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**DEPARTMENT OF THE NAVY
JUSTIFICATION OF ESTIMATES
AMENDED FY 1988/1989 BIENNIAL BUDGET**

AD-A197 654



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SUBMITTED TO CONGRESS FEBRUARY 1988

PROCUREMENT

OTHER PROCUREMENT, NAVY

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Department of the Navy
Other Procurement, Navy

Justification of Estimates for Fiscal Year 1989

TABLE OF CONTENTS

	<u>Page</u>
Budget Appendix Extract	1
Program and Financing Summary	2-8
Budget Activity Justification:	
Budget Activity 1: Ship Support Equipment	9-18
Budget Activity 2: Communications and Electronics Equipment	19-33
Budget Activity 3: Aviation Support Equipment	34-43
Budget Activity 4: Ordnance Support Equipment	44-49
Budget Activity 5: Civil Engineering Support Equipment	50-53
Budget Activity 6: Supply Support Equipment	54-56
Budget Activity 7: Personnel and Command Support Equipment	57-60
Budget Activity 8: Spares and Repair Parts	61
Exhibit 32C: Comparison of Program Requirements	62-70

ACQUISITION FOR
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DTIC TAB
UNCLASSIFIED
AVAILABILITY STATEMENTS
STATEMENT OF WORK
STATEMENT OF WORK

A-1



Other Procurement, Navy

For procurement, production, and modernization of support equipment and materials not otherwise provided for, Navy ordnance and ammunition (except ordnance for new aircraft, new ships, and ships authorized for conversion) the purchase of not to exceed two vehicles for physical security of personnel notwithstanding price limitations applicable to passenger carrying vehicles, but not to exceed \$115,000 per vehicle and the purchase of not to exceed [861] 490 passenger motor vehicles of which [17] 434 shall be for replacement only; expansion of public and private plants, including the land necessary therefor, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway, [as follows: Ship support equipment, \$812,891,000, Communications and electronics equipment, \$1,656,886,000; Aviation support equipment, \$674,615,000; Ordnance support equipment, \$899,837,000; Civil engineering support equipment, \$94,215,000; Supply support equipment, \$400,194,000; Personnel and command support equipment, \$416,823,000; Spares and repair parts, \$278,888,888; in all, \$4,872,461,000]; \$4,789,700,000, of which \$59,545,000 shall be available only for the Navy Reserve, to remain available for obligation until September 30, [1990] 1991. (10 U.S.C. 5013, 5063; Department of Defense Appropriations Act, 1988, as included in Public Law 100-202; additional authorizing legislation to be proposed.

(CSDA)

Other Procurement, Navy
Program and Financing (in thousands of dollars) SUMMARY

Identification code	17-1810-0-1-051	Budget Plan (amounts for PROCUREMENT actions programmed)				Obligations	
		1987 actual	1988 est.	1989 est.	1987 actual	1988 est.	1989 est.
Program by activities:							
Direct program:							
00.0101	Ships support equipment	964,741	769,591	663,240	958,498	784,960	673,037
00.0201	Communications and electronics equipment	1,764,773	1,645,786	1,575,264	1,859,554	1,609,932	1,869,119
00.0301	Aviation support equipment	745,769	669,704	469,250	676,818	710,540	505,990
00.0401	Ordnance support equipment	1,208,765	746,237	1,170,571	1,040,198	1,005,193	1,038,158
00.0501	Civil engineering support equipment	205,321	95,215	104,475	219,209	117,458	102,580
00.0601	Supply support equipment	69,250	109,194	105,295	88,043	96,413	59,912
00.0701	Personnel and command support equipment	503,298	416,823	474,409	589,793	486,810	467,015
00.0801	Spares and repair parts	285,740	278,800	227,196	279,059	279,227	288,458
00.9101	Total direct program	5,747,657	4,731,350	4,789,700	5,911,172	5,090,533	5,004,269
01.0101	Reimbursable program	12,124	65,000	65,000	5,706	91,490	65,000
10.0001	Total	5,759,781	4,796,350	4,854,700	5,916,878	5,182,023	5,069,269
Financing:							
Offsetting collections from:							
11.0001	Federal funds(-)	-10,054	-17,500	-17,500	-8,199	-17,500	-17,500
13.0001	Trust funds(-)	-2,768	-45,000	-45,000	580	-45,000	-45,000
14.0001	Non-Federal sources(-)	698	-2,500	-2,500	683	-2,500	-2,500
17.0001	Recovery of prior year obligations				-48,011		
21.4002	Unobligated balance available, start of year:						
21.4003	For completion of prior year budget plans	-267,167	-342,975		-2,564,780	-2,294,718	-1,909,045
21.4007	Available to finance new budget plans	-155,788			-267,167	-342,975	
22.4001	Reprogramming from/to prior year budget plan	105,064	85,000		105,064	85,000	
24.4002	Unobligated balance transferred to other accounts						
24.4003	For completion of prior year budget plans	342,975			2,294,718	1,909,045	1,694,476
25.0001	Available to finance subsequent year budget	29,927			342,975		
	Unobligated balance lapsing				29,927		
39.0001	Budget authority	5,802,668	4,473,375	4,789,700	5,802,668	4,473,375	4,789,700
Budget authority:							
40.0001	Appropriation	6,033,371	4,872,461	4,789,700	6,033,371	4,872,461	4,789,700
40.0017	Appropriation rescinded	-233,203	-257,975		-233,203	-257,975	
41.0001	Transferred to other accounts(-)		-142,111			-142,111	
42.0001	Transferred from other accounts	2,500	1,000		2,500	1,000	
43.0001	Appropriation (adjusted)	5,802,668	4,473,375	4,789,700	5,802,668	4,473,375	4,789,700

Navy

Other Procurement, Navy
Program and Financing (in Thousands of dollars) SUMMARY

Identification code	17-1810-0-1-051	1987 actual	1988 est.	1989 est.
Relation of obligations to outlays:				
71.0001	Obligations incurred, net	5,909,942	5,117,023	5,004,269
72.4001	Obligated balance, start of year	7,758,227	9,082,151	9,307,974
74.4001	Obligated balance, end of year	-9,082,151	-9,307,974	-9,280,243
77.0001	Adjustments in expired accounts	61,596		
78.0001	Adjustments in unexpired accounts	-48,011		
90.0001	Outlays	4,599,603	4,891,200	5,022,000

Other Procurement, Navy
Program and Financing (in Thousands of dollars) FISCAL YEAR 1985

Identification code	17-1810-0-1-051	Budget plan (amounts for PROCUREMENT actions programmed)		Obligations	
		1987 actual	1988 est.	1987 actual	1988 est.
Program by activities:					
Direct program:					
00.0101	Ships support equipment			54,642	
00.0201	Communications and electronics equipment			143,983	
00.0301	Aviation support equipment			57,637	
00.0401	Ordnance support equipment			53,251	
00.0501	Civil engineering support equipment			21,464	
00.0601	Supply support equipment			11,363	
00.0701	Personnel and command support equipment			75,660	
00.9101	Total direct program			418,000	
01.0101	Reimbursable program			2,649	
10.0001	Total			420,649	
Financing:					
Offsetting collections from:					
11.0001	Federal funds(-)			1,536	
13.0001	Trust funds(-)			2,861	
14.0001	Non-Federal sources(-)			-17	
17.0001	Recovery of prior year obligations			-19,855	
21.4002	Unobligated balance available, start of year:			-492,901	
21.4003	For completion of prior year budget plans			-33,598	
21.4007	Available to finance new budget plans			-87,727	
22.4001	Reprogramming from/to prior year budget pla			72,964	
25.0001	Unobligated balance transferred to other acc			29,927	
40.0017	Unobligated balance lapsing				
40.0017	Budget authority (Appropriation rescinded)			-18,434	

Navy

Other Procurement, Navy
 Program and Financing (in Thousands of dollars) FISCAL YEAR 1986

Identification code	17-1810-0-1-051	Budget plan (amounts for PROCUREMENT actions programmed)		Obligations	
		1987 actual	1988 est.	1987 actual	1988 est.
Program by activities:					
Direct program:					
00.0101	Ships support equipment			170,454	35,126
00.0201	Communications and electronics equipment			574,588	192,897
00.0301	Aviation support equipment			255,715	79,602
00.0401	Ordnance support equipment			208,870	104,887
00.0501	Civil engineering support equipment			40,822	11,982
00.0601	Supply support equipment			22,498	3,899
00.0701	Personnel and command support equipment			161,486	68,033
00.0801	Spares and repair parts			59,141	23,743
00.9101	Total direct program			1,493,574	520,169
01.0101	Reimbursable program			2,787	14,636
10.0001	Total			1,496,361	534,805
Financing:					
Offsetting collections from:					
11.0001	Federal funds(-)			319	
13.0001	Trust funds(-)			487	
14.0001	Non-Federal sources(-)			2	
17.0001	Recovery of prior year obligations			-13,056	
21.4002	Unobligated balance available, start of year:				
	For completion of prior year budget plans			-2,071,879	-534,805
21.4003	Available to finance new budget plans			-233,569	-54,761
21.4007	Reprogramming from/to prior year budget plan				
22.4001	Unobligated balance transferred to other acc			17,000	22,400
22.4001	Unobligated balance available, end of year:				
	For completion of prior year budget plans			54,761	54,761
24.4002	Available to finance subsequent year budget				
24.4003	Budget authority (Appropriation rescinded)			-214,769	-32,361
40.0017	Budget authority (Appropriation rescinded)			-214,769	-32,361

Other Procurement, Navy
Program and Financing (in Thousands of dollars) FISCAL YEAR 1987

Identification code	Budget Plan (amounts for PROCUREMENT actions programmed)				Obligations		
	17-1810-0-1-051	1987 actual	1988 est.	1989 est.	1987 actual	1988 est.	1989 est.
Program by activities:							
Direct program:							
00.0101	Ships support equipment	964,741			733,402	170,908	60,431
00.0201	Communications and electronics equipment	1,784,773			1,140,983	396,005	227,785
00.0301	Aviation support equipment	745,769			563,466	128,463	53,840
00.0401	Ordnance support equipment	1,208,785			778,077	337,315	93,373
00.0501	Civil engineering support equipment	205,321			156,923	34,104	14,294
00.0601	Supply support equipment	69,250			54,182	10,618	4,450
00.0701	Personnel and command support equipment	503,298			352,647	106,159	44,492
00.0801	Spares and repair parts	285,740			219,918	46,383	19,439
00.9101	Total direct program	5,747,657			3,999,598	1,229,955	518,104
01.0101	Reimbursable program	12,124			270	11,854	
10.0001	Total	5,759,781			3,999,868	1,241,809	518,104
Financing:							
Offsetting collections from:							
11.0001	Federal funds(-)	-10,054			-10,054		
13.0001	Trust funds(-)	-2,768			-2,768		
14.0001	Non-federal sources(-)	698			698		
21.4002	Unobligated balance available, start of year:						
21.4003	For completion of prior year budget plans						
22.4001	Available to finance new budget plans						
24.4002	Unobligated balance transferred to other acc						
24.4003	Available to finance subsequent year budget						
39.0001	Budget authority	6,035,871	-225,614		6,035,871	-225,614	
Budget authority:							
40.0001	Appropriation	6,033,371			6,033,371		
40.0017	Appropriation rescinded		-225,614			-225,614	
42.0001	Transferred from other accounts	2,500			2,500		
43.0001	Appropriation (adjusted)	6,035,871	-225,614		6,035,871	-225,614	

Other Procurement, Navy
 Program and Financing (in Thousands of dollars) FISCAL YEAR 1988

Identification code	Budget Plan (amounts for PROCUREMENT activities programed)			Obligations	
	17-1810-0-1-051	1987 actual	1988 est.	1987 actual	1988 est.
Program by activities:					
Direct program:					
00.0101	Ships support equipment	769,591	769,591	578,928	112,841
00.0201	Communications and electronics equipment	1,645,786	1,645,786	1,021,030	552,194
00.0301	Aviation support equipment	669,704	669,704	502,475	100,161
00.0401	Ordnance support equipment	746,237	746,237	562,981	106,968
00.0501	Civil engineering support equipment	95,215	95,215	71,372	14,343
00.0601	Supply support equipment	109,194	109,194	81,896	16,380
00.0701	Personnel and command support equipment	416,823	416,823	312,618	62,524
00.0801	Spares and repair parts	278,800	278,800	209,101	41,823
00.9101	Total direct program	4,731,350	4,731,350	3,340,409	1,007,234
01.0101	Reimbursable program	65,000	65,000	65,000	
10.0001	Total	4,796,350	4,796,350	3,405,409	1,007,234
Financing:					
Offsetting collections from:					
11.0001	Federal funds(-)	-17,500	-17,500	-17,500	
13.0001	Trust funds(-)	-45,000	-45,000	-45,000	
14.0001	Non-Federal sources(-)	-2,500	-2,500	-2,500	
21.4002	Unobligated balance available, start of year: for completion of prior year budget plans			312,941	-1,390,941
24.4002	Unobligated balance available, end of year: for completion of prior year budget plans			1,390,941	389,707
39.0001	Budget authority	4,731,350	4,731,350	4,731,350	
Budget authority:					
40.0001	Appropriation	4,872,461	4,872,461	4,872,461	
41.0001	Transferred to other accounts(-)	-142,111	-142,111	-142,111	
42.0001	Transferred from other accounts	1,000	1,000	1,000	
43.0001	Appropriation (adjusted)	4,731,350	4,731,350	4,731,350	

Other Procurement, Navy
 Program and Financing (in Thousands of dollars) FISCAL YEAR 1989

Identification code	17-1810-0-1-051	Budget Plan (amounts for PROCUREMENT actions programmed)			Obligations	
		1987 actual	1988 est.	1989 est.	1987 actual	1988 est.
Program by activities:						
Direct program:						
00.0101	Ships support equipment		663,240			499,765
00.0201	Communications and electronics equipment		1,575,264			1,089,140
00.0301	Aviation support equipment		469,250			351,989
00.0401	Ordnance support equipment		1,170,571			837,817
00.0501	Civil engineering support equipment		104,475			73,943
00.0601	Supply support equipment		105,295			39,082
00.0701	Personnel and command support equipment		474,409			359,999
00.0801	Spare and repair parts		227,196			227,196
00.9101	Total direct program		4,789,700			3,478,931
01.0101	Reimbursable program		65,000			65,000
10.0001	Total		4,854,700			3,543,931
Financing:						
Offsetting collections from:						
11.0001	Federal funds(-)		-17,500			-17,500
13.0001	Trust funds(-)		-45,000			-45,000
14.0001	Non-Federal sources(-)		-2,500			-2,500
24.4002	Unobligated balance available, end of year: For completion of prior year budget plans					
40.0001	Budget authority (Appropriation)		4,789,700			1,310,769
						4,789,700

BUDGET ACTIVITY 1: SHIP SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(\$ In Thousands)

Budget Plan
(Amounts for Procurement Actions Programmed)

	FY 1987 ACTUAL	FY 1988 ESTIMATE	FY 1989 INITIAL ESTIMATE	FY 1989 CHANGE	FY 1989 AMENDED ESTIMATE	JUSTIFICATION PAGE
SHIP PROPULSION EQUIPMENT	\$ 38,195	\$ 36,262	\$ 42,020	\$ -10,759	\$ 31,261	10
GENERATORS AND PUMPS	32,166	17,481	15,737	-5,398	10,339	11
AIR COMPRESSORS	5,453	2,023	1,938	-1,021	917	11
PROPELLERS	9,849	11,639	10,201	-3,045	7,156	11
NAVIGATION EQUIPMENT	60,231	23,147	14,005	-1,804	12,201	12
UNDERWAY REPLENISHMENT EQUIPMENT	2,911	6,132	7,743	-2,862	4,881	12
PERISCOPES	24,786	10,757	24,952	-17,806	7,146	13
OTHER SHIPBOARD EQUIPMENT:						
SHIP SILENCING	17,335	7,613	26,133	-17,159	8,974	13
STRATEGIC PLATFORM SUPPORT	69,161	75,300	86,068	-29,580	56,488	14
DEEP SUBMERGENCE	8,738	7,879	8,648	-1,648	7,000	14
SHIP SUPPORT IMPROVEMENT	24,930	15,920	15,098	-3,737	11,361	15
MINESWEEPING EQUIPMENT	4,196	737	4,286	-446	3,840	15
SAFETY EQUIPMENT	16,041	45,706	28,132	-4,133	23,999	15
MISCELLANEOUS	146,272	121,411	125,272	-44,978	80,294	16
REACTOR PLANT EQUIPMENT	389,822	272,874	397,657	-114,461	283,196	16
OCEAN ENGINEERING	44,907	63,261	64,912	-457	64,455	17
SMALL BOATS	19,201	25,249	17,649	-5,037	12,612	17
TRAINING EQUIPMENT	18,085	2,404	18,159	-13,992	4,167	18
PRODUCTION FACILITIES EQUIPMENT	24,962	23,796	32,956	-3	32,953	18
TOTAL BUDGET PLAN	\$957,241	\$769,591	\$941,566	\$-278,326	\$663,240	

Budget Activity 1 - Ships Support Equipment

	(\$ In Thousands)
FY 1989 Amended Estimate	- \$ 663,240
FY 1989 Change	- \$-278,326
FY 1989 Initial Estimate	- \$ 941,566
FY 1988 Estimate	- \$ 769,591
FY 1987 Actual	- \$ 957,241

Purpose and Scope of Work

Budget Activity 1 programs include Shipboard Components, Reactor Cores and Reactor Plant Components, support of the Deep Submergence, TRIDENT and Small Boat procurement programs, and procurement of Production Facilities and Training equipment.

