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of The Fleet

Inside Front Cover
On board the aircraft carrier USS Nimitz (CVN 68), LT Michael Stone from Valley Center, Calif., completes signal instructions to launch an F-14 Tomcat. Nimitz and Carrier Air Wing 9 (CVW-9) are currently operating in the Arabian Gulf in support of Operation Southern Watch, enforcing the U.N. "No-Fly Zone" over Southern Iraq. (Photo by PH2 James Watson)
In this era of "chaotic peace," where threats to national security are at once ambiguous and daunting, such forward presence is reassuring. Even at this writing, there are two carrier battle groups poised in the Persian Gulf to answer our nation's call. And they are ready.

On the pages that follow you'll get a snapshot of the Fleet today: its people, its ships and its aircraft. You will also journey into the future. You'll see some of the new equipment our Sailors will train on, sail in and fight with. You'll not only learn firsthand who and what the Fleet is, you'll find out where that Fleet is heading: straight into the next century with a full head of steam.

Sailors

The Chief of Naval Operations calls Sailors the Fleet's smartest weapon. A highly-trained, motivated team of active-duty and Reserve personnel entrusted to operate the most sophisticated equipment on earth, this team can project power anywhere at virtually a moment's notice and then stay there. And it is a diverse team as well, representing every state, every faith and every face in America. Sailors are your next-door neighbors, the high school all-star athlete, the student council president. They are your schoolteachers, pharmacists and your dentists. No matter their background, no matter their hometowns, each one brings honor, courage and commitment to the task at hand. No matter how different one may be from the other, they are all woven together by the common thread of duty. They are Americans, and their diversity only makes the Fleet stronger. Imbued with a special trust, these young men and women are actively engaged in meaningful work around the globe right now, putting the skills and education they have received to good use. And they are ready.
“My goal is to give our people the tools they need to do what they have always done -- to go in harm’s way and prevail.”
- Admiral Jay L. Johnson
Chief of Naval Operations

Aircraft

Forward presence and dominance of both the sea and the littoral are simply not possible without control of the corresponding airspace. That’s where naval aviation comes in. In and of itself a unique team of people, aircraft and shore facilities, naval aviation provides maritime forces with incredible flexibility and rapid response. Our aircraft are multifaceted, capable of a broad range of missions and payloads. Indeed, they have become key elements in the Navy’s ability to achieve its operational and tactical objectives. Most Fleet ships have the capability to support air operations and all of them can be serviced by helicopters. The arsenal of aircraft in today’s Fleet is absolutely essential to success. And it’s getting better all the time.

The introduction of the new F/A-18E/F Super Hornet to the Fleet in 2000 will provide range/payload improvements, survivability enhancements, weapon bring-back improvements and critical growth capacity, all of which are required to keep the strike-fighter force lethal and viable well into the next century. Ultimately the single-seat version of the Super Hornet will replace older versions of the F/A-18, while the two-seat F/A-18F will replace the F-14 Tomcat. In any case, it is proof positive that naval aviation will continue to have an important stake in maritime operations. Beyond the Super Hornet, the Navy is working with its sister services on the development of the Joint Strike Fighter (JSF). Essentially designed to complement the F/A-18E/F, the Fleet’s version of the JSF will be a stealthy, multi-role strike fighter, the first of which is expected to be delivered in 2008.

Today, there are hundreds of U.S. naval aircraft preparing to take off. Some are stationed at various land bases around the world, and some are unfolding their wings on the decks of our aircraft carriers. Wherever they are, wherever they are going, they are in the hands of the best pilots, the best aircrew and the best maintenance personnel in American military history. And they are ready.

Ships

The Fleet sails the most powerful, technologically-advanced warships in the world. No other Navy can put to sea with a force equal to that of the United States. Our nuclear-powered aircraft carriers, surface combatants and submarines give us a distinct tactical advantage in any environment against any threat. And looming on the horizon are platforms such as CVN 77 and CVX, the next generation aircraft carriers; DD 21, the next generation surface combatant; LPD 17, the gator of the future; and New Attack Submarine — providing undersea supremacy into the 21st century. These ships will be more than just specialized units, they will ensure dominance across the spectrum of naval warfare. One hundred years ago, people gazed in awe at a new class of British battleships known as the Dreadnought. Tomorrow, people will gaze in awe at our American warships.

But power and technology are only part of the equation. To be an effective tool of national policy, a navy must be ready, on station and alert. All the hardware in the world won’t make a difference if it isn’t smartly employed. As you read this, more than half of our Fleet is at sea, its readiness assured by the professionalism and dedication of its crews. Our ships may be the Fleet’s lifeblood, but our Sailors are its heart. And they are ready.

Welcome to this, the fifth installment of the All Hands Owner’s and Operator’s Manual.
Southern California
June-July 1997
More than 12,000 Sailors, Marines and Reservists, 24 ships and a variety of Navy, Marine Corps, Army, Air National Guard and Coast Guard aircraft conducted amphibious operations along the California coast.

Counter Drug Operations
Caribbean/Western Pacific
July 1990 - present
U.S. Navy support provided to law enforcement agencies conducting counterdrug operations in the Western Hemisphere.

Exercise UNITAS '97
Latin America
July-November 1997
U.S. Navy and Coast Guard ships joined with navies from 11 nations that circumnavigate Latin America and support regional stability.

Operation Noble Obelisk
Sierra Leone
May-June 1997
USS Kearsarge (LHD 3) and the 22nd Marine Expeditionary Unit conducted noncombatant evacuations of more than 1,200 American citizens and designated third-country nationals from Sierra Leone.
Exercise BALTOPS '97
Baltic Sea
June 1997
USS Cape St. George (CG 71), USS Anzio (CG 68) and USS Estocin (FFG 15) joined 47 other ships from 12 European nations in the largest Partnership for Peace exercise ever conducted.

