.6]		[2.3]		[0]		0.6		0.2		0.4			0.0						1.2
Other (DSA)		[1.8]		[0]		[0]		0.1		0.3		0.5			0.4						1.3
Interim Contractor Support																					
Installation of Hardware*	0	0.000	[4]	[0]	[1]	[0]	12	2.0	5	1.1	8	1.7	7	1.5						32	6.2
PRIOR YR EQUIP			[4]	[0]	[1]	[0]	12	2.0			4	0.8	7	1.5						23	4.3
FY 00 EQUIP																					
FY 01 EQUIP																					
FY 02 EQUIP																					
FY 03 EQUIP																					
FY 04 EQUIP									5	1.1	4	0.8								9	1.9
FY 05 EQUIP																					
FY 06 EQUIP																					
FY 07 EQUIP																					
FY 08 EQUIP																					
FY09 EQUIP																					
FY TC EQUIP																					
TOTAL INSTALLATION COST		0.0		[0]		[0]		2.0		1.1		1.7		1.5							6.2
TOTAL PROCUREMENT		[43.90]		[2.60]		[1.10]		11.9020		1.5500		2.609		1.8840							17.9

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEAD-TIME: 2 Months      PRODUCTION LEAD-TIME: 12 months

CONTRACT DATES: FY 2002: NA      FY 2003: NA      FY 2004: Jul-04      FY 2005: NA

DELIVERY DATES: FY 2002: NA      FY 2003: NA      FY 2004: Jul-05      FY 2005: NA

INSTALLATION SCHEDULE:

	PY	FY 04				FY 05				FY 06			
		1	2	3	4	1	2	3	4	1	2	3	4
INPUT	0		4	4	4				5	4	4		
OUTPUT	0		4	4	4				5	4	4		

INSTALLATION SCHEDULE:

	FY07			FY 08			FY 09			TC	TOTAL
	1	2	3	1	2	3	1	2	3		
INPUT	6	1									32
OUTPUT	6	1									32

Notes/Comments

Note 1: DMR unit includes four channels per box.

Note 2: DMR racks included under Equipment Non-Recurring line.

Note 3: FY03 and Prior: DMR reflected in BLI 321500. Provided for information purposes only. Total inventory objective is 61 units: BLI 3215 and BLI 3010.

Note 4: Due to results of Navy Audit, 24 Military Sealift Command (MSC) assets directed to higher priority platforms: 4 to be installed in FY06, 7 assets in FY07, 13 remaining assets for SCN requirements. 2 (PY) DMR units provided to SSC-SD lab, 2 (PY) DMR units provided to SSC-CH lab. No installation cost to SPAWAR.

Note 5: FY02 procurements consist of ancillary equipment for the SSN 21 and SSN 23 (each kit includes one 500 watt HF power amplifier and one Sunair 9000 HF transceiver, SSN 21 receives one set SSN23 receives two sets.

Note 6: FY03 Pentagon DMR unit installed at no cost to SPAWAR.

Note 7: FY04: New sole source contract requires non-recurring engineering support as part of production start-up.