Shipboard components, as well as nuclear components and small boats, are procured for direct support or installation on Active Fleet ships as part of a planned maintenance replacement program or as part of an improvement program. These components are also procured to fill authorized stock requirements. Funding for the Deep Submergence program is aimed at expanding the Navy's capability to live, work, explore, and perform rescue missions in deep ocean areas.

Ship Propulsion Equipment (P-1 Line Items 1-5)

(\$ In Thousands)	
FY 1988	FY 1989
\$36,262	\$31,261

These funds will provide for the procurement of equipment designed to improve the reliability, maintainability, fuel efficiency, power output, and durability of the LM 2500 Gas Turbine Engines. The LM 2500 engines were introduced into the Fleet through the DD-963 and FFG-7 Class construction programs and the Allison 501K Gas Turbine engine was introduced into the Fleet through the DD-963, DDG-993, and DD-997 Class ships. These improvements will be accomplished through procurement of modifications identified as a result of the Component Improvement Program. Existing 1200 and 600 PSI Steam Plants require sufficient funds to modify and improve reliability through the procurement of fuel oil strainers, lube oil mods, boiler conductivity monitoring systems, stack gas analyzers, and lube oil strainers. Funds requested will also procure ME831-800 gas turbines, fin stabilizer mods, support for LCAC gas turbines, support for marine diesel engines, clutch retrofit for DD-963/993 class ships, and a depot modernization program for SSN 688 class.

Generators and Pumps (P-1 Line Items 6-7)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$17,481	\$10,339

Funding requested for these programs will provide for continuation of programs to replace obsolete, unsupported, underpowered, and unreliable generators and pumps of various capacities and sizes. These programs also procure equipment to support programmed SHIPALTS. Types of equipment procured include a 500KW ship service motor for SSN 688's, arcing fault detector for SSN and SSBN overhauls; 1500KW emergency diesel generator for LPH-2 class; 60/400 HZ motor generator sets for CG, CGN and DDG class overhauls, diesel ship service power units for PHMs, depot maintenance equipment for SSN 688 class, air conditioning chill water pumps; trim and drain pumps for SSN's and SSBN's, fire pumps/ends/motors for CVs/CVNs and DDG-37 class, and pumps for the auxiliary/amphibious ship maintenance strategy program, the surface ship advance equipment repair program, and the depot modernization program for SSN-688 class.

Air Compressors (P-1 Line Items 8-9)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$ 2,023	\$ 917

These funds will provide for the procurement of greater capacity and more reliable high pressure air compressors than those currently installed in the Active Fleet. Oil-free 20 Cubic feet/hour (CFH) air compressors are needed to support combat weapons systems on combatants. Also being procured are 30 Cubic feet/hour air compressors which are essential to the operation of Liquid Oxygen Generating Plants on aircraft carriers in direct support of aircraft, low-pressure blowers for SSN-637 class and equipment for the SSN-688 depot modernization program.

Propellers (P-1 Line Items 10-11)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$11,639	\$ 7,156

The requested funding will provide for the procurement of propellers to reduce the noise signature on FBM and attack submarines and as replacements for those propellers currently installed as casualties occur. Funds are also required for replacement of blades, shafts, and hubs in support of active fleet ships as damage or failure occurs, as well as for support inventories for the newer classes of ships such as FFG-7s, DD 963/993s, CG-47s and the A0-177s.

Navigation Equipment (P-1 Line Items 12-14)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$23,147	\$12,201

These funds will procure Electrically Suspended Gyro Navigators (ESGN) which are programmed as replacements for the MK-3 Ships Inertial Navigation System (SINS) on SSN-637 Class and SSNs 671 and 685; and as replacements for the Dual Miniature Inertial Navigation System (DMINS) on SSN-688 Class ships. The improvement over the MK-3 SINS is in reliability, maintainability, availability and performance. The improvement over DMINS is in performance. Funds are also budgeted for the CV/CVN navigation system which will replace the MK-3 SINS system. This system will provide for improvements in reliability, maintainability, and availability. Funds are also budgeted for maintenance items and newly developed improvements such as the AN/VSN-5 Inertial Navigation Sets for CG/CGN/DDG Class ships and the Doppler Sonar Velocity Log for SSN's and SSBN's. These improvements provide more precise fire control computation and improved accuracy in support of sophisticated missile systems and for safety of PHMs.

Underway Replenishment Equipment (P-1 Line Item 15)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$ 6,132	\$ 4,881

The equipment procured under this program is required to provide the Active Fleet with new or improved underway replenishment-at-sea capability. This equipment is used to transfer fuel, cargo, ammunition, and missiles by both alongside and vertical replenishment techniques. The equipment being procured supports the following objectives: personnel/equipment safety, reduction in maintenance costs, and reduction in alongside time, to minimize ship vulnerability to enemy action. Major equipment includes ram tensioners, air flasks, vertical conveyors, saddle winches, and elevator controllers.

Periscopes (P-1 Line Items 16-18)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$10,757	\$ 7,146

These funds will provide for the procurement of Type 18 periscope related material and other periscopes and accessories. The Type 18 periscope equipment includes eyepiece boxes and masts which are required to establish an inventory of these parts based on actual/predicted failure rates and turn around times and automatic direction finding modifications. Funds are required to procure a Submarine Satellite Information Exchange reception capability on Type 18 periscopes. Type 18 periscope systems will also be procured to establish a rotatable pool of ready-for-issue assets in support of the depot modernization program for SSN 688 class submarines. Field change kits are being procured to implement approved changes on previously procured Type 18 periscopes. Equipment to provide additional shore/tender based components for other type periscopes is also required to ensure that an issuable periscope is always available as a replacement for damaged units on SSN-594 and 637 Class ships. This requirement is based on past demand experience and repair turn around time. The Type 8 periscope program will enable the modification of Type 8 periscopes to incorporate solid state amplifiers, twelve-channel rotary joints, and improved slip ring assemblies, noise source and sapphire heated head window assemblies. Type 8 Mod 3 periscopes will be procured to replace existing periscopes on SSBN submarines. The improvement over existing equipment is enhanced imaging and communications. Funding will also provide for support and improvement of the Type 2 and 15 series periscopes for all Active Fleet submarines.

Other Shipboard Equipment (Ship Silencing) (P-1 Line Items 22 and 23)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$ 7,613	\$ 8,974

The requested funds will provide for the procurement of equipment required to implement the high priority Submarine Silencing program on existing nuclear submarines and for the acoustic quieting of radiated noise and sonar self-noise for surface ships. The submarine silencing equipment incorporates technology developed under RDT&EN programs for improving detection capability and reducing the detectability of the submarine. The

surface ship silencing program will make use of the extensive silencing technology already developed under the Submarine Silencing program. FY 1988 and FY 1989 funding for the submarine silencing program includes procurement of equipments supporting the east and west coast acoustic measurement facilities. In addition, FY 1988 and FY 1989 funding for surface ships provides for the procurement of Masker Belts for CGs, PRAIRIE masker equipment for CVs, Compound Air Maskers for large combatants, and flex hose and line filters for DD's and DDG's.

Other Shipboard Equipment (STRATEGIC PLATFORM SUPPORT) (P-1 Line Item 25)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$75,300	\$56,488

Funding for this program provides for hull, mechanical, and electrical equipment and tools required to support maintenance tasks for TRIDENT submarines. The equipment is required to support the tempo of FBM submarines and includes funding to develop stock levels for TRIDENT plant equipment and repair (TRIPER) equipments to achieve the required operational availability and to achieve a depot availability period which does not exceed one year; alteration/modification packages for TRIPER equipment to maintain standardization and interchangeability of offsets; long lead material equipment for the advanced equipment replacement program, main shaft seal mating rings, and alteration/modification packages for hull, mechanical and electrical equipment.

Other Shipboard Equipment (Deep Submergence) (P-1 Line Item 26)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$ 7,879	\$ 7,000

The requested funds will provide for the procurement of hardware to improve/modify Deep Submergence Vehicles to provide the Navy with the capability to rescue personnel from craft disabled on the ocean floor. It also will improve the capability to perform manned underwater search, inspection and recovery missions.

Other Shipboard Equipment (Ship Support Improvement) (P-1 Line Items 31 and 37)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$15,920	\$11,361

These programs will procure critical, long lead time equipments, assemblies and components to support the maintenance-limited frigate classes of ships after delivery; provide for improvement in the material condition of Engineered Operating cycle ships; achieve increased operational availability and provide funds to upgrade facilities both ashore and afloat (industrial plant and tenders) in order to improve and expand intermediate level maintenance by the surface forces. Shipboard maintenance will emphasize modular replacement with repairables being returned to Intermediate Maintenance Activities and Depot Overhaul Points for repair or rework and return to stock. Inherent in the Engineering Operating Cycle will be several intervening maintenance availabilities of extremely short duration for performing scheduled alterations and planned overhaul of installed equipment.

Other Shipboard Equipment (Minesweeping Equipment) (P-1 Line Item 29)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$ 737	\$ 3,840

This program will provide for the procurement of minesweeping cables necessary to counter moored and influence mines. These funds will procure Q-3 and S-3 cables, mine neutralization system vehicles, cables and modification kits, and a complete mine neutralization system in FY 1988 and FY 1989.

Other Shipboard Equipment (Safety Equipment) (P-1 Line Items 19, 33, 35)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$45,706	\$23,999

These funds procure equipment which supports shipboard fire fighting operations, fuel tank inspection, and other activities which can involve the exposure of lungs to noxious substances. Funding will provide the Navy with the latest available safety equipment in order to perform assigned tasks without risking

personal injury, provide for the protection of personnel from exposure to nuclear weapons radiation and provide ships of the active fleet with the capabilities to detect chemical warfare agents before ship contamination occurs. FY 1988 and FY 1989 funding will provide Halon 1301 Fire Fighting systems to complement the existing Aqueous Film Forming Foam/Purple K Dry Chemical Powder hose reel systems in machinery spaces as well as procurement of this system in a mobile/portable form and Oxygen-Breathing Apparatus Voice Amplifiers to improve communications between fire fighting team members, shielding which will be affixed to bulkheads and to cradles containing the individual weapons on CVs, SSN-688 Class, Non-FBM ASs and at shore facilities, and chemical warfare directional detectors and chemical agent point detector system.

Other Shipboard Equipment (Miscellaneous) (P-1 Line Items 20, 21, 24, 27, 28, 30, 32, 34, 36, and 38)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$121,411	\$ 80,294

These funds provide for the procurement of Combat System Command and Control Switchboards, equipment which will enable the Navy to comply with Federal law and DOD environmental pollution control regulations, replacement batteries for all active submersible craft/submarines, procurement and positioning of special equipment for merchant ships to provide them with the capability to perform Naval auxiliary roles, provision of specialized equipment to assure reliable repair of electronic modules at selected shore, surface and subsurface fleet activities, acquisition of energy conservation systems, equipment and modifications developed through the Chief of Naval Operation's Energy Research and Development program for installation aboard ships in the Fleet; and modifications/replacements for all equipment which costs less than \$2,000,000 by category.

Reactor Plant Equipment (P-1 Line Items 39 and 40)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$272,874	\$283,196

The FY 1988 and 1989 requests provide for the procurement of replacement reactor cores, power units, and other reactor plant components and equipment. Replacement cores and power units are the assemblies of nuclear fuel and necessary associated structural and reactivity control equipment required for the periodic

refueling of nuclear powered ships. The procurement of these units is accomplished by the Department of Energy (DOE). The DOE has developed production lines within the civilian nuclear industry to fabricate these units. The funds requested are required to meet the refueling needs of the Navy in a manner most efficient to the government as recommended by the DOE. The reactor component line item includes the components, equipment, and material required to provide minimum support needed for the continued safe and reliable operations of naval nuclear propulsion plants. Funds are programmed for acquisition of replacement components for ship alterations and specialized equipment necessary for refueling of nuclear powered ships.

Ocean Engineering (P-1 Line Items 41-43)

	(\$ In Thousands)	
	<u>FY 1988</u>	<u>FY 1989</u>
	\$63,261	\$64,455

These programs provide for the procurement of equipment to support safety requirements at the existing depth capabilities and mission duration restriction imposed on the working diver, equipment to improve the Navy's diving capabilities and maintain sufficient levels of critical salvage items, and improved equipment developed as part of Swimmer Support Systems for Underwater Demolition Teams, SEAL Teams, and Inshore Undersea Warfare Groups. FY 1988 and FY 1989 funds will procure the MK-14 Push Pull System and the Deep Tool System, Ready on Pier Emergency Repair cart, diving boats; hardware which will increase the U.S. Navy Operational surface supported maximum diving depth from 300 to 450 feet and salvage equipment such as hydraulic pullers, stato anchors, puller beach gearlegs, and synthetic line, MK-VIII Swimmer delivery vehicles, deck shelters, SEAL team outfitting, laser target designator, reserve equipment, and underwater breathing apparatus.

Small Boats (P-1 Line Items 44)

	(\$ In Thousands)	
	<u>FY 1988</u>	<u>FY 1989</u>
	\$25,249	\$12,612

Standard boats procured with these funds will be used to fill new or revised allowances, to replace obsolete wooden boats now in service, and to replace boats of fiberglass or steel construction which are beyond economical repair. Types of boats to be procured with these funds include the 26' Motor Whaleboat, 14' Punt, 50' Workboat, 24' Explosive Ordnance Disposal (EOD) Craft, and 65' EOD Support Craft.

Training Equipment (P-1 Line Item 45 and 46)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$ 2,404	\$ 4,167

This program provides equipment for the support of initial training requirements developed through the Navy Training Plan process and sustaining training requirements developed by the Chief of Naval Education and Training. This funding will also procure equipment for the construction of a CG-47/DD 963 gas turbine operational facility.

Production Facilities Equipment (P-1 Line Items 47, 48, and 49)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$23,796	\$32,953

These programs provide for the procurement of replacement cranes for the floating dry dock at Norfolk Naval Shipyard, funding required for Industrial plant equipment and other shop equipment necessary to support Navy managed facilities; machine tools, industrial plant equipment and other plant equipment necessary to support the Fleet Operations Program and calibration equipment for the intermediate and organizational maintenance levels.