Operation Silver Wake
Albania
March-June 1997
USS Nassau (LHA 4), USS Pensacola (LSD 38), USS Nashville (LPD 13) and elements of the 26th Marine Expeditionary Unit rescued 889 people, including 400 Americans, from continuing civil strife and provided additional security to the Embassy in the Albanian capital.

Operation Southern Watch
Arabian Gulf
August 1995 - present
Coalition enforcement of the no-fly zone in southern Iraq. Escalating tensions in November caused USS George Washington (CVN 73) carrier battle group to join USS Nimitz (CVN 68) in the Gulf.

Maritime Interception Ops
Arabian Gulf
August 1990 - present
U.S. Navy ships continue to enforce U.N. sanctions against Iraqi imports/exports.

Exercise CARAT '97
Southeast Asia
May 1997
Units of the 7th Fleet trained with the navies and marines from Malaysia, Brunei, Thailand and Singapore during Cooperation Afloat Readiness and Training '97.

Exercise Tandem Thrust ‘97
Australia
March 1997
28,170 troops, 252 aircraft and 43 ships from the U.S. 7th Fleet and Australian Defense Force participated in carrier battle group and amphibious ready group operations, amphibious landings, live fire exercises, ground maneuvers and parachute landings.

Operation Guardian Retrieval
Zaire/Congo
May-August 1997
USS Kearsarge (LHD 3) and elements of the 22nd Marine Expeditionary Unit began their six-month deployment two weeks early to relieve USS Nassau (LHA 4) off the West African coast.

Operation Pacific Haven
Guam
September 1996 - April 1997
6,600 Kurdish refugees began their lives in America via Operation Pacific Haven. Navy involvement included medical and dental specialists, Seabees, and logistic experts.
November 21 — On board the destroyer USS Benfold (DDG 65) operating in the Northern Persian Gulf, CMG1 Joe Brown, from Arlington, Texas, handles a 25mm chain gun while on watch. The ship, home ported in San Diego, was deployed with USS Nimitz (CVN 68) battle group under the U.S. Navy’s 5th Fleet. Benfold was conducting Multinational Maritime Interception Operations as part of the U.N. sanctions against Iraq.
November 16 — On board the nuclear-powered aircraft carrier USS *Nimitz* (CVN 68), AC Buccie Cline from Humphrey, Ariz., monitors final control positions of pilots during aircraft recovery operations in the North Arabian Gulf. *Nimitz* and its embarked air wing were operating in the Gulf to enforce U.N. sanctions against Iraq.

February 15 — AO1(DV) David Ahearn attaches an inert satchel charge to a training mine during exercises in waters off Naval Base Guantanamo Bay, Cuba.

July 28 — U.S. Navy SEALs exit a CH-53E Sea Stallion during a training exercise in Bosnia.
January 18 — The U.S. Navy's newest Strike Fighter, the F/A-18E/F Super Hornet, makes a final approach to the flight deck of the aircraft carrier USS John C. Stennis (CVN 74), during the aircraft's initial sea trials.
August 3 — Personnel man the underway main control watch aboard the Navy’s newest nuclear-powered submarine USS Seawolf (SSN 21). Seawolf uses the latest technology in submarine warfare making it the fastest, most versatile submarine in the U.S. undersea arsenal. The boat was commissioned July 19, 1997.

May 30 — A child clings to a U.S. Navy Sailor after a frightening first ride in a helicopter. She was among the first of 200 children evacuated to the Amphibious Assault Ship USS Kearsarge (LHD 3) from Freetown, Sierra Leone, during operation Noble Obelisk.

August 6, Guam — U.S. Navy, Air Force, Coast Guard and civilian rescuers remove a survivor from the wreckage of Korean Airlines Flight 801.

November 23 — The aircraft carrier USS Nimitz (CVN 68) (bottom) comes alongside the carrier USS George Washington (CVN 73) in the Arabian Gulf. With both carriers and their embarked air wings in the region, the United States had approximately 100 strike aircraft operating independently in the waters of the Arabian Gulf.
July 20 — USS Constitution, “Old Ironsides,” is framed by a life ring aboard the destroyer USS Ramage (DDG 61). Ramage provided escort for the Navy’s oldest commissioned war ship while tugs aided in her transit to Marblehead, Mass. Commissioned Oct. 21, 1797, Old Ironsides set sail unassisted July 21 for the first time in 116 years.

March 23, San Diego — U.S. Navy and Chinese Sailors compare uniform insignias on board the frigate USS Rentz (FFG 46). This marks the first time Chinese warships have crossed the Pacific and visited the continental United States.
June 29 — On board the nuclear-powered aircraft carrier USS Nimitz (CVN 68) in the Eastern Pacific Ocean, AS3 Susana Lomeli, of Pomona, Calif., performs a quick engine change on an AS32-21 tow tractor.

November 16 — The Ticonderoga-class cruiser USS Normandy (CG 60) (front), the nuclear-powered, fast-attack submarine USS Annapolis (SSN 760) (center) and the fast combat support ship USS Seattle (AOE 3) transited the Suez Canal. All three U.S. ships were part of USS George Washington’s (CVN 73) battle group which joined USS Nimitz’s battle group already on station. Both will enforce U.N. sanctions against Iraq by patrolling the No-Fly Zone under Operation Southern Watch.

November 27 — ET3 Class David Fox (left) from Ukiah, Calif., and IC2 Jefferson Richardson from Knoxville, Tenn., enjoy a traditional Thanksgiving dinner on board the aircraft carrier USS Nimitz (CVN 68). Nimitz and its air wing were deployed to the Arabian Gulf in support of U.N. sanctions against Iraq under Operation Southern Watch.
CVN 77 is one of the Navy’s newest platforms where the latest automation and technologies for design, manufacturing and support of aircraft carriers are being integrated. Several concepts, such as the one depicted here, are being considered. Here’s a bird’s-eye view of some of the key areas:

**Concept of Operations (CONOPS)** — Ensures total combat effectiveness, flight deck sortie rate and Joint Task Force (JTF) operation requirements.

**Systems Engineering** — Provides a strategy-to-task-to-technology approach to integrate total ship systems’ engineering processes.

**Life Cycle Cost (LCC)** — Investigates all aspects of platform costs to ensuring best value in true construction through maintenance costs.

**Automation** — Increases manning efficiency and safety while reducing life cycle costs and modernizing the Fleet.

**Combat Systems** — Has new technologies and integrates ship and aircraft systems necessary for naval ships of the future.

**Network Centric Warfare** — Inserts information technology shipwide and ensures complete joint interoperability needs are met.

**Aircraft Launch and Recovery Equipment (ALRE)** — Investigates new technologies as they apply to the launch and recovery of aircraft.

**Propulsion** — Incorporates ship plant technologies with the latest innovation in performance, weight, volume and power generation.

**Signatures** — Concentrates on signature reduction design of the superstructure, hull and the island house.

**Commercialization** — Monitors the marketplace for the best commercial products, commercial-off-the-shelf (COTS) conversion and construction techniques.

Innovative ideas are being incorporated from the start in the design of CVN 77.

**Manpower Reductions**
Technology insertion, space rearrangement, operational procedural changes, advanced sensor technologies, and condition-based maintenance systems all allow for a smaller, specially trained crew.

**Passive Jet Blast Deflector**
Redesigns and new materials mean reduced maintenance cost.

**Expanded Bandwidth**
More onboard and offboard capability gives the ship a communications edge.

**Zonal Electrical Distribution Systems**
Isolate the potential for problems and minimize the effect on the rest of the ship.

Artwork for this page and the front cover were provided by Newport News Shipbuilding.
Innovative Thinking

Parts Standardization and Reduction
The simpler the better.

Reconfigurable Spaces
Life-of-the-ship modular construction designs provide flexibility and reduce cost.

Automation Insertion
Material movement devices, semi-autonomous, gravity compensated weapons handling devices, damage control automation systems and components will reduce the ship’s crew and cost.

Signature Reduction
Curved flight deck edges, enclosed antenna farms, smaller islands and internal aircraft elevators add up to maximum stealth.

CVN 77 will incorporate cost savings and automation, as well as stealth, perhaps in a more traditional single island design.

Island Designs
Improve flight deck access and reduce signature and electronic self-interference.

Aircraft Pit Stop
Semi-automated refueling and servicing in a new configuration and deck location provides faster, more efficient airwing pit stops and requires fewer people.

Hangar Bay
New designs reduce clutter.

To learn more about CVN 77 check out this web site: http://www.nns.com/ten5a1_cvn_smart.htm

JANUARY 1998

Forward ...From The Sea
Aircraft Carriers
The aircraft carrier continues to be the centerpiece of the forces necessary for forward presence. Whenever there has been a crisis, the first question has been: “Where are the carriers?” Carriers support and operate aircraft that engage in attacks on airborne, afloat and ashore targets that threaten free use of the sea. They can respond to global crises in ways ranging from peacetime presence to full scale war. Together with their on board air wings, the carriers have vital roles across the full spectrum of conflict.

Nimitz-class
USS Nimitz (CVN 68)
USS Dwight D. Eisenhower (CVN 69)
USS Carl Vinson (CVN 70)
USS Theodore Roosevelt (CVN 71)
USS Abraham Lincoln (CVN 72)
USS George Washington (CVN 73)
USS John C. Stennis (CVN 74)
PCU Harry S. Truman (CVN 75)

John F. Kennedy-class
USS John F. Kennedy (CVN 67)

Enterprise-class
USS Enterprise (CVN 65)

Cruisers
Modern U.S. Navy guided-missile cruisers perform primarily in a battle force role. These ships are multi-mission (anti-air, anti-surface, anti-submarine) surface combatants capable of supporting carrier battle groups, amphibious forces or of operating independently and as flagships of surface action groups.

Ticonderoga-class
USS Ticonderoga (CG 47)
USS Yorktown (CG 48)
USS Vincennes (CG 49)
USS Valley Forge (CG 50)
USS Thomas S. Gates (CG 51)
USS Bunker Hill (CG 52)
USS Mobile Bay (CG 53)
USS Antietam (CG 54)
USS Leyte Gulf (CG 55)
USS San Jacinto (CG 56)
USS Lake Champlain (CG 57)
USS Philippine Sea (CG 58)
USS Princeton (CG 59)
USS Normandy (CG 60)
USS Monterey (CG 61)
USS Chancellorsville (CG 62)
USS Cowpens (CG 63)
USS Gettysburg (CG 64)
USS Chosin (CG 65)
USS Hue City (CG 66)
USS Shiloh (CG 67)
USS Anzio (CG 68)
USS Vicksburg (CG 69)
USS Lake Erie (CG 70)
USS Cape St. George (CG 71)
USS Vella Gulf (CG 72)
USS Port Royal (CG 73)

California-class
USS California (CGN 36)
USS South Carolina (CGN 37)

Frigates
Guided-missile frigates (FFG) bring an anti-air warfare (AW) capability to the table. Designed as cost-efficient surface combatants, the FFG 7 class is a robust platform, capable of withstanding considerable damage.

Oliver Hazard Perry-class
USS McInerney (FFG 8)
USS Wadsworth (FFG 9)
USS Clark (FFG 11)
USS George Philip (FFG 12)
USS Samuel Eliot Morison (FFG 13)
USS Sides (FFG 14)
USS Estocin (FFG 15)
USS John A. Moore (FFG 19)
USS PHalanx (FFG 22)
USS Lewis B. Puller (FFG 23)
USS Boone (FFG 28)
USS Stephen W. Groves (FFG 29)
USS Reid (FFG 30)
USS Stark (FFG 31)
USS John L. Hall (FFG 32)
USS Jarrett (FFG 33)
USS Aubrey Fitch (FFG 34)
USS Underwood (FFG 36)
USS Crommelin (FFG 37)
USS Curtis (FFG 38)
USS Doyle (FFG 39)
USS Halyburton (FFG 40)
USS Mitscher (FFG 41)
USS Klakring (FFG 42)
USS Thach (FFG 43)
USS Deyo (FFG 45)
USS Rentz (FFG 46)
USS Nicholas (FFG 47)

5,500
Number of daily e-mail messages being sent by USS Nimitz crewmembers during current deployment to the Persian Gulf. Equates to one per crewmember per day.