BUDGET ACTIVITY 2: COMMUNICATIONS AND ELECTRONIC EQUIPMENT
SUMMARY OF BUDGET PLAN
(In Thousands)

BUDGET PLAN
(Amounts For Procurement Actions Programmed)

	FY 1987		FY 1988	FY 1989		FY 1989	JUSTIFICATION
	ACTUAL	ESTIMATE	ESTIMATE	INITIAL	AMENDED	PAGE	
SHIP RADARS	124,635	132,587	164,619		135,252	20	
SHIP SONARS (SURFACE SHIPS)	85,266	171,613	245,735		228,857	21	
SHIP SONARS (SUBMARINES)	96,085	35,867	107,261		102,784	21	
SHIP SONARS (GENERAL SUPPORT)	47,407	33,612	37,018		33,889	22	
ANTI-SUBMARINE WARFARE ELECTRONICS (SURFACE SHIPS)	154,294	30,149	33,296		13,405	22	
ANTI-SUBMARINE WARFARE ELECTRONICS (SUBMARINE)	66,364	72,440	128,736		19,151	23	
ANTI-SUBMARINE WARFARE ELECTRONICS (AVIATION)	37,851	19,853	35,496		27,697	23	
ANTI-SUBMARINE WARFARE ELECTRONICS (SURVEILLANCE)	92,646	101,645	52,789		39,598	24	
ELECTRONIC WARFARE EQUIPMENT	148,014	90,328	205,458		90,657	24	
RECONNAISSANCE EQUIPMENT	39,618	100,056	121,794		13,566	25	
SUBMARINE SURVEILLANCE EQUIPMENT	26,886	54,132	38,559		29,049	25	
OTHER SHIPBOARD ELECTRONIC EQUIPMENT	298,848	208,472	303,429		240,310	26	
TRAINING EQUIPMENT	3,450	2,899	444		447	26	
AVIATION ELECTRONIC EQUIPMENT	98,031	88,675	85,453		37,126	27	
OTHER SHORE ELECTRONIC EQUIPMENT (COMM & CONTROL)	43,568	20,469	42,283		30,769	28	
OTHER SHORE ELECTRONIC EQUIPMENT (MISCELLANEOUS)	75,348	154,186	272,497		241,000	28	
SHIPBOARD COMMUNICATIONS	47,160	36,653	31,839		21,367	29	
SUBMARINE COMMUNICATIONS	74,868	14,398	60,693		22,114	30	
SATELLITE COMMUNICATIONS	27,331	35,778	51,547		28,441	30	
SHORE COMMUNICATIONS	60,300	42,929	39,387		22,913	31	
CRYPTOGRAPHIC EQUIPMENT	163,217	184,116	199,749		179,878	31	
CRYPTOLOGIC EQUIPMENT	11,747	12,092	18,307		14,566	32	
OTHER ELECTRONIC SUPPORT	7,073	2,837	2,950		2,428	33	

TOTAL BUDGET PLAN \$1,830,007 \$1,645,786 \$2,279,338 \$-704,074 \$1,575,264

BUDGET ACTIVITY 2: COMMUNICATIONS AND ELECTRONIC EQUIPMENT

(\$ In Thousands)
FY 1989 Amended Estimate \$1,575,264
FY 1989 Change \$- 704,074
FY 1989 Initial Estimate \$2,279,338
FY 1988 Estimate \$1,645,786
FY 1987 Actual \$1,830,007

Purpose and Scope of Work

Budget Activity 2 programs include the procurement of shipboard and shore communications and electronic equipment for the Active Fleet and training activities. Improved shipboard surface and air search radars are designed to enhance the military capability of combatant ships. Anti-Submarine Warfare Electronics equipment will furnish surface ships, submarines and special shore activities with equipment used for detection, tracking localization and classification of submarines. Special sonars are procured for employment in Fleet Ballistic Missile submarines. Also procured in this activity is equipment which will provide the Fleet with the capability of deceiving, intercepting, and analyzing airborne, electromagnetic and underwater radiation for the purpose of executing an effective surveillance and intelligence collection capability.

Justification of Funds:

Ship Radars (P-1 Line Items 50 - 56)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$132,587	\$135,252

These Ship Radar Procurements provide the Active Fleet with detection, tracking and identification equipment to meet the challenge of high speed attack capabilities of low-flyers, anti-ship missiles and modern aircraft. Specific radars and radar equipment improvements to be procured include the AN/SPS-67(V) radar (the modernized version of the AN/SPS-10 radar), which is the primary surface search radar in the Fleet (FY 1988 \$7.8 million; FY 1989 \$7.0 million); the AN/SPS-40 radar system improvements which are designed to increase detection capability in hostile, cluttered, or low-flyer threat environments through improved system availability and automation techniques (FY 1988 \$26.1 million; FY 1989 \$13.1 million); the AN/SPS-48 radar, a three-coordinate air search radar which has a primary function of providing target position data to a weapon system (FY 1988 \$45.8 million; FY 1989 \$46.3 million); the AN/SPS-49 radar, a narrow beamed, very long-range two dimensional, air search radar (FY 1988 \$16.5 million; FY 1989 \$16.1 million); the Integrated Automatic Detection and Tracking System (AN/SYS-()) which provides the capability to correlate contact data from up to

Ship Radars (P-1 Line Items) (Continued)

three radars, determine target tracks, and provide a single target output to the ship's command and decision system automatically (FY 1988 \$8.0 million; FY 1989 \$5.1 million); and the MK-23 Target Acquisition System, a rapid reaction, fully automatic, electronic counter-counter-measure capable radar system developed as the target acquisition system for the Improved Point Defense Surface Missile System (FY 1988 \$19.8 million; FY 1989 \$22.7 million). This request also includes funding for procurement of various radar support items (FY 1988 \$8.6 million; FY 1989 \$24.9 million).

Ship Sonars (Surface Ships) (P-1 Line Items 57 to 60 and 63)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$171,613	\$228,857

Funds requested for Surface Ship Sonars include \$10.9 million in FY 1988 for procurement of AN/SQS-26/53/53A sonar improvements. \$154.6 million in FY 1988 and \$218.4 million in FY 1989 provide for procurement of the AN/SQQ-89 Surface ASW Combat System. Beginning with FY 1988, the AN/SQQ-89 Surface ASW Combat System is being procured as an integrated system and includes funding previously budgeted as separate units. The line items consolidated into this new line item are the AN/SQS-53B/C, AN/SQS-19, MK 116 FCS and receivers and on-board processors previously budgeted in LAMPS MK III. \$6.1 million budgeted in FY 1988 and the \$10.5 million budgeted in FY 1989 provide for the procurement of emergency replacement windows and domes for the AN/SQS-26/53, AN/SQQ-23, AN/SQS-38 sonar systems.

Ship Sonars (Submarines) (P-1 Line Items 61, 62 and 66)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$35,867	\$102,784

These funds provide for continued procurement of AN/BQQ-5 modification kits required to upgrade previously procured and installed AN/BQQ-5 systems onboard SSN-637 and SSN 688 class submarines and maintenance trainers (FY 1988 \$25.9 million; FY 1989 \$91.6 million) In FY 1987, a competitive (one year with two one-year options) procurement of TB-16 arrays was awarded for ten units, with an additional 35 units planned for subsequent procurement (FY 1988 \$5.7 million; FY 1989 \$6.2 million). These funds also provide for procurement of AN/BQR-23 Improved Processors and Memory, AN/BQR-15 array modification shipalts, AN/BQQ-9 systems and various other alterations for installation on SSBN class submarines (FY 1988 \$4.3 million; FY 1989 \$5.0 million).

Ship Sonars (General Support) (P-1 Line Items 64 and 65)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$33,612	\$33,889

These funds procure upgrade equipment for the Transducer Repair Facilities, including Towed Line Array (TLA) plant equipment for the TB-16, AN/SQS-18A(V)1, and engineering changes for the AN/BQS-14 including the upgrade of the Forward Look portion of this sonar, and AN/BQS-15 (FY 1988 \$5.2 million; FY 1989 \$4.8 million). This request also includes resources to continue procurement of TR-317 transducers for the AN/BQS-11/12/13 and AN/BQQ-5 sonars for use on SSN-594, SSN-637 and SSN-688 class submarines; new TR-313 transducers for the AN/SQS-26 Sonar; and Electronic Scanning Switches required to support replacement of unreliable mechanical switches with electronic switches on both surface ships and submarines (FY 1988 \$28.5 million; FY 1989 \$29.1 million).

Anti-Submarine Warfare Electronics (Surface Ships) (P-1 Line Items 68 and 72 - 75)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$30,149	\$13,405

This funding provides for the procurement and support of major ASW electronics systems for installation on deploying ships and those in the Naval Reserve Force. This request includes procurement of AN/SLO-25 (NIXIE) engineering field change kits in FY 1988 and FY 1989, (FY 1988 \$10.0 million; FY 1989 \$6.1 million) AN/SQR-17 performance improvements and AN/SKR-4 Data Link Modifications required to receive the new DIFAR/DICASS sonobuoy frequencies (FY 1988 \$9.3 million; FY 1989 \$6.1 million); improvements to increase the service life of the AN/SQR-15 Towed Array System (FY 1988 \$.7 million; FY 1989 \$.9 million); and procurement of kits to upgrade the AN/SQR-18 systems to the AN/SQR-18A(V)A configuration and continued procurement in FY 1988 and FY 1989 of the AN/SQR-18(V) critical angle tow systems which employ the AN/SQR-19 hoist for installation non-variable depth sonar ships (FY 1988 \$10.2 million; FY 1989 \$.3 million).

Anti-Submarine Warfare Electronics (Submarine) (P-1 Line Items 67, 69 and 70)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$72,440	\$19,151

The request includes \$29.3 million in FY 1988 and \$18.8 million in FY 1989 for Submarine Acoustic Warfare Systems (SAWS) which will provide an enhanced survival capability for submarines to use against enemy torpedoes and a means to reduce the effectiveness of enemy sensors. These funds also provide for procurement of AN/FLR-14/BQR-15 Interface Engineering Changes, procurement of the Acoustic Device Countermeasure (ADC) MK-1, MK 2 NAE Beacons (MK3). AN/BQH-7 engineering changes and expendable probes, AN/VLR-9/12 engineering changes and, commencing in FY 1988, the Countermeasure Set Acoustic (CSA) Mk 2 Mod 0 for SSBNs and CSA Mk MOD 1 for SSN-637 class submarines, AIR display engineering changes, ADC MK 3, associated SHIPALTS/ECPS and production support. \$42.8 million budgeted in FY 1988 provides for the procurement of team trainers, Intermediate Maintenance Activities (IMAs) equipment and module screening and repair activities equipment to support the AN/BSY-1 Combat Control and Acoustic Set. In addition, \$.4 million in FY 1988 and \$.4 million in FY 1989 is requested for the Acoustic Communications system, a multi-phase program which provides improved tactical acoustic communications systems for the three primary Anti-Submarine Warfare platforms (aircraft, surface ships, and submarines).

Anti-Submarine Warfare Electronics (Aviation)(P-1 Line Items 77 and 78)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$19,853	\$27,697

These funds will procure reliability and operability improvements to tactical ADP equipment and will provide for continued production of UYQ-21 displays in FY 1988 and FY 1989 as well as continued procurement of improvements to the Acoustic Analysis subsystem and UYQ-21 displays. All of these are components of the Carrier Asw Module of the Carrier Combat Direction System (FY 1988 \$16.0 million; FY 1989 \$5.7 million). The request also includes resources to support procurement of various equipments which support the ASW Operations Center (ASWOCs) which is the land based terminal for ASW area commanders in the overall Navy Command Control System (NCCS). (FY 1988 \$3.9 million; FY 1989 \$21.9 million).

Anti-Submarine Warfare Electronics (Surveillance) (P-1 Line Items 71 and 76)

(\$ In Thousands)

<u>FY 1988</u>	<u>FY 1989</u>
\$101,645	\$39,598

These funds will support both the Sound Surveillance System (SOSUS) and the Surveillance Towed Array Sensor (SURTASS) programs. Specific items to be procured in SOSUS include ship improvement equipment, cable replacement and engineering, trainer hardware and configuration changes, searchlight processing, cable and shore electronics, (FY 1988 \$54.3 million; FY 1989 \$30.3 million). The funds requested in FY 1988 and FY 1989 for SURTASS will procure shore electronic unit, back-up arrays, high ambient array kits, field changes modifications, and equipment for a second trainer and provide for procurement of special project hardware. (\$47.3 million in FY 1988; \$9.3 million in FY 1989).

Electronic Warfare Equipment (P-1 Line Items 79 - 87)

(\$ In Thousands)

<u>FY 1988</u>	<u>FY 1989</u>
\$90,328	\$90,657

The FY 1988 and FY 1989 Electronic Warfare procurement provides the Fleet with systems that have the capability of detecting overt electromagnetic emissions through passive means. Specific systems to be procured include the AN/SLO-32, a family of modular shipborne electronic warfare equipments to be installed in most combatants and auxiliaries in the surface Navy. \$64.2 million in FY 1988 will procure three AN/SLO-32(V)3 systems and Electronic Warfare Improvements as follows: Direction Finding (DF) Accuracy Improvement (Band 1), Electronic Support Measures (ESM) Sensitivity Improvements (Band 1 and 3), Band 3 ESM HAT, Antenna Enclosure Improvements, and Electromagnetic Interference (EMI) Improvements. \$71.0 million in FY 1989 will procure six AN/SLO-32(V)3 systems, and EV Improvements. The AN/WLR-1H is a tactical ESM receiver for use on-board SSN and CV/CVN class ships. \$5.5 million budgeted in FY 1988 and \$6.2 million budgeted in FY 1989 provide for the procurement of field change kits, depot upgrades, engineering change proposals, and direction finding (DF) Antenna Subsystems for CV/CVN class ships. The Fleet Electronic Warfare Support Group (FEWSG) provides a realistic air, surface, and subsurface threat environment for Fleet Training and support of Operational Test And Evaluation of Electronic Systems. \$.8 million budgeted in FY 1988 provides for the procurement of simulators for AN/ULQ-13(V) vans. \$7.5 million budgeted in FY 1988 is for procurement of Scenario Generators, High Frequency (HF) communications Simulators, RADAR Jammer II Buoys, and E/F Band Simulators. \$4.9 million budgeted in FY 1988 and \$4.8 million budgeted in FY 1989 are for procurement of AN/ULQ-16 Video Processors and Reprogrammable Library terminals/processors/printers. \$7.4 million budgeted in

Electronic Warfare Equipment (P-1 Line Items 79 - 87) (Continued)

FY 1988 and \$5.6 million budgeted in FY 1989 are for procurement of Chaff Buoys, Active Electronic Buoys (AEB), and DLP-1/2 Buoys. The AN/WLR-8(V)2 is a tactical Electronic Warfare Support Measures receiver for the SSN 688 class submarines providing intercept, surveillance and signal parameter analysis of the electromagnetic signals for threat warning. \$3.0 million budgeted in FY 1989 provides for the procurement of AN/WLR-8 field change kits.

Reconnaissance Equipment (P-1 Line Items 88 - 92)

	(\$ In Thousands)	
	<u>FY 1988</u>	<u>FY 1989</u>
	\$100,056	\$13,566

This funding will provide the tactical capability to detect, locate and identify hostile targets at long range and to input this information into the ship's Tactical Data Systems. \$27.8 million budgeted in FY 1988 and \$0.7 million budgeted in FY 1989 is for procurement of OUTBOARD Phase I and OUTBOARD Phase II suites and modification kits. \$52.7 million budgeted in FY 1988 is for procurement of Combat Direction Finding Systems. \$9.5 million budgeted in FY 1988 and \$4.7 million budgeted in FY 1989 are for procurement of Combat Cryptologic Support Consoles (CCSC). \$10.1 million budgeted in FY 1988 and \$8.1 million in FY 1989 are for procurement of equipment for intelligence centers for the Aircraft Carriers (CV) and Fleet Imager Support Terminals (FIST).

Submarine Surveillance Equipment (P-1 Line Items 93 - 96)

	(\$ In Thousands)	
	<u>FY 1988</u>	<u>FY 1989</u>
	\$54,132	\$29,049

The funding requested provides for special equipment in support of submarine surveillance operations. \$9.9 million budgeted in FY 1988 and \$0.7 million budgeted in FY 1989 are for procurement of automatic test equipment, repair test stations, and test program sets for the AN/WLQ-4(V) system level overhaul depot facility. \$18.8 million budgeted in FY 1988 and \$26.9 million budgeted in FY 1989 are for procurement of modifications to the existing AN/WLQ-4(V) installed on the SSN-637 Class submarines and Mini-N-Suite signal intelligence augmentation modification kits, both installed on the SSN-637 Class submarines. \$22.5 million budgeted in FY 1988 and \$0.9 million budgeted in FY 1989 are for procurement of AN/BLD-1 direction finding systems and support which will provide improved performance on SSN-688 Class submarines against long range targets. \$2.9 million budgeted in FY 1988 and \$0.6 million in FY 1989 are for the procurement of unique equipments that are maintained in limited quantities at Submarine Surveillance Equipment Program Support Facilities for use onboard nuclear attack submarines as well as for procurement of improved power supplies for AN/WLR-8(V)2 systems.