USS Vandegrift (FFG 48)
USS Bradley (FFG 49)
USS Taylor (FFG 50)
USS Gary (FFG 51)
USS Carr (FFG 52)
USS Halsey (FFG 53)
USS Ford (FFG 54)
USS Eber (FFG 55)
USS Simpson (FFG 56)
USS Reuben James (FFG 57)
USS Samuel B. Roberts (FFG 58)
USS Kaufman (FFG 59)
USS Rodney M. Davis (FFG 60)
USS Ingraham (FFG 61)
Destroyers

Destroyers and guided-missile destroyers operate in support of carrier battle groups, surface action groups, amphibious groups and replenishment groups. Destroyers primarily perform anti-submarine warfare duty while guided-missile destroyers are multi-mission (anti-submarine, anti-air and anti-surface warfare) surface combatants.

Arleigh Burke-class
- USS Arleigh Burke (DDG 51)
- USS Barry (DDG 52)
- USS John Paul Jones (DDG 53)
- USS Curtis Wilbur (DDG 54)
- USS Stout (DDG 55)
- USS John S. McCain (DDG 56)
- USS Mitscher (DDG 57)
- USS Lassen (DDG 58)
- USS Russell (DDG 59)
- USS Paul Hamilton (DDG 60)
- USS Ramage (DDG 61)
- USS Fitzgerald (DDG 62)
- USS Stethem (DDG 63)
- USS Carney (DDG 64)
- USS Benfold (DDG 65)
- USS Gonzalez (DDG 66)
- USS Cole (DDG 67)
- USS The Sullivans (DDG 68)
- USS Millus (DDG 69)
- USS Hopper (DDG 70)
- USS Ross (DDG 71)

Under Construction
- Mahan (DDG 72)
- Decatur (DDG 73)
- McFaul (DDG 74)
- Donald Cook (DDG 75)
- Higgins (DDG 76)
- O'Kane (DDG 77)
- Porter (DDG 78)
- Oscar Austin (DDG 79)
- Roosevelt (DDG 80)
- Winston Churchill (DDG 81)

Kidd-class
- USS Kidd (DDG 993)
- USS Callaghan (DDG 994)
- USS Scott (DDG 995)
- USS Chandler (DDG 996)

Spruance-class
- USS Spruance (DD 963)
- USS Paul F. Foster (DD 964)
- USS Kinkaid (DD 965)
- USS Hewitt (DD 966)
- USS Elliot (DD 967)
- USS Arthur W. Radford (DD 968)
- USS Peterson (DD 969)
- USS Caron (DD 970)
- USS David R. Ray (DD 971)
- USS Oldendorf (DD 972)
- USS John Young (DD 973)
- USS Comte De Grasse (DD 974)
- USS O'Brien (DD 975)
- USS Murff (DD 976)
- USS Bissoe (DD 977)
- USS Stump (DD 978)
- USS Conolly (DD 979)
- USS Moosbrugger (DD 980)
- USS John Hancock (DD 981)
- USS Nicholson (DD 982)
- USS John Rodgers (DD 983)
- USS Leftwich (DD 984)
- USS Cushing (DD 985)
- USS Harry W. Hill (DD 986)
- USS O'Bannon (DD 987)
- USS Thorn (DD 988)
- USS Deyo (DD 989)
- USS Ingerson (DD 990)
- USS Fife (DD 991)
- USS Fletcher (DD 992)
- USS Hayler (DD 997)

Amphibious Warfare Ships

Modern U.S. Navy amphibious assault ships are called upon to perform as primary landing ships for assault operations of Marine expeditionary units. In a secondary role, using AV-8B Harrier aircraft and anti-submarine warfare helicopters, these ships perform sea control and limited power projection missions.

Assault Ships

Transport and land assault forces ashore by use of Landing Craft, Air Cushion (LCAC), conventional landing craft, and helicopters.

Wasp-class
- USS Wasp (LHD 1)
- USS Essex (LHD 2)
- USS Boxer (LHD 4)
- USS Bataan (LHD 5)

Under Construction
- Bon Homme Richard (LHD 6)

Tarawa-class
- USS Tarawa (LHA 1)
- USS Saipan (LHA 2)
- USS Belleau Wood (LHA 3)
- USS Nassau (LHA 4)
- USS Peleliu (LHA 5)

Iwo Jima-class
- USS Guam (LPH 9)
- USS New Orleans (LPH 11)
Amphibious Command

Command ships provide communications and accommodations for fleet commanders and staff. Ships are equipped with air and surface radars, helicopters, chaff launchers and electronic warfare suites and helicopters capabilities. These ships were converted from amphibious warfare ships for employment as command ships.

**Blue Ridge-class**
- USS Blue Ridge (LCC 19)
- USS Mount Whitney (LCC 20)

**USS Forf McHenry'(LSD 43)**
- USS Gunsfon Hall (LSD 44)
- USS Comsfock (LSD 45)
- USS Tortuga (LSD 46)
- USS Rushmore (LSD 47)
- USS Ashland (LSD 48)

**LaSalle & Coronado-class**
- USS Le Salle (AGF 3)
- USS Coronado (AGF 11)

**Anchorage-class**
- USS Anchorage (LSD 36)
- USS Portland (LSD 37)
- USS Pensacola (LSD 38)
- USS Mount Vernon (LSD 39)
- USS Fort Fisher (LSD 40)

Tank Landing

Tank landing ships (LST) are used to transport and land tanks, amphibious vehicles and other rolling stock in amphibious assault. The two ships of this class, now assigned to the Naval Reserve Forces, are the only this 20-ship class of LSTs remaining in the fleet.

**Newport-class**
- USS Frederick (LST 1184)
- USS La Moure County (LST 1194)

Amphibious Transport Dock

Amphibious transport dock ships are used to transport and land Marines, their equipment and supplies by embarked landing craft or amphibious vehicles augmented by helicopters in amphibious assault.

**Austin-class**
- USS Austin (LPD 4)
- USS Ogden (LPD 5)
- USS Duluth (LPD 6)
- USS Cleveland (LPD 7)
- USS Dubuque (LPD 8)
- USS Denver (LPD 9)
- USS Juneau (LPD 10)
- USS Shreveport (LPD 12)
- USS Nashville (LPD 13)

Under Construction
- San Antonio (LPD 17) amphibious transport dock ship.

Dock Landing

Support amphibious operations on a hostile shore via Landing Craft Air Cushion (LCAC), conventional landing craft and helicopters.

**Harpers Ferry-class**
- USS Harpers Ferry (LSD 49)
- USS Carter Hall (LSD 50)
- USS Oak Hill (LSD 51)

Attack Submarines

Attack submarines are designed to seek and destroy enemy submarines and surface ships. Their other missions range from intelligence collection and special forces delivery to antiship and strike warfare. It is a multimission vessel, capable of deploying to forward ocean areas to search out and destroy enemy submarines and surface ships and to fire missiles in support of other forces.

**Los Angeles-class**
- USS Los Angeles (SSN 688)
- USS Philadelphia (SSN 690)
- USS Memphis (SSN 691)

**Seawolf-class**
- USS Seawolf (SSN 21)
- USS Connecticut (SSN 22)

**Blue Ridge-class**
- USS Blue Ridge (LCC 19)
- USS Mount Whitney (LCC 20)

**Los Angeles-class**
- USS Los Angeles (SSN 688)
- USS Philadelphia (SSN 690)
- USS Memphis (SSN 691)
USS Topeka (SSN 754)  
USS Miami (SSN 755)  
USS Scranton (SSN 756)  
USS Alexandria (SSN 757)  
USS Asheville (SSN 758)  
USS Jefferson City (SSN 759)  
USS Annapolis (SSN 760)  
USS Springfield (SSN 761)  
USS Columbus (SSN 762)  
USS Santa Fe (SSN 763)  
USS Boise (SSN 764)  
USS Montpelier (SSN 765)  
USS Charlotte (SSN 766)  
USS Hampton (SSN 767)  
USS Hartford (SSN 768)  
USS Toledo (SSN 769)  

Ballistic Missile Submarines

Among the Navy's highest priority programs, ballistic missile submarines are the cornerstone of the national security policy, functioning as the most survivable and enduring leg of the strategic deterrent triad.

**Ohio-class**
- USS Ohio (SSBN 726)
- USS Michigan (SSBN 727)
- USS Florida (SSBN 728)
- USS Georgia (SSBN 729)
- USS Henry M. Jackson (SSBN 730)
- USS Alabama (SSBN 731)
- USS Alaska (SSBN 732)
- USS Nevada (SSBN 733)
- USS Tennessee (SSBN 734)
- USS Pennsylvania (SSBN 735)
- USS West Virginia (SSBN 736)
- USS Kentucky (SSBN 737)
- USS Maryland (SSBN 738)
- USS Nebraska (SSBN 739)
- USS Rhode Island (SSBN 740)
- USS Maine (SSBN 741)
- USS Wyoming (SSBN 742)
- USS Louisiana (SSBN 743)

**Narwhal-class**
- USS Narwhal (SSN 671)

**Sturgeon-class**
- USS Pogy (SSN 647)
- USS Sand Lance (SSN 660)
- USS Hawkbill (SSN 666)
- USS Pintado (SSN 672)
- USS Trepang (SSN 674)
- USS Billfish (SSN 676)
- USS Archerfish (SSN 678)
- USS William H. Bates (SSN 680)
- USS Batfish (SSN 681)
- USS Tunny (SSN 682)
- USS Parche (SSN 683)
- USS Cavalla (SSN 684)
- USS L. Menzefiner Rivers (SSN 686)

**Benjamin Franklin-class**
- USS Kamehameha (SSN 642)
- USS James K. Polk (SSN 645)

Mine Warfare Ships

In the early 1980s, the Navy began developing a new mine countermeasures (MCM) force that included two new classes of ships and minesweeping helicopters.

**Inchon-class**
- USS Inchon (MCS 12)

**Mine Countermeasures**

USS Inchon was converted to a command and control ship to support an embarked composite helicopter squadron of eight CH-53E and two SAR/spotter helicopters, and provide alongside support and services for up to four MCM/MHC ships.

**Avenger-class**
- USS Avenger (MCM 1)
- USS Defender (MCM 2)
- USS Sentry (MCM 3)
- USS Champion (MCM 4)
- USS Guardian (MCM 5)
- USS Devastator (MCM 6)
- USS Patriot (MCM 7)
- USS Scout (MCM 8)
- USS Pioneer (MCM 9)
- USS Warrior (MCM 10)
- USS Gladiators (MCM 11)
- USS Ardent (MCM 12)
- USS Dextrous (MCM 13)
- USS Chief (MCM 14)

**Tenders**

Submarine tenders are the largest of the active auxiliaries. Their crews are made up mostly of technicians and repair personnel. The L. Y. Spear-class is designed and fitted to accommodate attack submarines and can service up to four submarines moored alongside simultaneously. The Simon Lake-class is configured especially to service ballistic missile submarines.

**L. Y. Spear-class**
- USS Emory S. Land (AS 39)
- USS Frank Cable (AS 40)
- USS McKee (AS 41)

**Simon Lake-class**
- USS Simon Lake (AS 33)

**Minehunters Coastal**

Osprey-class (MHC 51) ships are mine hunter-killers capable of finding, classifying and destroying moored and bottom mines.