Other Shipboard Electronic Equipment (P-1 Line Items 97 - 105)

	(\$ In Thousands)
<u>FY 1988</u>	<u>FY 1989</u>
\$208,472	\$240,310

\$88.0 million budgeted in FY 1988 and \$111.3 million budgeted in FY 1989 provides for procurement of improvements to the Navy Tactical Data System (NTDS) which permits major warships rapid integration of ship sensor information, analysis and display of tactical information and designation of weapon systems to force threats. \$77.7 million budgeted in FY 1988 and \$92.6 million budgeted in FY 1989 are for electronic equipment for the TRIDENT Training Facility (TRITRAFAC). \$3.3 million budgeted in FY 1988 and \$1.3 million budgeted in FY 1989 are for procurement of state-of-the-art OMEGA receiving sets (LTN-211). This request also includes resources to support procurement of equipment for the Armed Forces Radio and Television Service (AFRTS) which operates radio and television outlets for the shipboard information training and entertainment of United States servicemen and their dependents at sea or on shore (FY 1988 \$5.3 million; FY 1989 \$6.3 million). \$7.1 million budgeted in FY 1988 and \$4.8 million budgeted in FY 1989 are for procurement of mine hunting sonars for Minesweeping Boats (MSBs), route survey sonars for Oeangoing Minesweepers (MSOs), and precise navigation equipment. \$13.2 million budgeted in FY 1988 and \$17.4 million budgeted in FY 1989 are for procurement of shipboard and manpack receiver equipment for the NAVSTAR Global Positioning System (GPS), a joint service program which will provide a continuous, world-wide three-dimensional positioning/navigation capability to the operational forces. \$.8 million budgeted in FY 1988 and \$1.1 million budgeted in FY 1989 are for procurement of the AN/USQ-74, a Link II Data Terminal Set. \$13.0 million budgeted in FY 1988 and \$5.4 million budgeted in FY 1989 are for procurement of Tactical Flag Command Centers (TFCC) which support the tactical commander by receiving and displaying information relative to the current tactical situation.

Training Equipment (P-1 Line Items 106 and 107)

	(\$ In Thousands)
<u>FY 1988</u>	<u>FY 1989</u>
\$2,899	\$ 447

The FY 1988 and FY 1989 requests are for procurement of equipment to satisfy initial training requirements developed through the Navy Training Plan process which will give the Navy the capability to train officer, operator and maintenance personnel on new or significantly modified equipment for which no Navy training is currently available. It also satisfies requirements to expand the Navy training capability on existing equipment to meet heavier needs for trained personnel in the Fleet (FY 1988 \$2.9 million; FY 1989 \$0.4 million).

Aviation Electronic Equipment (P-1 Line Items 108 - 116)

(\$ In Thousands)
FY 1988 FY 1989
\$88,675 \$37,126

The FY 1988 and FY 1989 request for Aviation Electronic Equipment provides for procurement of electronic equipment to support Naval and Marine aviation shore activities, shipboard aircraft control equipment and secure identification systems. The Marine Air Traffic Control and Landing System (MATCAL) will provide a fully automatic air traffic control and landing system. \$21.6 million budgeted in FY 1988 and \$10.1 million budgeted in FY 1989 are for the procurement of MATCAL air traffic control subsystems. The Shipboard Air Traffic Control (SATC) program will improve our traffic control operations in the Fleet. SATC funding includes \$4.6 million in FY 1988 and \$1.3 million budgeted in FY 1989 for procurement of AN/SPN-43 solid-state radar field changes, AN/UYK-44 computers to replace AN/UYK-20s in the Carrier Air Traffic Control Centers-Direct Altitude Identification Readout (CATCC-DAIR). \$1.7 million budgeted in FY 1988 and \$1.3 million budgeted in FY 1989 for Automatic Carrier Landing Systems (ACLS) will procure AN/SPN-35, AN/SPN-41 and AN/SPN-42A improvements and an AN/SPN-42/46 Software Support System. \$4.8 million budgeted in FY 1988 and \$2.8 million budgeted in FY 1989 are for procurement of Tactical Air Navigation (TACAN) equipment for Navy ships such as OE-273(V) URN antennas and AN/URN-25 Beacon transmitters to reduce current shortages of this vital, short-range navigation equipment. \$16.7 million budgeted in FY 1988 and \$7.5 million budgeted in FY 1989 are for procurement of various equipments to improve the MK XII Identification Friend or Foe air traffic control radar system used as a secure identification system on all major combatant ships, selected auxiliaries, patrol craft and selected Coast Guard ships. Major items planned for procurement include AN/UPH MK XII test sets, SN-501 Pulse Generators, and various MK II Air Traffic Control Identification Friend or Foe Mode IV System (AIMS) improvements, including AN/UPA-59 standard synchro interfaces and enhanced reliability and maintainability, to insure that all systems are properly interfaced and capable of optimal operation. The Air Station Support equipment program addresses air traffic control requirements and enhances flight safety at Navy and Marine Corps Air Stations. The budget request includes \$6.6 million in FY 1988 and \$4.5 million in FY 1989 for Fiber Optic Cable systems, AN/UPM-137A test set replacements, AN/FSA OA7621 replacement for existing communications control systems and Naval Air Facility Aleutian Island navigational aids to ensure safe conduct of air traffic at and around Amchitka Island. \$1.2 million budgeted in FY 1988 and \$3 million budgeted in FY 1989 are for procurement of Open Planar Array Antennas for Operational Radar Air Traffic Control Facilities. This equipment will prevent the loss of radar targets due to multipath radiation from runways and surrounding aprons thereby reducing the potential for mid-air/terrain collisions. \$7.5 million is budgeted in FY 1989 for procurement of Microwave Landing Systems (MLS). The MLS is a joint DOT/DOD/NASA project to create a common civil/military precision landing system which will overcome the limitations of existing landing systems.

Aviation Electronic Equipment (P-1 Line Items 108 - 116) (Continued)

\$31.4 million budgeted in FY 1988 and \$1.8 million budgeted in FY 1989 for Fleet Area Control and Surveillance Facilities (FACSFAC) program will procure FACSFAC Air Control Tracking System, Radar Beacon Digitizer, and Air Search Radar field changes and capability enhancements, increased hardware and software maintenance capability and upgrade of the Joint Reconnaissance Control Center.

Other Shore Electronic Equipment (Command and Control) (P-1 Line Items 117 - 120)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$20,469	\$30,769

These funds will procure electronic equipment for replacement of obsolete equipment of the Navy Space Surveillance System, to support unalerted real-time detection of non-radiating satellites and other objects which pass through multistatic continuous wave radar beams (FY 1988, \$9.0 million; FY 1989, \$11.5 million). This request also includes resources to support the Space System Processing System, procurement of special computer hardware and software necessary to improve information processing and generation of highly classified reports for use by Operational Navy Command (FY 1988, \$2.2 million; FY 1989, \$2.0 million). The Navy Command and Control System (NCS) Ashore program (\$9.4 million in FY 1988 and \$15.7 million in FY 1989) provides for the coordination and integration of shore based command centers and their respective systems; resources will procure baseline command center upgrades, communications hardware, satellite communications equipment, correlation upgrade equipment, replacement equipments, and formatted message origination systems. \$1.6 million budgeted in FY 1989 also provides for procurement of mini computers for vans using upgraded software for the Multiple Unit Link Eleven Test and Operational Training System (MULTOTS), a transportable system to validate Link II interoperability on Tactical Data Systems equipped ships and aircraft.

Other Shore Electronic Equipment (Miscellaneous) (P-1 Line Items 121 - 127)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$154,186	\$241,000

The \$7.4 million budgeted in FY 1988 and \$6.3 million budgeted in FY 1989 for the Radiation Detection Indication and Computation Equipment Program (RADIAC) procures instruments to detect and measure nuclear and ionizing radiation and convert these measurements into meaningful terms so that Navy personnel can adequately control personnel exposure to those radiations. Funds in the amount of \$19.0 million in FY 1988 and \$26.6 million in FY 1989 are for the procurement of General Purpose Electronic Test Equipment (GPETE) for initial

Other Shore Electronic Equipment (Miscellaneous) (P-1 Line Items 121 - 127) (Continued)

outfitting of new or modified Fleet and shore electronic equipment. Funding of \$5.8 million in FY 1988 and \$3.6 million in FY 1989 is for procurement of equipment required for the Integrated Combat System Test Facility (ICSTF), located at San Diego, California, the only permanent Navy test facility for integrated shipboard combat system certification, and for continuation of engineering for modification of combat systems in existing ships. Funding of \$7.0 million in FY 1988 and \$7.6 million in FY 1989 is for procurement of a new generation of signal generators and oscillator calibrators capable of calibrating up to 18 GHz to support test equipment for FFG-7 and DD-963 class ships and TRIDENT submarines and up to 40 GHz to support test equipment for SSN-637 and SSN-688 class submarines. Funding of \$8.6 million in FY 1988 and \$7.0 million in FY 1989 is for procurement of emergency field change kits and hardware devices to solve Electromagnetic Interference (EMI) problems in electronic systems and equipments throughout the operating forces. Funding of \$88.1 million in FY 1988 and \$163.6 million in FY 1989 is for procurement of three (one in FY 1988, two in FY 1989) wide area surveillance systems (Over the Horizon Radars) to provide targeting information to tactical commanders afloat. The FY 1988 and FY 1989 requests also include resources to support procurement of replacements for deteriorating and obsolete management equipment, for facilitization of the AN/UUK-43 and 44 depots and for procurement of AN/UYS-1 and 2 hardware (FY 1988 \$18.3 million; FY 1989 \$26.5 million).

Shipboard Communications Equipment (P-1 Line Items 128 - 135)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$36,653	\$21,367

Funding of \$3.8 million in FY 1988 and \$9 million in FY 1989 is for the High Frequency (HF) Shipboard Communications program to update the capabilities of the current HF Communications Systems. FY 1988 and FY 1989 funds will procure AN/URT-23 transmitters, AN/TRQ-35 HF Sounders, and the R1051. Funding of \$5.2 million in FY 1988 and \$2.3 million in FY 1989 is for procurement of AN/VSC-3 (LOS) radios, Ultra High Frequency (UHF) transceivers which provide secure tactical voice communications aboard line-of-sight ships and OA-9123 transceiver multicoupler which replaces obsolete equipment. Funds in the amount of \$4.7 million in FY 1988 and \$5.6 million in FY 1989 are for procurement of portable specialized radios to support the unique air, sea and land environment of the Explosive Ordnance Disposal (EOD) mission as well as funding for modernization of Naval Beach/Group Construction Force Communications/Tactical Air Contract Squadron (TACRONS) to remain compatible with the Fleet Marine Force and the Amphibious Surface Fleet. Funding of \$7.7 million in FY 1988 provides portable radios to support the Navy Special Warfare Mission. Funding of \$6.9 million in FY 1988 and \$6.1 million in FY 1989 is for procurement of communication systems to automate message processing and distribution functions aboard ship. Funding of \$5.3 million in FY 1988 and \$3.5 million in FY 1989 is for procurement of multicoupler interface components, antennas and various other items for the integration and completion of communication suites aboard ship. Finally, funding of \$3.0 million in FY 1988 and \$3.0 million in FY 1989 is for procurement of upgraded communication packages for flag configured logistic support ships and equipment for the Military Sealift Command/Ready Reserve Fleet (MSC/RRF).

Submarine Communications Equipment (P-1 Line Items 136 - 142)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$14,398	\$22,114

These resources will procure communications equipment for Command and Control of the Fleet Ballistic Missile (FBM) and Attack Submarine Forces. Funds in the amount of \$1.1 million in FY 1988 and \$4.3 million in FY 1989 are for procurement of Low Frequency/Very Low Frequency (LF/VLF) communications hardware, upgrades and high efficiency amplifiers. Funding of \$.8 million in FY 1988 and \$3.9 million in FY 1989 is for procurement of Erasable Program Only Memory loaders, printers for the LF/VLF test bed and commencement of an upgrade program for the Software Support Activity (SSA) and the Integrated Submarine Automated Broadcast Processing System. These requirements are part of the VERDIN VLF communications system. Funding of \$.5 million in FY 1988 and \$2.5 million in FY 1989 is for procurement of equipment to enhance the capabilities of the existing SSN-688 class radio room. Funding of \$12.0 million in FY 1988 and \$11.3 million in FY 1989 is for procurement of submarine communications equipment consisting of antennas, mast assemblies and buoyant cable antennas.

Satellite Communications Equipment (P-1 Line Items 143 - 145)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$35,778	\$28,441

FY 1988 and FY 1989 Satellite Communications procurements provide for adequate command, control and communications with ships and aircraft through the Ultra High Frequency (UHF) and Super High Frequency (SHF) bands. Funding of \$35.8 million in FY 1988 and \$28.4 million in FY 1989 is for procurement of Demand Assignment Multiple Access (DAMA) systems, Officer in Tactical Command Information Exchange Subsystems equipment, Tactical Data Information Exchange Subsystems equipment, Satellite Communications equipment for submarines operating in the arctic regions, Submarine Satellite Information Exchange Subsystems Combat Direction Finding Communications equipment, Front End Processors for the Navy Modular Automated Communications Systems (NAVMACS) and modification kits for upgrading the Defense Satellite Communications terminals, AN/MSC-64 Navy Terminals, AN/TSC-96 terminals and equipment operating with the new KG-84C cryptologic equipment.

Shore Communications Equipment (P-1 Line Items 146 - 156)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$42,929	\$22,913

Funding of \$4.5 million budgeted in FY 1988 and \$2.9 million budgeted in FY 1989 represents the Navy share of a Joint Service modernization of the Joint Chiefs of Staff (JCS) Communications equipment. Funding of \$1.1 million in FY 1988 and \$0.5 million in FY 1989 is for procurement of emergency generators and Uninterruptable Power Systems for installation at various Naval Communication activities worldwide. Funding of \$12.8 million in FY 1988 and \$3.0 million in FY 1989 is for procurement of equipment and field change kits to replace obsolete High Frequency (HF) assets used to enable Naval Telecommunications to be viable in the absence of satellite communications. Funding in the amount of \$1.3 million in FY 1988 and \$1.3 million in FY 1989 is for procurement of manual suite upgrades which will provide functional standardization of Technical Control Facilities. Funding of \$1.9 million in FY 1988 and \$3.0 million in FY 1989 is for procurement of AN/FCC-100's which will convert the worldwide Defense Communications system to all digital terminals. Funding of \$2.3 million in FY 1988 and \$2.0 million in FY 1989 is for procurement of replacement and upgrade of microwave facilities in the worldwide Defense Communication System (DCS). Funding of \$10.2 million in FY 1988 and \$7.1 million in FY 1989 is for procurement of Local Digital Message Exchange terminals, and Remote Automated Terminals. Funding of \$0.5 million in FY 1988 and \$1.1 million in FY 1989 is for procurement of various communications equipment which supports the Worldwide Military Command and Control System (WVMCCS). Funding of \$7.8 million in FY 1988 and \$2.1 million in FY 1989 is for procurement of low dollar value items to support numerous Naval Shore Telecommunications programs. Funding of \$0.5 million in FY 1988 also procures various items supporting the Special Operations Forces mission.