**Osprey-class**
- USS Osprey (MHC 51)
- USS Heron (MHC 52)
- USS Pelican (MHC 53)
- USS Robin (MHC 54)
- USS Oriole (MHC 55)
- USS Kingfisher (MHC 56)
- USS Cormorant (MHC 57)
- USS Black Hawk (MHC 58)
- USS Falcon (MHC 59)
- USS Cardinal (MHC 60)

Under Construction
- Raven (MHC 61)
- Shrike (MHC 62)

**Percentage of the earth's land mass that is within striking range of SSN's using Tomahawks.**

JANUARY 1998
Coastal Patrol
Primarily provides coastal protection and interdiction. Also provides Naval Special Warfare Support, including long-range SEAL insertion/extraction and tactical swimmer operations.

Cyclone-class
USS Cyclone (PC 1)
USS Tempest (PC 2)
USS Hurricane (PC 3)
USS Monsun (PC 4)
USS Typhoon (PC 5)
USS Sirocco (PC 6)
USS Squall (PC 7)
USS Zephyr (PC 8)
USS Firebolt (PC 10)
USS Whirlwind (PC 11)
USS Thunderbolt (PC 12)
USS Shamal (PC 13)

Safeguard-class
USS Safeguard (ARS 50)
USS Grasp (ARS 51)
USS Salvor (ARS 52)
USS Grapple (ARS 53)

Mobile Combat Logistics Force
Provide fuel, provisions and ammunition to combatant ships at sea via underway and vertical replenishment. These ships are an integral part of carrier battle groups as fuel, ammunition and stores reservoirs.

Fast Combat Support
The fast combat support ship (AOE) is the Navy’s largest combat logistics ship. The AOE has the speed and armament to keep up with the carrier battle groups.

Sacramento & Supply-classes
Supply-class
USS Supply (AOE 6)
USS Rainer (AOE 7)
USS Arctic (AOE 8)
Under Construction
Bridge (AOE 10)

Fleet Support Ships
Provide repair, salvage and a variety of other types of support to the combatant fleet.

Rescue, Salvage & Towing
The mission of the rescue and salvage ships is four-fold: de-beach stranded vessels, heavy lift capability from ocean depths, towing of other vessels and manned diving operations. For rescue missions, these ships are equipped with fire monitors forward and amidships which can deliver either firefighting foam or sea water.

Sacramento-class
USS Sacramento (AOE 1)
USS Camden (AOE 2)
USS Seattle (AOE 3)
USS Detroit (AOE 40)

Fleet Oiler
Transport bulk petroleum and lubricants from depots to underway battle group station ships, as well as combatants and support forces by alongside and vertical replenishment.

Cimarron-class
USS Cimarron (AO 177)
USS Monongahela (AO 178)
USS Merrimack (AO 179)
USS Willamette (AO 180)
USS Plate (AO 186)

Ammunition
Ammunition ships keep the fleet supplied with ammunition and ordnance, independently or with other combat logistic ships. Ammunition is delivered by slings on ship-to-ship cables and by helicopters.
Military Sealift Command

The Military Sealift Command (MSC) maintains a fleet of ships which provides a variety of unique support missions to the fleet and other military services. These ships are primarily crewed by civilians with a contingent of U.S. Navy personnel.

Missile Range Instrumentation

USNS Observation Island operates worldwide, monitoring foreign missile tests for the Air Force Intelligence command. This ship carries the Air Force’s Cobra Judy phased-array radar.

Ammunition

Ammunition ships keep the fleet supplied with ammunition and ordnance, independently or with other combat logistic ships. Ammunition is delivered by slings on ship-to-ship cables, and by helicopters.

Combat Stores

Combat Stores Ships are capable of underway replenishment using tensioned cargo rigs and UH-46 Sea Knight helicopters. Combat Stores Ships carry refrigerated stores, dry provisions, technical spares, general stores, fleet freight and mail.

Hospital Ships

The hospital ships (T-AH) provide emergency, on-site surgical and medical care to U.S. deployed forces in wartime or a contingency. The two hospital ships are part of the Military Sealift Command’s Strategic Sealift Force. Each ship contains 1,000 hospital beds, 12 operating rooms, radiological services, medical laboratories, an optometry lab, a pharmacy and two oxygen producing plants.

Cable Repair

The Cable Repair Ship performs maintenance on the Sound Surveillance System (SOSUS), a network of strategically placed sonar sensors that provide early warning of submarines.

Fleet Oilers

Fleet Oilers operate as a unit of an underway replenishment group, replenishing petroleum products and ordnance to the fleet at sea during underway replenishments (UNREPS).
The bottom line for any amphibious ship is the transport, landing and support of Marine Corps expeditionary forces. How successful these ships are in fulfilling this mission and adapting to an ever-changing world can be determined by design.

The LPD 17 program incorporates the full-range of ship design expertise and goes one step beyond. “Design for Ownership” is a basic precept for the new ship class. This philosophy means involving the Navy and Marine Corps operators, maintainers and trainers in the design process from the very start. What’s to be gained? A significant increase in quality and cost efficiency for one. For another, familiarization and acceptance is greater when a ship joins the fleet because the process has been going on for years. The more familiar the ship, the greater the chances are to fully realize its potential.

Christened *San Antonio*, the first of 12 LPD 17-class ships, is expected to be delivered to the Navy in 2002. As the numbers increase, this class will replace 41 ships of the LPD 4, LSD 36, LKA 113 and LST 1179-classes. To accomplish this, the new ships must be truly multipurpose and capable of supporting the evolving role of the Marine Corps into the 21st century.