Cryptographic Equipment (P-1 Line Items 157 - 171)

(In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$184,116	\$179,878

The FY 1988 and FY 1989 request will procure sufficient secure voice equipment to provide secure voice protection to an additional share of Navy's identified critical narrowband/wideband secure voice requirements. Funding of \$7.8 million in FY 1988 and \$4.6 million in FY 1989 is for procurement of the Single Audio System (SAS), a system where all shipboard radio voice subscribers have access to either a plain or cryptographically covered circuit, on an as required and programmed basis. The SAS will provide manual voice switching suites for smaller ships and an automated switching suite for larger ships. Both switching systems utilize a switch

Cryptographic Equipment (P-1 Line Items 157 - 171) (Continued)

which is modularly expandable to suit the needs of various platforms. Funding of \$37.1 million in FY 1988 and \$25.3 million in FY 1989 is for procurement of TSEC/KY-71/72 equipments which will provide subscriber expansion and improvement over the secure voice capability presently provided by AUTOSEVOCOM I. New features include digital transmission, end to end secure voice with conferencing, better voice quality, and lower bit rate. Funding of \$51.5 million in FY 1988 and \$36.0 million in FY 1989 is included for procurement of the TSEC/KG-84, a general purpose key generator capable of satisfying a wide variety of requirements and is designed to serve as the future standard link encryption device for low to medium speed record and/or data systems. Funding of \$5.0 million in FY 1988 and \$20.7 million in FY 1989 is requested for TSEC/KY-57/58, a wideband, push-to-talk (half-duplex) tactical speech security system for use in VHF/UHF communications. Funding of \$38.3 million in FY 1988 and \$47.5 million in FY 1989 is for procurement of the TSEC/KYV-5, the Cryptographic module for the Advance Narrowband Digital Voice Terminal (ANDVT) which satisfies requirements for secure narrowband communications which cannot be met by existing equipment. Funding of \$1.6 million in FY 1988 and \$2.1 million in FY 1989 is for procurement of the TSEC/KG-81, a full-duplex, high speed digital data encryption system for bulk encryption of the most vital DCS links. Funding of \$1.3 million in FY 1989 is for procurement of Blacker Cryptographic material which provides multilevel security capabilities to support Command and Control systems. Funding of \$3.8 million in FY 1989 is for procurement of the TSEC/KG-58/KGV-6, required to secure Marine Corps Ultra High Frequency Multi-Channel Communications in the Position Location and Reporting System (PLRS). Funding of \$4.1 million in FY 1988 and \$6.8 million in FY 1989 is for procurement of the TSEC/KGV-11, a general purpose communications security module designed for use with wide spectrum communications. Funding of \$15.1 million in FY 1988 and \$14.3 million in FY 1989 is for procurement of items of relatively low dollar value to meet special operational requirements. Funding of \$.7 million also procures equipment supporting the Special Operations Forces mission. Funding of \$21.9 million in FY 1988 and \$16.4 million in FY 1989 is for procurement of COMSEC devices for the TRI-TAC switches. Funding of \$.4 million in FY 1988 and \$.4 million in FY 1989 is for procurement of the TEMPEST test equipment. Funding of \$.6 million in FY 1988 and \$.5 million in FY 1989 is for procurement of the KYK-13 battery operated transfer devices and the KOI-18 which is a lightweight battery operated device for reading light-level punched type.

Cryptologic Equipment (P-1 Line Items 173 - 178)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$12,092	\$14,566

These resources provide equipment to support Tactical Cryptologic missions and functions. Funding of \$2.0 million in FY 1988 and \$2.6 million in FY 1989 continues procurement of the Carry-on Special Intelligence Communications equipments and the Special Intelligence Ship-Shore Teletype replacement equipments. Funding of \$4.1 million in FY 1988 and \$5.7 million in FY 1989 initiates and continues procurement of Carry-on Tactical Cryptologic ancillaries, equipment and systems for the Ships Signals Exploitation Space aboard U.S.

Cryptologic Equipment (P-1 Line Items 173 - 178) (Continued)

Navy combatants. Funding of \$3.0 million in FY 1988 \$2.0 million in FY 1989 continues procurement of various replacement and cryptologic training equipments for use at U.S. Navy shore sites, training commands, and aboard U.S. Navy combatants. Funding of \$1.3 million in FY 1988 and \$1.9 million in FY 1989 continues procurement of cryptologic systems for use at U.S. Navy ashore reserve training sites. Funding of \$.4 million in FY 1988 and \$1.0 in FY 1989 continues procurement of cryptologic systems for use at U.S. Navy ashore reserve training sites to ensure that cryptologic technicians maintain proficiency in various languages and manual Morse. Funding of \$1.3 million in FY 1988 and \$1.3 million in FY 1989 continues procurement of cryptologic support systems to be installed at various worldwide shore sites which are used in conjunction with afloat cryptologic systems to ensure that accurate tactical data bases are maintained.

Other Electronic Support (P-1 Line Items 179 - 181)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$2,837	\$2,428

This funding will procure critical repairable equipments in support of planned maintenance schedules and corrective maintenance actions for the FFG (LO-MIX) and DD (Engineering Operation Cycle) Class ships, dedicated test stations, industrial plant equipment, and test jigs and fixtures for selected depot rework facilities in support of the new maintenance strategies for the FFG and DD (EOC) Class ships (FY 1988 \$2.1 million; FY 1989 \$1.8 million). In addition, funding of \$.7 million in FY 1988 and \$.6 million in FY 1989 is for procurement of war reserve communication equipment, RADIAC and ancillary equipments for Advanced Base Functional Components which are planned groupings of personnel, material and equipment tailored to support overseas base deployment.

Budget Activity 3: AVIATION SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(In Thousands)

Budget Plan
(Amounts for Procurement Actions Programmed)

	<u>FY 1987</u> <u>ACTUAL</u>	<u>FY 1988</u> <u>ESTIMATE</u>	<u>FY 1989</u> <u>INITIAL</u> <u>ESTIMATE</u>	<u>FY 1989</u> <u>CHANGE</u>	<u>FY 1989</u> <u>AMENDED</u> <u>ESTIMATE</u>	<u>JUSTIFICATION</u> <u>PAGE</u>
SONOBUOYS	\$181,997	\$165,235	\$138,355	-34,976	103,379	35
GENERAL PURPOSE BOMBS	166,252	162,512	193,476	-114,023	79,453	36
AIR LAUNCHED ROCKETS	17,894	47,973	50,024	-31,293	18,731	37
AIRCRAFT MACHINE GUN						
AMMUNITION	10,961	14,435	17,368	-4,363	13,005	37
BIGEYE CHEMICAL WEAPON	19,802	0	9,937	-37	9,900	38
GATOR	24,335	6,400	20,869	-7,505	13,364	38
MISCELLANEOUS ORDNANCE						
AND SUPPORT	74,864	51,197	49,630	-13,071	36,559	38
WEAPONS RANGE SUPPORT						
EQUIPMENT	48,327	46,829	69,740	-12,577	57,163	39
AIRCRAFT LAUNCHING AND						
RECOVERY EQUIPMENT	31,601	54,641	36,114	-6,597	29,517	40
AIRCRAFT REARMING						
EQUIPMENT	37,386	35,277	18,440	-6,576	11,864	40
AIRBORNE MINE COUNTER-						
MEASURES EQUIPMENT	27,168	15,940	26,020	-3,432	22,588	41
LAMPS MK III SHIPBOARD						
EQUIPMENT	26,141	22,587	15,225	-7,045	8,180	41
OTHER AVIATION SUPPORT	57,089	46,678	94,597	-29,050	65,547	42
TOTAL BUDGET PLAN	\$723,817	\$669,704	\$739,795	\$-270,545	\$469,250	

Budget Activity 3: AVIATION SUPPORT EQUIPMENT

	(\$ in Thousands)
FY 1989 Amended Estimate	\$469,250
FY 1989 Change	\$-270,545
FY 1989 Initial Estimate	\$739,795
FY 1988 Estimate	\$669,704
FY 1987 Actual	\$723,817

Purpose and Scope of Work:

Budget Activity 3 finances the procurement of all air-delivered ordnance required for the Navy forces and Marine Air Wings, except guided missiles funded under the Weapons Procurement, Navy (WPN) appropriation. It also includes air launched anti-submarine warfare (ASW) sensors, general support equipment associated with aircraft and other aviation support which includes ground electronics equipment, aircraft launching and retrieving equipment, photographic equipment, reconnaissance and electronic warfare processing and analysis equipment, aircraft rearming equipment, airborne mine and expendable countermeasure devices and miscellaneous other categories.

Justification of Funds:

Sonobuoys (Includes P-1 Line Item Nos. 182-188).

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$165,235	\$103,379

The FY 1988 and FY 1989 Sonobuoy procurement has been computed considering the number of ASW carrier air groups and shore based ASW patrol squadrons to be supported, actual and planned peacetime usage for these forces and the necessary training allowance requirements. User aircraft include the S-3A, P-3, SH-2D, and SH-3 series with the SH-60F also being built with sonobuoy launch capability. Specific sonobuoys to be procured in FY 1988 and FY 1989 include the AN/SSQ-36 Bathythermograph Sonobuoy, an air-dropped bathythermograph transmitting set that provides a vertical water temperature profile (FY 1988 \$4.1 million; FY 1989 \$4.4 million); the AN/SSQ-53 (DIFAR), a passive directional sonobuoy used during the target

localization phase of the Air ASW Mission (FY 1988 \$73.7 million; FY 1989 \$47.7 million); the AN/SSQ-57 (Special Purpose) Sonobuoy, a calibrated AN/SSQ-41 sonobuoy used to obtain acoustic and sound pressure level data and to measure ambient noise (FY 1988 \$11.3 million; FY 1989 \$2.8 million); the AN/SSQ-62 (DICASS) Sonobuoy, an active directional sonobuoy (FY 1988 \$42.8 million; FY 1989 \$23.0 million), and the AN/SSQ-77 (VLAD) Sonobuoy, a passive directional sonobuoy utilizing a line array of omni-directional hydrophones and a DIFAR element. The directional beam patterns are formed from the line array to discriminate against noise and the DIFAR enables determination of the azimuthal bearing of detected sound (FY 1988 \$33.4 million; FY 1989 \$23.6 million). The FY 1989 request also includes funding to support procurement of Signal Underwater Sound (SUS) devices which are expendable, high energy acoustic sources used for many applications including bottom mapping, long range signal transmission and position fixing (FY 1989 \$1.9 million).

General Purpose Bombs (P-1 Line Item Nos. #189-193, 198).

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
162,512	79,453

These funds will procure the MK 83 thermally protected bomb, the BSU-85 Air Inflatable Retarder Fin for the MK-83 G.P. Bomb, the FMU-139/B electric fuze used on MK-80 series G.P. bombs, the MK 15/BSU-86 retard fin and the BSU-33 high drag mode fin both for the MK-92 G.P. Bomb. The \$23.7 million FY 1988 is for procurement of BLU-110/B explosive fill for the MK 83 G.P. Bomb. In FY 1988 \$8.1 million and in FY 1989 \$6.7 million will procure the BSU-85 Air Inflatable Retarder Fir. \$11.9 million in FY 1988 and \$9.6 million in FY 1989 will procure the FMU-139/B electric fuze. The remaining \$20.3 million in FY 1988 and \$15.0 million in FY 1989 are requested to procure various types of fins for these G.P. Bombs as well as miscellaneous component parts and production support. \$38.8 million in FY 1988 is for the procurement of SKIPPER, a Rocket Powered Standoff Laser Guided MK 83 Bomb. \$3.8 million in FY 1988 is for Paveway II Laser Guided Bomb Kits, which will be used to provide terminal guidance to the MK-82 general purpose bomb. \$10.7 million in FY 1988 and \$4.3 million in FY 1989 are for VALLEYE, an air-to-surface TV-guided glide bomb. \$8.3 million in FY 1988 is for procurement of FMU-140 proximity fuzes to retrofit the existing inventory of ROCKEYE II MK 20 500-lb, free-fall cluster bombs as well as production support funds. The \$.9 million in FY 1989 is for Rockeye II MK 20 production support. The Practice Bombs procurement is \$8.0 million in FY 1988 and \$15.1 million in FY 1989 for the MK-76 and BDU-48 Practice Bombs, \$20.1 million in FY 1988 and \$4.9 million in FY 1989 for the MK-80 series inert bomb, \$1.0 million in FY 1988 and \$0.7 million in FY 1989 for Cartridge Signal Units (CXU-3 smoke signal), \$3.4 million in FY 1988, \$3.4 million in FY 1989 for ROCKEYE Practice Bombs, \$14.5 million in FY 1989 for the Laser Guided Training Round and \$4.4 million in FY 1988 and \$4.5 million in FY 1989 for production support services.

Air Launched Rockets (P-1 Line Item Nos. 194, 195).

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$ 47,973	\$ 18,731

This category consists of the ZUNI 5.0" Rocket and 2.75" Rocket systems. The ZUNI and 2.75" rocket systems are air-to-ground weapons consisting of a variety of warheads and are fired from a four-round (ZUNI) and a seven/nineteen (2.75") cylindrical launcher. Both rocket systems are cleared for use on the following USN and USMC aircraft: A4, A6, A7, F4, F/A-18, AH1, AV-8 and OV10. Funding of \$29.5 million in FY 1988 is for procurement of the air-to-ground ZUNI 5.0" Wrap-around Fin Rocket system. In addition, funding of \$18.5 million appropriated in FY 1988 and \$18.7 million budgeted in FY 1989 is budgeted for the 2.75" wrap around Fin Rocket system.

Aircraft Machine Gun Ammunition (P-1 Line Item No. 197).

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$ 14,435	\$ 13,005

This category includes procurement of 20mm and 25mm ammunition used with various aircraft (A-7E, F-14, F/A-18, AH-1, and AV-8B) gun systems. Funding of \$9.7 million appropriated in FY 1988 and \$9.2 million budgeted in FY 1989 is for procurement of 20mm practice gun ammunition used with various aircraft (A-7E, F-14, F/A-18, and AH-1) gun systems for fleet training to maintain pilot proficiency and war reserve. Funding of \$2.0 million in FY 1988 and \$1.3 million in FY 1989 is to procure 25mm HEI and API service ammunition for war reserve requirements for the AV-8B. Included in this program is \$1.4 million in FY 1988 and \$1.4 million in FY 1989 for production/engineering support of ammunition procurements. In addition, funding of \$1.2 million is provided in FY 1988 and \$1.2 million in FY 1989 for a product improvement effort to increase the safety and reliability of the 25mm high explosive ammunition (HEI) and target practice ammunition, in addition to reducing its cost.

BIGEYE Chemical Weapon (P-1 Line Item No. 204).

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
-0-	\$9,900

The BIGEYE is an air-launched binary spray chemical bomb. It generates and delivers a persistent nerve agent from two non-toxic chemicals. BIGEYE will provide enhanced safety and reliability on the existing inventory of aging chemical weapons. The President has certified that BIGEYE production is in the national interest. The FY 1989 request of \$9.9 million provides funds for the second year of production of the BIGEYE bomb. Funding was previously appropriated for BIGEYE in FY 1987.

GATOR (P-1 Line Item No. 206).

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$ 6,400	\$13,364

The \$6.4 million in FY 1988 and \$13.4 million in FY 1989 are to procure GATOR CBU-78 500 pound bombs. The GATOR weapon consists of a MK-7 dispenser that contains a mixture of air-scatterable anti-tank and anti-personnel land mines. It is used in support of the Marine Corps amphibious support mission and can be fired from a variety of aircraft.

Miscellaneous Ordnance and Support (P-1 Line Item Nos. 196, 199-203, 205, 207).

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$51,197	\$36,559

Budgeted procurements will include chaff decoy heads for electronic countermeasures impulse cartridges, and other miscellaneous ordnance and support. Funding of \$1.4 million in FY 1988 is requested for the Parachute Flare Program to procure the SUU 25 parachute flare. Funding of \$12.2 million in FY 1988 and \$1.9 million in FY 1989 are for the procurement of impulse cartridges used for ejecting air-launched weapons and other cartridge-actuated devices. Funding of \$3.7 million in FY 1988 and \$3.6 million requested

in FY 1989 is for rocket motors and catapults used for ejecting aircrewmembers from disabled aircraft. Funding of \$20.0 million in FY 1988 and \$17.5 million in FY 1989 is for procurement of airborne expendable countermeasures including chaff, infrared flares and expendable jammers to meet training and war reserve (mobilization) requirements. Funding of \$4.1 million in FY 1988 and \$4.8 million in FY 1989 is for Jet-Assisted Take Off (JATO) rockets used to launch aircraft and targets and to propel sleds used in testing. The remaining \$9.7 million in FY 1988 and \$8.7 million in FY 1989 are for miscellaneous ordnance, including such items as Marine Location Markers, and Defense Nuclear Agency material.

Weapons Range Support Equipment (P-1 Line Item No. 208).

	(\$ in Thousands)
<u>FY 1988</u>	<u>FY 1989</u>
\$46,829	\$57,163

The Weapons Range Support Equipment program procures equipment in support of Navy Fleet Training Range requirements. These ranges provide the primary means of fleet combat readiness training. Procurements in FY 1988 include the following: (1) \$1.4 million for a threat radar simulator at the Atlantic Fleet Weapons Training Facility (AFWTF), (2) \$9.4 million for Aircrew Electronic Training Ranges at Cherry Point, NC and Fallon, NV; (3) \$3.3 million for System Replacement and Modernization; (4) \$1.7 million for upgrading the West Coast Tactical Aircrew Combat Training System (TACTS) at Yuma, AZ; (5) \$3.0 million for upgrading the East Coast TACTS data links at Cherry Point, NC; (6) \$9.2 million for two surveillance radars for NAS, Fallon, NV; (7) \$1.4 million for seven integrated laser training systems for seven different sites; (8) \$1.1 million for communications equipment at the Pacific Missile Range Facility (PMRF), HI; (9) \$3.3 million for an underwater tracking range computer for St. Croix, and (10) \$1.9 million for Communication Central Network for PMRF, HI. In addition, \$11.2 million is required for production engineering and integrated logistics support (ILS) efforts. Procurements in FY 1989 include the following: (1) \$6.8 million for Aircrew Electronic Warfare Ranges at Fallon, NV and Cherry Point, NC; (2) \$3.5 million for Systems Replacement and Modernization; (3) \$14.9 million for upgrading of the East Coast TACTS at Cherry Point, NC and Oceana, VA; (4) \$15.5 million for additional capabilities at the ASW underwater range at SOCAL, and (5) \$1.5 million for communication equipment for PMRF, HI. In addition, \$14.9 million is required for production engineering and ILS efforts.

Aircraft Launching and Recovery Equipment (P-1 Line Item Nos. 209 and 211).

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$54,641	\$29,517

Catapult, Arresting Gear, and Visual Landing Aids Support for the Navy's aircraft carriers and other air-capable ships, and the Marine Corps' Expeditionary Airfield (EAF) systems are funded under this program. Funding of \$15.7 million in FY 1988 and \$8.7 million in FY 1989 are for EAF support equipment to enhance maintainability, reliability and safety of flight operations, and to keep pace with advanced aircraft requirements by correcting known deficiencies and by modernizing EAF equipment. Funding of \$38.9 million in FY 1988 and \$20.8 million in FY 1989 is for the procurement of major catapult, arresting gear and visual landing aids equipment for aircraft carriers and other aircraft capable ships.

Aircraft Rearming Equipment (P-1 Line Item No. 210).

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$35,277	\$11,864

The Aircraft Rearming Equipment program provides armament support equipment (ASE) and weapons support equipment (WSE) for use ashore and afloat to load and/or download air-launched weapons and to perform maintenance on aircraft-installed armament systems. WSE equipment is used to transport and perform maintenance on weapons and explosive ordnance components. ASE and WSE are utilized to accomplish the improved rearining rate (IRR) of A-6, EA-6, A-7, F-4, F-14, F-18, and AV-8 aircraft. The use of this equipment permits the rapid weapons loading and reloading of strike aircraft with a minimum number of flight deck personnel.

Airborne Mine Countermeasures Equipment (P-1 Line Item No. 215).

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$15,940	\$22,588

This program funds various mine countermeasures equipment operated by RH/CH-53D/MH-53E helicopters. The funding requested in FY 1988 will procure 14 sets of airborne mine countermeasures (AMCM) tow provision kits which provide the necessary removable equipment that allow the helicopter to tow an AMCM system (\$14.4 million). Funds requested in FY 1989 will procure fourteen towed portions of the ALQ-14 mine hunter sonar system (\$8.4 million) and thirty-six A/N 37U-1 mechanical mine sweeping systems (\$12.0 million). The former procures the in-water portion of the system. The latter provides a new capability to the Navy's mine sweeping mission and is a towed wire sweep armed with MK-17 cutters. Amounts of \$1.5 million in FY 1988 and \$2.2 million in FY 1989 are included for various upgrades to the existing AMCM inventory.

LAMPS MK III Shipboard Equipment (P-1 Line Item No. 216).

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$22,587	\$8,180

Equipment to be installed in existing ships being backfitted with the LAMPS MK III weapon system is procured in this line item. This equipment includes the AN/SRQ-4, a shipboard terminal data transmission device (5 for \$4.2 million in FY 1988) and the shipboard Helicopter Landing System (HLS) for the LAMPS MK III helicopter (3 for \$5.7 million in FY 1988). Other requirements include system integration efforts (\$6.3 million in FY 1988 and \$4.3 million in FY 1989), peculiar ground support equipment (\$.4 million in FY 1988 and \$.4 million in FY 1989) and various production engineering and integration logistics support items (\$6.0 million in FY 1988 and \$3.5 million in FY 1989).

Other Aviation Support (P-1 Line Item Nos. 212-214, 217-219).

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$46,678	\$65,547

Funds budgeted include the procurement of Meteorological equipment, Other Photographic equipment, Survival equipment, Reconnaissance equipment, Stock Surveillance equipment and Other Aviation Support equipment. Meteorological equipment to be procured in both FY 1988 and FY 1989 provides a cost effective means to receive/process/disseminate meteorological/oceanographical data and an on-site, real time geographical capability to determine environmental factors currently affecting fleet and shore activities. Specifically, this equipment includes the AN/SMQ-11 Meteorological Data Satellite Receiver-Recorder and the Marine Corps MARK IV Tactical Terminals and related MARK IV van equipment (\$20.1M in FY 1988 and \$22.6M in FY 1989). Other Photographic equipment funds the procurement of photographic equipment for all Navy, shore and seaborne photographic laboratories, plus various intelligence activities (\$1.8 million in FY 1988 and \$1.9 million in FY 1989). The Survival equipment program finances procurement of the PRC-90 1 Aircrew Survival Radio (\$3.6 million in FY 1989) and chemical, and biological personal protective equipment (\$4.8 million in FY 1988 and \$0.7 million in FY 1989) for use by aircrewmembers. The Survival equipment program also includes funds for support equipment, integrated logistics support and production support (\$2.8 million in FY 1988 and \$1.4 million in FY 1989). \$3.3 million in FY 1989 is requested to buy equipment in support of the Reconnaissance Electronic Warfare, Special Operations and Naval Intelligence (REWSON) program. Procurement includes: (1) readout equipment for ship and shore reconnaissance squadrons, (2) surface and subsurface photo collection equipment, (3) analytical equipment to support these collectors and (4) equipment of a photographic and analytic nature for use by ship combatants. The Stock Surveillance equipment line provides funds for procurement of equipment needed to monitor, measure, and assess the condition of current Navy stocks of air-launched missiles and air-launched ordnance and ammunition (\$3.2 million in FY 1988 and \$2.8 million in FY 1989). Eighty percent of the funds support missile inventory quality evaluation (surveillance) efforts and twenty percent support air-launched ordnance evaluation, including bombs, rockets, and cartridge actuated devices. Material readiness factors such as reliability and serviceability are measured by this effort. The Other Aviation Support Equipment line funds various small dollar value programs (\$13.9 million in FY 1988 and \$29.1 million in FY 1989). Included are funds for procurement of fleet telemetry equipment which

Other Aviation Support (P-1 Line Item Nos. 212-214, 217-219) (Continued)

us used to receive, record and analyze missile telemetry performance data providing information to evaluate training/test exercises (\$.6 million in FY 1988 and \$5.5 million in FY 1989). Also included is \$2.3 million in FY 1988 and \$.9 million in FY 1989 for collateral equipment in support of the Naval Air Systems Command and its field activities; \$2.0 million in FY 1988 for shipboard-installed, Remotely Piloted Vehicle (RPV) support equipment; and \$17.0 million in FY 1989 for Industrial Plant Equipment for Naval Air Engineering Center, Lakehurst and Naval Avionics Center, Indianapolis, field activities which are to be funded from operating budgets rather than from the Navy Industrial Fund (NIF) beginning in FY 1990. The Other Aviation Support Equipment line also funds procurement of a computerized Tactical Aircraft Mission Planning System (TAMPS) (\$8.9 in FY 1988 and \$5.6 million in FY 1989). Installations are planned for aviation-capable ships, air stations, aviation training, support facilities and deployed aviation units. Finally, \$.1 million is budgeted in each fiscal year for capital maintenance of the government-owned, contractor-operated Sonobuoy test facility at St. Croix, U.S. Virgin Islands.

BUDGET ACTIVITY 4: ORDNANCE SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(\$ In Thousands)

Budget Plan
(Amounts for Procurement Actions Programmed)

	FY 1987 ACTUAL	FY 1988 ESTIMATE	FY 1989 INITIAL ESTIMATE	FY 1989 CHANGE	FY 1989 AMENDED ESTIMATE	JUSTIFICATION PAGE
SHIP GUN AMMUNITION	\$223,118	\$136,479	\$177,301	\$ -30,768	\$146,533	45
SHIP GUN SYSTEMS EQUIPMENT	39,137	13,914	16,800	-8,849	7,951	45
SHIP MISSILE SYSTEMS EQUIPMENT	394,016	298,342	354,603	-1,426	353,177	46
FBM SUPPORT EQUIPMENT	103,977	66,745	471,032	-86,309	384,723	47
ASV SUPPORT EQUIPMENT	259,684	73,018	132,219	-18,639	113,580	47
OTHER ORDNANCE SUPPORT EQUIPMENT	37,040	34,109	39,188	-8,283	30,905	48
OTHER EXPENDABLE ORDNANCE	133,182	123,631	181,689	-47,987	133,702	48
TOTAL BUDGET PLAN	\$1,190,154	\$746,237	\$1,372,832	\$-202,261	\$1,170,571	

Budget Activity 4: Ordnance Support Equipment

	(\$ In Thousands)
FY 1989 Amended Estimate	- \$1,170,571
FY 1989 Change	- \$ -202,261
FY 1989 Initial Estimate	- \$1,372,832
FY 1988 Estimate	- \$ 746,237
FY 1987 Actual	- \$1,190,154

Purpose and Scope of Work

Funds provided in this budget activity are for Ship Gun Ammunition, Ship Gun and Ship Missile Systems Equipment, Fleet Ballistic Missile and Anti-Submarine Warfare Support equipment, other Ordnance Support equipment, and Other Expendable Ordnance.

Justification of Funds

Ship Gun Ammunition (Includes P-1 Line Items 220-227)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$136,479	\$146,533

The FY 1988 request of \$136.5 million and FY 1989 request of \$146.5 million for Ship Gun Ammunition is for procurement of Three-inch and Five-inch ammunition, 20mm ammunition for the Close-In Weapon System (CIWS), 76mm ammunition, Sixteen-inch ammunition, and other Ship Gun Ammunition. The primary mission for the 76mm ammunition is for use against air targets but it is also for use against surface and shore targets. The Sixteen-inch ammunition is for use by battleships against surface and shore targets. The Five-inch ammunition is the most common and is used by nearly all of the Navy's combatant ships.

Ship Gun System Equipment (Includes P-1 Line Items 228-229)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$ 13,914	\$ 7,951

The FY 1988 request of \$13.9 million and the FY 1989 request for \$8.0 million is to procure Gun Fire Control equipment. The funds requested for Gun Fire Control equipment are for the procurement of equipment and ordnance alterations to improve reliability and maintainability of the MK-86 and MK-68/56 surface Gun Fire Control Systems installed on all surface combatants fitted with 5" naval guns.

Ship Missile Systems Equipment (Includes P-1 Line Items 230-239)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$298,342	\$353,177

The FY 1988 request of \$298.3 million and the FY 1989 request of \$353.2 million are for Ship Missile Systems (SMSS) programs. The MK-92 Fire Control System request of \$7.0 million in FY 1988 and \$8.1 million in FY 1989 will provide for improved readiness of the MK-92 system. The FY 1988 and FY 1989 request of \$38.0 million and \$42.9 million respectively for Harpoon Support equipment will be used to procure Ordnance Alterations. The TERRIER Support equipment request of \$48.5 million in FY 1988 and \$47.3 million in FY 1989 will provide for modification to the TERRIER Missile Weapon Systems including Fire Control System MK-76, Weapons Direction System MK-14, Guided Missile Launching system MK-10, Communications Tracking Set AN/SYR-1 and Ancillary support equipment. These modifications provide for CG/SM-2 performance improvements (Standard Missile (Extended Range) Block I missile capability), New Threat Upgrade performance improvements (Standard Missile 2 (Extended Range) Block II missile capability) and associated reliability/maintainability/availability improvements in CG-16/26/N9/N25/N35 Class ships. The requests in FY 1988 and FY 1989 of \$64.2 million and \$61.3 million, respectively, for the TARTAR Support equipment program are for improvements to the CGN/DDG/SM-2 Weapons Systems including Fire Control Radar Mods, Weapons Direction System (WDS MK-14), AN/SYR-1 Downlink Receiver and Ancillary Modifications to provide capability to fire the SM-2 (MR) missile; and improvements to the Guided Missile Launching System MK-13 Mod 4 on the FFG-7 Class ships. The Point Defense Support equipment request of \$23.9 million in FY 1988 and \$34.4 million in FY 1989 will provide air defense of selected ships by upgrading the NATO SEASPARROW Surface Missile System including modifications to incorporate specific improvements to increase reliability. The request also includes procurement of the launch system to fire the RAM Missile. The \$1.0 million requested in FY 1988 and \$1.1 million requested in FY 1989 for Airborne ECM/ECCM will provide for equipment used to simulate projected enemy jamming tactics and techniques during Surface Warfare Systems evaluations and Fleet exercises. The AEGIS Support equipment request of \$1.2 million in FY 1988 and \$39.1 million in FY 1989 will provide shore based assets for the AEGIS Combat System/Educational Center to support the Battle readiness of AEGIS Cruisers including AEGIS Combat System Center equipment and AEGIS Educational Center equipment. The Surface TOMAHAWK Support equipment request of \$50.9 million in FY 1988 and \$38.0 million in FY 1989 will procure Common Weapons Control Systems (CWCS), and Armored Box Launchers for surface ships missile landing systems. The FY 1988 request of \$5.5 million and the FY 1989 request of \$2.6 million for the Submarine TOMAHAWK Support equipment program will procure modifications to the MK-117 Fire Control System for SSN 637 and 688 Class submarines to provide the capability to launch the TOMAHAWK Cruise Missile. The Vertical Launch Systems request of \$54.9 million in FY 1988 and \$78.3 million in FY 1989 will provide for installation of three VLS systems on DD 963 and CG 47 class ships and a training site.

Strategic Platform Support Equipment (Includes P-1 Line Item 240)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$ 66,745	\$384,723

The FY 1988 request of \$66.7 million and the FY 1989 request of \$384.7 million for Strategic Platform Support equipment provides funding for ordnance support, ship alterations and test equipment for the TRIDENT submarine and TRIDENT Refit Facility (TRIREFFAC) located at Naval Submarine Base (NBS), Bangor, Washington and numerous support facilities. In addition, funds are requested for the procurement of Strategic Weapon System (SWS) equipment for deployed SSBNs and shore support sites to support the POSEIDON (C-3), TRIDENT I (C-3), TRIDENT I (C-4) and TRIDENT II (D-5) programs and procurement of Strategic Weapons System equipment and ship system ordnance equipment needed to establish the Navy Submarine Base, Kings Bay Georgia. The increase in FY 1989 supports TRIDENT II backfits for overhaul installation and TRIDENT II navigation and weapons training equipment.

ASV Support Equipment (Includes P-1 Line Items 241-246)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$ 73,018	\$113,580

The FY 1988 request of \$73.0 million and FY 1989 request of \$113.6 million for Anti-Submarine Warfare Support equipment procurement includes funding for the All Digital Attack Center (ADAC), which includes FCS MK-117 increased Display and Conversion for Over the Horizon targeting, Advanced Capability (ADCAP) Torpedo, and FCS MK-117/CCS MK-1 Improvements. In addition, FY 1988 and FY 1989 funding will support procurement of various upgrades to submarines and surface torpedo tube equipment, Anti-Submarine Rocket (ASROC) launchers, various test equipments, and procurement of equipment to support the MK-113 Mod 9 Improvement program. These funds will also provide for the procurement of Anti-Submarine Warfare torpedo exercise and shore support equipment, range equipment for Fleet Operational Readiness Accuracy Check Sites (FORACS) and Sensor Accuracy Check Sites (SACS), and test equipment to support Weapon System Accuracy Trials (WSAT).