**Statistics:**

- **Length**: 684 ft.
- **Beam**: 105 ft.
- **Draft**: 23.0 ft.
- **Displacement**: 25,300 tons
- **Speed**: 22+ knots
- **Cost**: About $641 million

**Designed as a multipurpose ship, LPD 17 will be capable of supporting the ever-changing role of the Marine Corps in the 21st century.**
Warfare Capability: Meets all stated operational requirements.
Mission Flexibility: Readily adaptable to the full range of Navy-Marine Corps, Joint Service and NATO expeditionary warfare missions.
Technical Adaptability: Designed for rapid, affordable performance upgrades throughout the life of the ship.
Supportability: Reliable, maintainable and affordable throughout the life of the ship.
Air-to-Air Missiles

Sparrow

Sidewinder
Primary mission: All-weather, heat-seeking, short-range, dogfight missile; can be used day or night; and homes in on the engine exhaust of target aircraft. Dimensions: length – 9 ft.; diameter – 5 in.; weight – 188 lbs. Range: 10,000 to 20,000 yards. Payload: annular blast fragmentation; weight – 20.8 lbs.

Cruise Missiles

Harpone
Primary mission: All-weather, over-the-horizon, anti-ship missile; capable of being launched from surface ships, submarines or from aircraft to destroy surface combatants, submarines or other shipping. Dimensions: length – 15 ft., surface/submarine launched; 12 ft., 7 in. air launched; diameter – missile body, 13.5 in.; Payload: 500 lbs. high explosive, blast penetrator.

Tomahawk Cruise Missile

Fleet Ballistic Missiles

Trident II (D-5)
Primary mission: Subsurface to surface strategic nuclear deterrence. Dimensions: length – 44 ft.; diameter – 83 in.; weight – 126,000 lbs. Range: more than 6,000 nautical miles. Payload: Thermonuclear MIRV (Multiple Independent Re-entry Vehicle); Multiple Re-entry Vehicle (MRV) warhead.

Trident I (C-4)

Phoenix
Primary mission: All-weather, long-range missile, carried in clusters, up to six missiles on the F-14; provides near simultaneous launch against multiple air targets. Dimensions: length – 13 ft.; diameter – 15 in.; weight – 989 lbs. Range: more than 104 nautical miles. Payload: proximity fuse, high-explosive; weight – 135 lbs.

AMRAAM

SLAM-ER
Primary mission: All-weather, intermediate-range with precision strike capability against land targets and ships in port, capable of being launched from land or from aircraft. Dimensions: length – 14 ft.; diameter – 13.4 in.; weight – 1,400 lbs. Range: more than 100 nautical miles. Payload: 500 lbs high explosive; blast fragmentation.
Air-to-Ground Missiles

HARM Missile

Shrike Anti-radar Missile
Primary mission: The AGM-45 Shrike is designed to home in on anti-aircraft radars. **Dimensions**: length – 10 ft., diameter – 6 in.; weight – 390 lbs. **Range**: delivered by fighter aircraft, employs solid-fueled rocket. **Payload**: explosive blast warhead.

Surface-to-Air Missiles

Standard Missile Family

IR Maverick Missile
Primary mission: Forward fired, infrared-guided weapon; designed for day/night sea warfare and land interdiction. **Dimensions**: length – 8 ft. 2 in.; diameter – 12 in.; wing span – 2 ft. 4 in.; weight 675 lbs. **Range**: 12 nautical miles. **Payload**: 300 lb. penetrating/blast warhead.

Naval Guns

MK 15 Phalanx Close-in Weapons System (CIWS)
Primary mission: Fast-reaction, rapid-fire 20-millimeter gun system; provides defense against anti-ship missiles and hostile air targets at short range. **Dimensions**: weight – 12,500 lbs.; magazine capacity – 1,500 rounds of 20 mm ammunition. **Features**: Fires 3,000 – 4,500 rounds per minute.

MK 75, 76mm.62 Caliber Gun System
Primary mission: Provides frigates and other combatants with a fast-reaction, lightweight gun; counters aircraft, cruise missiles and surface ships. **Features**: an enclosed naval gun mount, single barrel, remote-controlled, rapid-fire capability.

5-inch/.54 Caliber Lightweight Gun
Primary mission: Fires at a rate of 16 to 20 rounds per minute; provides surface combatants with accurate naval gunfire against fast, highly maneuverable surface targets, air threats and shore targets.

Torpedoes

MK 48 and MK 48 Advanced Capability (AdCap) Torpedo
Primary mission: Subsurface to submarine and subsurface to surface. **Dimensions**: length – 19 ft.; diameter – 21 in.; weight – 3,520 lbs., (MK 48 AdCap-3,695 lbs.). **Range**: 23 miles; depth – more than 1,200 ft. **Guidance**: wire-guided active and/or passive homing. **Payload**: 650 lbs. high-explosive warhead.

MK 50 Torpedo
Primary mission: Surface and air to sub-surface. **Dimensions**: length – 9.5 ft.; diameter – 12.75 in.; weight – 800 lbs. **Guidance**: active/passive acoustic homing.

MK 46 Torpedo
Primary mission: Launched from surface combatant torpedo tubes, ASROC missile and fixed and rotary wing aircraft. **Dimensions**: length – 8.5 ft.; diameter – 12.75 in.; weight – 508 lbs. **Guidance**: 2 different modes – active or passive/active homing. **Payload**: 98 lbs. of PBXN-103 high explosive.
Representing a revolution in cost-effective design and construction techniques and mission flexibility, the new attack submarine (NSSN) will provide the U.S. Navy with the capabilities it requires to maintain the nation’s undersea supremacy well into the 21st century.

The NSSN will satisfy the full spectrum of open ocean as well as regional and near-land missions. Equipped to wage multidimensional warfare, these submarines will be key to America’s sea power and national defense with their stealth, lethality and unlimited endurance.

Now under design and scheduled for a 1998 construction start, NSSN is being optimized for maximum technological and operational flexibility. When the lead ship of the class joins the Navy’s fleet in 2004, it will reflect the uncompromising quest to engineer the proper balance between advanced technologies and affordability.