Other Ordnance Support Equipment (Includes P-1 Line Items 247-254)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$34,109	\$30,905

The FY 1988 request of \$31.8 million and the FY 1989 request of \$30.9 million for Other Ordnance Support equipment are for various ordnance programs not budgeted under other programs within this budget activity. Some of the major programs include: Explosive Ordnance Disposal equipment, Unmanned Seaborne Targets, and Stock Surveillance equipment. The request in both FY 1988 and FY 1989 for explosive Ordnance Disposal equipment provides for procurement of necessary EOD tools and equipment required for initial outfitting of EOD units. These equipments provide ordnance location and safe disposal of unexploded ordnance. The request for Unmanned Seaborne Targets provides Surface Seaborne Targets for Fleet Training, with procurement of Septar Targets and Floating Automatic Scoring Target (FAST) hulls in FY 1988 and continuing in FY 1989. The request in FY 1988 and FY 1989 for Stock Surveillance equipment provides resources for determining safety, reliability, readiness, and service/shelf life of both stored and deployed Navy and Marine Corps tactical weapons and weapon system and the causes for their degraded state. Other programs included in the FY 1988 and FY 1989 request are the Swimmer Weapons Systems for Special Operations Forces, Anti-Ship Missile Decoy System, Calibration equipment, and Other Ordnance Training equipment.

Other Expendable Ordnance (Includes P-1 Line Items 255-263)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$123,631	\$133,702

The FY 1988 request of \$123.6 million and the FY 1989 request of \$133.7 million is for procurement of other expendable ordnance. The Small Arms and Landing Party Ammo request in FY 1988 and FY 1989 provides ammunition in support of active naval vessels, and for active and reserve special warfare forces including replacement of Non-Combat Expenditure Requirements (NCER), initial allowance for all approved active and reserve forces, and a combat reserve and/or material pipeline of ammunition quantities based on a "Days of Support" analysis. Special Operations Forces support of \$3.7 million in FY 1988 and \$3.5 million is included in this ammo request. The FY 1988 and FY 1989 request for Pyro and Demo Material provides pyrotechnics and demolition materials for all active naval vessels, amphibious and mobile construction battalions, harbor clearance units, cargo handling and port groups, naval security groups, and also includes \$23.3 million in FY 1988 and \$23.4 million in FY 1989 for Naval Special Operations Forces. The QUICKSTRIKE request in FY 1988 and FY 1989 provides for the procurement of the 2000 lb MK-65 service and

non-service mines to include the MK-58 Target Detecting Devices (TDDs) and associated safety and arming devices. The request for Fleet Mine Support Equipment in FY 1988 and FY 1989 provides for the procurement of material and production support services for the assembly of mines in stockpile. The request also provides for support of fleet proficiency training, mine warfare and mine countermeasures training, and improved stockpile mine performance. The Shipboard Expendable Countermeasures program provide for Anti-Ship Missile Decoys deployed from the MK-36 Decoy Launching System. The FY 1988 and FY 1989 request provides for SEA GNAT RF Decoys and MK-186-IR Decoys. Also included under Other Expendable Ordnance is funding for Defense Nuclear Agency (DNA) material for procurement of trainers and support equipment for the V-80 Series (TOMAHAWK) and other nuclear weapons systems in order to conduct nuclear safety studies, certification of ships/depots with respect to nuclear capability and for training and certification of weapons maintenance and handling personnel.

BUDGET ACTIVITY 5: CIVIL ENGINEERING SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(In Thousands)

	Budget Plan					Justification Page
	1987 Actual	1988 Estimate	1989 Initial Estimate	1989 Change	1989 Amended Estimate	
(Amounts for Procurement Actions Programmed)						
Passenger Carrying Vehicles	5,478	5,060	10,425	-4,922	5,503	51
Trucks, Trailers, Construction and Maintenance Equipment	59,408	52,993	91,875	-33,451	58,424	52
Amphibious Equipment and Combat Construction Support Equipment	35,556	18,344	41,293	-14,772	26,521	52
Other Equipment	22,749	18,818	13,219	+808	14,027	53
Fleet Hospitals	78,241	0	0	0	0	
Total Budget Plan	201,432	95,215	156,812	-52,337	104,475	

Budget Activity 5: Civil Engineering Support Equipment

(\$ in Thousands)
FY 1989 Amended Estimate - \$104,475
FY 1989 Change - -52,337
FY 1989 Initial Estimate - 156,812
FY 1988 Estimate - 95,215
FY 1987 Actual - 201,432

Purpose and Scope of Work

Funds provided under this budget activity are for the procurement of passenger carrying vehicles, trucks and trailers, construction, earthmoving, maintenance, fire fighting, weight handling, amphibious and specialized equipment, combat construction support equipment, mobile utilities support equipment, fleet moorings, collateral equipment for the initial outfitting of Military Construction Projects, pollution control equipment, and equipment used for construction of underwater facilities. This equipment is procured for Navy-wide use by the Operating Forces and Shore Establishment including passenger carrying vehicles for Industrial Fund activities.

Passenger Carrying Vehicles - (P-1 Line Item 264 & 265)

(\$ in Thousands)
FY 1988 FY 1989
\$ 5,060 \$ 5,503

This category provides for replacement and limited augment of buses, sedans, station wagons and armored sedans for all Navy activities. Included are replacement vehicles for Navy Industrial Fund (NIF) activities in compliance with the 97th Congress House of Representatives Conference Report No. 97-980. The FY 1988 program provides for the replacement of 379 vehicles leaving an additional 1,616 which will still exceed economic replacement criteria. The FY 1989 program provides for the replacement of 390 vehicles leaving an additional 1,486 which will still exceed economic replacement criteria. This category does not include ambulances, which are addressed below.

Trucks, Trailers, Construction and Maintenance Equipment - (P-1 Line Items 266-274)

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$52,993	\$58,424

This category includes trucks, trailers, generators, crushing, drilling, earth moving, fire fighting and weight handling equipment and ambulances for the protection and maintenance of Naval Shore Activities, Naval Construction Forces, and various other Operational Forces worldwide. Funding is included for the initial outfitting of the Advanced Base Functional Component (ABFC) OPLAN \$1.470 million in FY 1988 and \$.401 million in FY 1989, the Reserve Naval Construction Force (RNCF) \$.517 million in FY 1988 and \$3.128 million in FY 1989, and the Assault Follow-on Echelon (AFOE) \$2.982 million in FY 1988 and \$1.952 million in FY 1989.

Amphibious Equipment (P-1 Line Item 275) and Combat Construction Support Equipment (P-1 Line Item 276)

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$18,344	\$26,521

These funds provide specialized amphibious equipment which significantly enhances the Navy's capability to support Marine Corps amphibious operations through the ship-to-shore transfer of both dry and liquid cargo and as a key part of the Strategic Sealift Program. This equipment will be used by the Amphibious Construction Battalions in the Assault Echelon and the Assault Follow-on Echelon phases of amphibious operations to provide essential logistic support in advanced areas having little or no port capability. The amphibious dry cargo transfer equipment in the FY 1988 program includes powered and non-powered causeway sections, side loadable warping tugs, and other miscellaneous amphibious specialized equipment. In addition, FY 1989 funding is provided for an elevated causeway. Combat Construction Support Equipment consists primarily of relocatable facilities such as storage magazines, fuel storage tanks, multipurpose shelters and containers, and panel buildings in support of Naval Construction Force personnel. The FY 1988 and FY 1989 programs include the outfitting of Naval Mobile Construction Battalions with containers for prepacking Table of Allowance items and provide shelters for the protection of personnel against chemical agents at overseas Naval Bases.

Other Equipment - (P-1 Line Items 277 - 282)

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$18,818	\$14,027

Other programs in Budget Activity 5 include Mobile Utilities Support Equipment which provides electric power and high quality steam for support to the fleet while in port, and for emergency shore operations, serious utility system deficiencies and delayed military construction. Collateral equipment provides equipment and furnishings to initially outfit Military Construction projects. Ocean Facilities Construction Equipment is associated with strategic deterrence, anti-submarine warfare and other fleet underwater construction programs. Fleet Moorings which will be used to procure components for overhauling fleet moorings worldwide. Pollution control equipment is for compliance with Clean Air Act and Clean Water Act Amendments, various Environmental Protection Agency Regulations and State Implementation Plans. Also included is other Civil Engineering Support Equipment for Administrative Equipment, Public Works Shop Equipment, and Specialized Inspection Equipment.

BUDGET ACTIVITY 6: SUPPLY SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(In Thousands)

Budget Plan

(Amounts for Procurement Actions Programmed)

	<u>FY 1987</u>	<u>FY 1988</u>	<u>FY 1989</u>	<u>FY 1989</u>	<u>FY 1989</u>	<u>JUSTIFICATION</u>
	<u>ACTUAL</u>	<u>ESTIMATE</u>	<u>INITIAL</u>	<u>AMENDED</u>	<u>ESTIMATE</u>	<u>PAGE</u>
		<u>ESTIMATE</u>	<u>ESTIMATE</u>	<u>ESTIMATE</u>		
			<u>CHANGE</u>			
Material Handling Equipment and Systems	20,775	25,265	36,790	-20,456	16,334	55
Other Supply Support Equipment	7,782	11,783	11,058	-6,259	4,799	56
Classified Programs	39,411	72,146	148,686	-64,524	84,162	56
Total Budget Plan	67,968	109,194	196,534	-91,239	105,295	

Budget Activity 6- Supply Support Equipment

(\$ In Thousands)
FY 1989 Amended Estimate - \$105,295
FY 1989 Change - \$-91,239
FY 1989 Initial Estimate - \$196,534
FY 1988 Estimate - \$109,194
FY 1987 Actual - \$ 67,968

Purpose and Scope of Work

This budget activity finances the procurement of forklift trucks and other materials handling equipment used at Navy installations and aboard ships; automated materials handling systems; investment type support equipment; and reprographics equipment. In addition, financing for certain classified projects is included in this activity.

Justification of Funds

Materials Handling Equipment and Systems (P-1 Line Items Nos. 284-286)

(\$ In Thousands)
FY 1988 FY 1989
\$25,265 \$16,334

These funds are requested to procure Forklift trucks in FY 1988 and FY 1989 which are needed for the cyclical replacement of overage equipments aboard ships and at shore activities which are more costly to maintain than to replace.

For Other Materials Handling equipment, the FY 1988 and FY 1989 requests represent the twelfth increment of a phased equipment replacement program designed to reduce the significant level of overage warehouse tractors, cranes and other equipment in the inventory.

The requested funds for the Automated Materials Handling system (AMHS) will provide for the installation of three Navy Integrated Storage Tracking and Retrieval Systems (NISTARS) in FY 1988 and FY 1989. NISTARS automates certain warehouse functions and places the entire warehouse operation under positive management control and automation. It improves the efficiency of labor and materials, as well as improves inventory accuracy. The first three sites were procured with an acquisition strategy which required one contractor to provide software, computer control, and all AMHS. A new acquisition strategy has been developed to breakout stand-alone AMHS as government furnished equipment in the competitive contract for these NISTARS sites.

Other Supply Support Equipment (P-1 Line Items Nos. 287-288)

(\$ in Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$11,783	\$4,799

The request for Other Supply Support equipment includes the procurement of shop and office equipment, reprographics, uninterrupted power service units, enlisted dining facilities equipment, office automation, and pollution control projects.

Classified Programs (P-1 Line Items No. 289)

(\$ In Thousands)	
<u>FY 1988</u>	<u>FY 1989</u>
\$72,146	\$84,162

Details of this program are of a higher classification. Justification is provided separately.

BUDGET ACTIVITY 7: PERSONNEL AND COMMAND SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN
(In Thousands)

Budget Plan
Amounts for Procurement Actions Programmed

	<u>FY 1987</u> <u>ACTUAL</u>	<u>FY 1988</u> <u>ESTIMATE</u>	<u>FY 1989</u> <u>INITIAL</u> <u>ESTIMATE</u>	<u>FY 1989</u> <u>CHANGED</u> <u>ESTIMATE</u>	<u>FY 1989</u> <u>AMENDED</u> <u>ESTIMATE</u>	<u>JUSTIFICATION</u> <u>PAGE</u>
Training Equipment	116,663	60,402	110,410	-23,455	86,955	58
Command Support Equipment	190,235	171,406	214,564	-35,089	179,475	59
Computer Acquisition Equip	180,195	175,654	219,279	-33,878	185,401	60
Productivity Programs	7,820	9,361	16,309	+6,269	22,578	60
Total Budget Plan	494,913	416,823	560,562	-86,153	474,409	

Budget Activity 7: Personnel and Command Support Equipment

	(\$ In Thousands)
FY 1989 Amended Estimate	- \$474,409
FY 1989 Change	- \$-86,153
FY 1989 Initial Estimate	- \$560,562
FY 1988 Estimate	- \$416,823
FY 1987 Actual	- \$494,913

Purpose and Scope of Work

This budget activity finances the procurement of Training Equipment, Command Support Equipment, Computer Equipment and Productivity Investment Programs.

Justification of Funds

Training Equipment (P-1 Line Items 290-296)

	(\$ In Thousands)
FY 1988	
FY 1989	
	\$60,402
	\$86,955

Surface training devices will provide maintenance, operator, team, and refresher training for new combat systems/capabilities being introduced into the fleet. Requested funding supports a variety of cost effective devices including Surface Sonar Trainers, Ship System Trainers and Surface Combat System Trainers (FY 1988, \$32.9 million; FY 1989, \$58.3 million).

The submarine trainers will provide for procurement of acoustic trainers which simulate the digital data processing and graphic displays of the newly developed sonar systems and the procurement of a training system which will generate real-time, dynamic submarine tactical training scenarios. (FY 1988, \$21.7 million; FY 1989, \$22.5 million).

Funding is required to procure Training Support Equipment (TSE) consisting of minor training aids and devices to support the education and training programs which supply the fleet with effectively trained personnel (FY 1988, \$2.6 million; FY 1989, \$4.5 million).

Training Device Modifications provide cost-effective enhancements to update the existing inventory of training devices. The modifications help maintain the training value of devices and keep them compatible with equivalent changes made to the fleet operational equipments which these devices simulate (FY 1988, \$3.1 million; FY 1989, \$1.8 million).

Command Support Equipment (P-1 Line Items 297-305)

(\$ In Thousands)
FY 1988 FY 1989

\$171,406 \$179,475

This funding provides for the procurement of items which have a unit cost over \$15 thousand including Command Support, Intelligence Support, Education Support, Medical Support, Operating Forces Equipment, Naval Reserve Support, Oceanographic Support, Physical Security Support, and Non-Centrally Managed equipment.

This request includes acquisition of equipment needed for the Naval Intelligence Command and its field activities. It is a part of the General Defense Intelligence Program (GDIP) requirements. Details on this classified program are contained in the Intelligence Justification Books, provided separately.

Funding is also requested to procure Medical Support equipment to be located in the United States and for prepositioned Fleet Hospitals. Funds requested to replace existing worn-out, obsolete assets located in the United States will provide for the acquisition of new technological developments for a modern health care delivery system. Funds requested for Fleet Hospitals will procure shelters, transportation equipment medical equipment, and other hospital support equipment to provide medical care for Navy and Marine Corps personnel during wartime. Procurement of equipment for fleet hospitals was budgeted in Budget Activity 5, Civilian Engineering Support Equipment (P-1 line item 283) through FY 1987. The FY 1989 program funds provide for one 500 bed combat zone hospital.

Funds are requested to procure Oceanographic equipment required to collect, analyze, and disseminate environmental data. This data is critical for precise positioning, navigation, and targeting of enemy air, surface, and sub-surface weapon systems.

Funds are requested for acquisition of equipment to support the following Physical Security programs: nuclear weapons security, remote sensors and other intrusion detection devices required for physical security at Naval bases and sensitive installations.

Funds are requested for acquisition of equipment to support Chief of Naval Operations field activities, Naval Military Personnel Command, Naval Telecommunications Command, Office of the Secretary of the Navy, Naval Reserves, Naval Academy, Naval Postgraduate School, Naval War College, and Headquarters of Pacific, Atlantic, and Europe Fleet Commands.

Computer Acquisition Program (P-1 Line Item 306)

	(\$ In Thousands)
<u>FY 1988</u>	<u>FY 1989</u>
\$175,654	\$185,401

The Computer Acquisition Program (CAP) was established to optimize the procurement of general purpose Automated Data Processing Equipment (ADPE) Navy-Wide. The procurement of ADPE through the CAP represents the culmination of several planned and developed ADP systems that are ready for deployment and introduction throughout the Fleet. The work load that is performed directly supports such day-to-day efforts as fleet supply and logistics, maintenance, financial and personnel management, and health management, all of which are currently either performed manually or in part by using old, obsolete, unreliable data processing support. The automation and upgrade capability to be funded by the CAP would lighten Fleet work load and modernize ADP, directly improving overall Fleet readiness.

Productivity Programs (P-1 Line Items 307-308)

	(\$ In Thousands)
<u>FY 1988</u>	<u>FY 1989</u>
\$ 9,361	\$22,578

Funds requested for the Productivity Investment Fund and Productivity Enhancing Incentive Fund are used to purchase improved general purpose equipment, tools and procedures. The objective of productivity investments is to apply capital investment in exchange for labor intensive and costly operations in government by investments in modern equipment, methods and labor saving devices. It also realizes a continuing stream of benefits through the reduction of recurring operating costs. Projects involve the replacement of old and outmoded equipment and procedures to reduce inefficiency and maintenance costs. This frequently implants new technology as well as enabling growth in efficiency and the solution of emerging problems in operations and logistics. The technology factor has been credited with at least 40 percent of all productivity growth over the past five decades of domestic experience. Productivity investments directly address the unfunded backlog of compelling investment opportunities existing in the Navy.

Budget Activity 8 - Spares and Repair Parts (P-1 Line items)

FY 1989 Amended Estimate	- \$ 227,196
FY 1989 Change	- \$-102,895
FY 1989 Estimate	- \$ 330,091
FY 1988 Estimate	- \$ 278,800
FY 1987 Actual	- \$ 282,125

Purpose and Scope of Work

Budget Activity 8 provides for all Other Procurement, Navy (OPN) spares. The funding requested provides for the procurement of spares and repair parts for all equipments requiring support by the Systems Commands prior to transitioning into the Navy Supply system material and is divided between Initial spares (\$258.0 million in FY 1988 and \$205.4 million in FY 1989) and Replenishment spares (\$20.8 million in FY 1988 and \$21.8 million in FY 1989). The FY 1988 program of \$278.8 million includes the procurement of \$175.6 million of ships initial spares, \$58.2 million of communications and electronics initial spares, \$15.0 million of aviation initial spares, \$7.6 million of ordnance initial/spares, \$2.1 million of civil engineering initial spares, \$0.2 million of personnel and command initial spares, \$4.6 million of aviation replenishment spares, and \$15.5 million of ordnance replenishment spares. The FY 1989 program of \$227.2 million includes the procurement of \$115.8 million of ships initial spares, \$61.2 million of communication electronics initial spares, \$18.8 million of aviation initial spares, \$7.8 million of ordnance initial spares, \$1.6 million of civil engineering initial spares, \$0.1 million of personnel and command initial spares, \$6.6 million of aviation replenishment spares, and \$15.2 million of ordnance replenishment spares.

Comparison of FY 1988 Program Requirements as Reflected
 In FY 1988 Budget With FY 1988 Program Requirements as
 Shown in Amended FY 1988/89 Biennial Budget

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)

	Total Program	Program	Increase (+) or Decrease (-)
	Requirements Per FY 1988/89 Budget	Requirements Per Amended FY 1988/89 Budget	
1. Ships Support Equipment	783,716	769,591	-14,125
2. Communications & Electronics	1,718,335	1,645,786	-72,549
3. Aviation Support Equipment	686,132	669,704	-16,428
4. Ordnance Support Equipment	770,242	746,237	-24,005
5. Civil Engineering Support Equipment	116,800	95,215	-21,585
6. Supply Support Equipment	122,005	109,194	-12,811
7. Personnel & Command Support Equipment	477,771	416,823	-60,948
8. Spares & Repair Parts Reimbursable Program	308,826 25,000	278,800 65,000	-30,026 +40,000
Total Fiscal Year Program	5,008,827	4,796,350	-212,477

EXPLANATION BY BUDGET ACTIVITY

1. Ships Support Equipment (\$-14.1 Million)

The decrease of \$14.1 million resulted from the following: Specific Congressional reductions to Strategic Platform Support (\$10.0 million), HM&E Items Under \$2 million (\$7.3 million) and Production Support Facilities Equipment (\$10.5 million). Other decreases include an appropriation transfer out of \$43.3 million. In addition, increases include a specific Congressional increase of \$22.0 million for Firefighting Equipment, \$12.0 million for Sealift Equipment, \$15.0 million for Naval Special Warfare Equipment and \$8.0 million for the Small Boats Program.

2. Communications and Electronic Equipment (\$-72.5 million)

The decrease of \$72.5 million resulted from specific Congressional reductions to the following programs: AN/SPS-48 Radar (\$1.9 million), AN/SYS () (\$.7 million), MK 23 TAS (\$6.5 million), Radar Support Equipment (\$1.0 million), Offboard Detection Devices (\$19.5 million), NTDS (\$5.2 million), MATCALIS (\$1.3 million), ACLS (\$13.9 million), Microwave Landing Systems (\$6.3 million), NCCS Ashore (REGENCY NET) (\$5.8 million), Portable Radios (\$2.0 million), Sealift Ship Communications (\$.8 million), Submarine Communication Antenna (\$1.3 million), TSEC/KY 57/58 (\$10.6 million) and TRI-TAC Crypto (\$1.1 million). Additional adjustments resulted from specific Congressional increases of \$15.8 million for the AN/BLD-1 Interferometer, \$5.3 million for MK XII AIMS IFF and \$1.0 million for a Large Screen Display. Other decreases include a proposed appropriation transfer of \$11.1 million.

3. Aviation Support Equipment (\$-16.4 million)

The decrease of \$16.4 million resulted from the following: Specific Congressional reductions to General Purpose Bombs (\$16.4 million), Zuni Rockets (\$2.5 million), Machine Gun Ammo (\$1.0 million), Practice Bombs (\$13.5 million), Airborne Expendable Countermeasures (\$1.5 million), BIGEYE (\$10.2 million), GATOR (\$13.4 million), Catapults and Arresting Gear (\$5.0 million) and Meteorological Equipment (\$6.0 million). Other decreases include a proposed appropriation transfer of \$2.5 million. Specific increases by the Congress include an undistributed increase of \$50.0 million for sonobuoys and \$1.5 million for ROCKEYE.

4. Ordnance Support Equipment (\$-24.0 million)

The decrease of \$24.0 million resulted from the following: Specific Congressional reductions to 5/54 Gun Ammunition (\$7.4 million), 16 Inch Gun Ammunition (\$1.6 million), Other Ship Gun Ammunition (\$1.6 million), MK 117 Fire Control System (\$7.2 million) and Shipboard Expendable Countermeasures (\$.7 million). Also included is a proposed appropriation transfer of \$82.8 million. A specific Congressional increase of \$78 million for MK 92 CORT is also included.

5. Civil Engineering Support Equipment (\$-21.6 million)

The decrease of \$21.6 million resulted from the following: Specific Congressional reductions to Passenger Carrying Vehicles (\$5.2 million), Armored Sedans (\$.2 million), Trucks (\$11.8 million), Crush, Mix, Batch and Pave Equipment (\$.7 million), Drilling and Blasting Equipment (\$.1 million), Miscellaneous Construction Equipment (\$1.2 million), Weight Handling Equipment (\$1.3 million) and Mobile Utilities Support Equipment (\$2.2 million). Other adjustments include a proposed appropriation transfer increase of \$1.0 million for Environmental Restoration.

6. Supply Support Equipment (\$-12.8 million)

The decrease of \$12.8 million resulted from specific Congressional reductions of \$9.8 million to Forklift Trucks and \$3.0 million to Other Supply Support Equipment.

7. Personnel and Command Support Equipment (\$-60.9 million)

The adjustment resulted from specific Congressional reductions to Intelligence Support Equipment (\$2.8 million), Operating Forces Support Equipment (\$7.3 million), Physical Security Equipment (\$7.2 million) and the Computer Acquisition Program (\$53.6 million). An offsetting Congressional increase of \$10.0 million for Oceanographic Support Equipment is also included.

8. Spares and Repair Parts (\$-30.0 million)

The decrease of \$30.0 million resulted from specific Congressional reductions.

9. Reimbursable Program (\$40.0 million)

The increase of \$40.0 million results from an adjustment to the reimbursable program to include projected NATO Seasparrow Foreign Military Sales (FMS).

Comparison of FY 1988 Financing as Reflected
In FY 1988/89 Budget With FY 1988 Financing As
Shown in Amended FY 1988/89 Budget
(\$ in Thousands)

	Financing Per FY 1988/89 Budget	Financing Per Amended FY 1988/89 Budget	Increase (+) or Decrease (-)
Program requirements (Total)	5,008,827	4,796,350	-212,477
Program Requirements (Service Account)	4,983,827	4,731,350	-252,477
Program Requirements (Reimbursable)	25,000	65,000	+40,000
Less:			
Anticipated Reimbursements	25,000	65,000	+40,000
Appropriation	4,983,827	4,872,461	-111,366
Transfer to other accounts	0	-142,111	-142,111
Transfer from other accounts	0	+1,000	+1,000
Appropriation (Adjusted)	4,983,827	4,731,350	-252,477

EXPLANATION OF CHANGES IN FINANCING

1. Program Requirements (TOTAL).

The decrease reflects Congressional action to the FY 1988 President's Budget Request, proposed inter-appropriation transfers, and changes to the reimbursable program.

2. Program Requirements (Service Account).

The decrease reflects Congressional reductions to the FY 1988 President's Budget Request of \$111,366 and the net of proposed inter-appropriation transfers of \$141,111.

3. Program Requirements (Reimbursable).

The increase reflects an adjustment to the FY 1988 reimbursable program to cover Seasparrrow Foreign Military Sales (FMS).

4. Anticipated Reimbursements.

As above.

5. Appropriation.

The decrease reflects the difference between what was requested in January 1987 for the FY 1988 President's Budget, and the amount that was actually appropriated in the FY 1988 DOD Appropriations Act.

6. Transfer to Other Accounts.

The decrease reflects a proposed inter-appropriation transfer of appropriated funds to finance Special Operating Forces, CHAMPUS, Communications Services Industrial Fund (\$-135,111) and Section 6 School (GUAM) (-\$7,000).

9. Transfer from Other Accounts.

The increase reflects an inter-appropriation transfer of funds appropriated in other accounts for Environmental Restoration which will be executed in OPN.

10. Appropriation (Adjusted).

As above.

Comparison of FY 1987 Program Requirements as Reflected
In FY 1988 Budget With FY 1987 Program Requirements as
Shown in Amended FY 1988/89 Biennial Budget

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)

	Total Program Requirements Per FY 1988/89 Budget	Program Requirements Per Amended FY 1988/89 Budget	Increase (+) or Decrease (-)
1. Ships Support Equipment	1,028,579	957,241	-71,338
2. Communications & Electronics Equipment	1,996,390	1,830,007	-166,383
3. Aviation Support Equipment	788,366	723,817	-64,549
4. Ordnance Support Equipment	1,144,885	1,190,154	+45,269
5. Civil Engineering Support Equipment	201,144	201,432	+288
6. Supply Support Equipment	69,971	67,968	-2,003
7. Personnel & Command Support Equipment	502,478	494,913	-7,565
8. Spares & Repair Parts	289,858	282,125	-7,733
Reimbursable Program	25,000	12,124	-12,876
Total Fiscal Year Program	6,046,671	5,759,781	-286,890

EXPLANATION BY BUDGET ACTIVITY

1. Ships Support Equipment (\$-71.3 million)

The decrease of \$71.3 million results from Congressional rescissions of prior year available program (\$18.7 million) and minor below threshold reprogrammings (\$52.6 million).

2. Communications and Electronic Equipment (\$-166.4 million)

The decrease of \$166.4 million resulted from Congressional rescissions of prior year available program (\$101.2 million), a proposed appropriation transfer for Air Force Space Launch Recovery (\$36.0 million) and minor below threshold reprogrammings (\$29.2 million).

3. Aviation Support Equipment (\$-64.5 million)

The decrease of \$64.5 million results from Congressional rescissions of prior year available program (\$22.0 million) and minor below threshold reprogramings (\$42.5 million).

4. Ordnance Support Equipment (\$45.3 million)

The increase of \$45.3 million results from Congressional rescissions of prior year available program \$66.6 million) and an increase for minor below threshold reprogramings (\$111.9 million).

5. Civil Engineering Support Equipment (\$.3 million)

The increase of \$.3 million results from Congressional rescissions of prior year available program (\$3.9 million) and an increase for minor below threshold reprogramings (\$4.2 million).

6. Supply Support Equipment (\$-2.0 million)

The decrease of \$2.0 million results from Congressional rescissions of prior year available program (\$1.3 million) and minor below threshold reprogramings (\$.7 million).

7. Personnel and Command Support Equipment (\$-7.6 million)

The decrease of \$7.6 million results from Congressional rescissions of prior year available program (\$8.4 million) and an increase for minor below threshold reprogramings (\$.8 million).

8. Repair Parts (\$-7.7 million)

The decrease of \$7.7 million results from Congressional rescissions of prior year available program (\$3.6 million) and minor below threshold reprogramings (\$4.1 million).

9. Reimbursable Program (\$-12.9 million)

The decrease of \$12.9 million results from actual reimbursable collections.

Comparison of FY 1987 Financing As Reflected
In FY 1988/89 Budget With FY 1987 Program Requirements as
Shown in Amended FY 1988/89 Budget
(\$ in Thousands)

	Financing Per FY 1988/89 Budget	Financing Per Amended FY 1988/89 Budget	Increase (+) or Decrease (-)
Program requirements (Total)	6,046,671	5,759,781	-286,890
Program Requirements (Service account)	6,021,671	5,747,657	-274,014
Program Requirements (Reimbursable)	25,000	12,124	-12,876
Less: Anticipated Reimbursements	25,000	12,124	-12,876
Add: Unobligated balance available to finance subsequent year budget plans	0	288,214	+288,214
Unobligated balance lapsing	12,400	0	-12,400
Appropriation	6,033,371	6,033,371	0
Transfer to other accounts	-26,600	0	+26,600
Transfer from other accounts	14,900	2,500	-12,400
Reappropriation	12,400	0	-12,400
Appropriation (Adjusted)	6,034,071	6,035,871	+1,800

EXPLANATION OF CHANGES IN FINANCING

1. Program Requirements (TOTAL).

The decrease reflects Congressional rescissions of \$225,614, proposed inter-appropriation transfers of \$-36,000, disapproval of the \$12,400 transfer in originally proposed for Production Support Facilities and changes to the reimbursable program of \$-12,876.

2. Program Requirements (Service Account).

The decrease in program requirements represents the effect of Congressional rescissions, funding proposed for inter-appropriation transfer of \$36,000 for Air Force Space Launch Recovery and disapproval of a \$12,400 transfer in for Production Support Facilities.

3. Program Requirements (Reimbursable).

The decrease in the reimbursable program reflects actual orders received in FY 1987.

4. Anticipated Reimbursements.

As above.

5. Unobligated Balance Available to Finance Subsequent Year Budget Plans.

The increase represents balances set aside to fund prior year Congressional rescissions and amounts proposed for inter-appropriation transfers supporting Air Force Space Launch Recovery of \$36,000 and a classified reprogramming for \$26,600.

6. Unobligated Balances Lapsing.

The decrease represents previously proposed appropriated amounts to be transferred into the appropriation.

7. Transfer to Other Accounts.

The increase represents appropriated amounts recommended for transfer out of the appropriation and not yet approved by the Congress.

8. Transfer from Other Accounts.

The decrease represents the disapproval of funds originally proposed for transfer to Production Support Facilities.

9. Appropriation (Adjusted).

The increase reflects the difference between what was requested for direct appropriation for FY 1987 in the FY 1988 President's Budget, and the amount currently requested.