**Statistics:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displacement</td>
<td>7,800 tons</td>
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<tr>
<td>Length</td>
<td>377 feet</td>
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<tr>
<td>Beam</td>
<td>34 feet</td>
</tr>
<tr>
<td>Speed</td>
<td>More than 25 knots</td>
</tr>
<tr>
<td>Depth</td>
<td>More than 800 feet</td>
</tr>
<tr>
<td>Payload</td>
<td>38 weapons, including Vertical Launching System and Special Operations Forces</td>
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<tr>
<td>Weapon Launch</td>
<td>4 21-inch torpedo tubes, 12 Vertical Launching System tubes</td>
</tr>
<tr>
<td>Weapons</td>
<td>Tomahawk land-attack missiles, MK 48 Advanced Capability torpedoes, advanced mobile mines and unmanned underwater vehicles.</td>
</tr>
</tbody>
</table>

**Intelligence, Surveillance, Reconnaissance**

NSSN has superior covert, non-provocative capabilities. Onboard imaging, acoustic and electronics sensor systems, unmanned vehicles and other off-board systems can continuously monitor the battlespace, allowing quick response to adversaries’ moves.

**Special Operations**

NSSN will support the full spectrum of special operations missions — search and rescue, intelligence collection, sabotage and diversionary attacks; directing air strikes and other clandestine missions that demand a stealthy team of elite forces.
ORDER OF PRECEDENCE — U.S. NAVY

<table>
<thead>
<tr>
<th>Medal Name</th>
<th>Image</th>
<th>Medal Name</th>
<th>Image</th>
<th>Medal Name</th>
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<tbody>
<tr>
<td>Medal of Honor</td>
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<td>Navy Cross</td>
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<td>Distinguished Service Medal</td>
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<td>Navy and Marine Corps Medal</td>
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<td>Bronze Star</td>
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<td>Meritorious Service Medal</td>
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<td>Joint Service Commendation Medal</td>
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<td>Purple Heart</td>
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<tr>
<td>Meritorious Service Medal</td>
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<td>Joint Service Achievement Medal</td>
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<td>Combat Action Ribbon</td>
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<td>Meritorious Unit Commendation</td>
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<td>Navy &quot;E&quot; Ribbon</td>
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<td>National Defense Service Medal</td>
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<td>Humanitarian Service Medal</td>
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<td>Military Outstanding Volunteer Service Medal</td>
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<td>Naval Reserve Meritorious Service Medal</td>
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<td>Southwest Asia Service Medal</td>
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<td>Armed Forces Expeditionary Medal</td>
<td></td>
<td>Naval Reserve Sea Service Medal</td>
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</tr>
</tbody>
</table>
**DEVICES**

**GOLD STAR**
Denotes each subsequent award of the same Navy decoration.

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**SILVER STAR**
Worn in the same manner as the gold star, in lieu of five gold stars.

---

**BRONZE OAK LEAF CLUSTER**
Represents second and subsequent entitlements of awards.

---

**SILVER OAK LEAF CLUSTER**
Worn for the sixth, 11th or in lieu of five bronze oak leaf clusters.

---

**HOURGLASS**
Issued for each succeeding award of the Armed Forces Reserve Medal.

---

**"O" DEVICE**
U.S. Coast Guard device denoting performance under operational conditions.

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**E" DEVICE**

---

**"E" WREATH**
Denotes 4 or more Battle "E" awards.

---

**SILVER SERVICE STAR**
Worn in the same manner as the bronze star, lieu of five bronze service stars.

---

**WINTERED OVER**
Authorized for service involving direct participation in combat operations.

---

**EUROPE AND ASIA CLASP**
Worn on the suspension ribbon of the Navy Occupation Service Medal.

---

**STRIKE/FLIGHT DEVICE**
Bronze arabic numeral denotes the total number of strike/flight awards of the Air Medal earned subsequent to April 9, 1962.

---

**FLEET MARINE FORCE COMBAT OPERATIONS INSIGNIA**
For Navy personnel attached to Fleet Marine force units participating in combat operations.

---

**"3/16" PALM**
Worn on the Republic of Vietnam Gallantry Cross Unit Citation and Republic of Vietnam Civil Actions Unit Citation ribbons.

The above display represents the correct order of precedence for ribbons most likely to be worn today on the Navy uniform. Devices worn on these ribbons must be worn in a specific manner and are used to denote additional awards or participation in a specific event. For additional information about the proper order of display, placement of devices or about ribbons not shown, refer to SECNAVINST 1650.1F and U.S. Navy Uniform Regulation (NAVPERS 1566.5G).
The Next Generation ... designed today!

NSSN meets America's requirement for multimission, flexible, combat-ready warships that can "walk softly and carry a big stick" well into the 21st century.

Modular Design
NSSN's equipment modules are constructed and tested off-hull. Each module's "independence" facilitates technology insertion into follow-on ships as well as technology upgrades later in the ship's life.
Navy Enlisted Ratings

AB
Aviation Boatswain's Mate
(used at pay grade E-9)

ABE
(Aviation Boatswain's Mate Equipment)

ABF
(Fuels)

ABH
(Aircraft Handling)

AC
Air Traffic Controller

AD
Aviation Machinist's Mate
(Compressed with AM to become AFCM at pay grade E-9)

AE
Aviation Electrician's Mate
(Compressed with AT to become AVCM at pay grade E-9)

AG
Aerographer's Mate

AK
Aviation Storekeeper

AM
Aviation Structural Mechanic
(used at pay grade E-8 only)
(Compressed with AD to become AFCM at pay grade E-9)

AME
(Safety Equipment)

AMH
(Hydraulics)

AMS
(Structures)

AS
Aviation Support Equipment Technician

AO
Aviation Ordnanceman

AT
Aviation Electronics Technician
(Compressed with AE to become AVCM at pay grade E-9)

Signal flags are just one method SM1(AW) Phillip D. Avery can use to communicate between ships at sea. Signalmen maintain lookouts and must be proficient in visual communication to ensure the safety of the ship and crew.

Number of Sailors and Marines who visit one of Navy Dentistry's 226 clinics worldwide each day.

8,738

Look, no cavities!
Dental technicians like DT3 Kimberly S. Combs of Shreveport, La., assist dentists with patient care, perform as X-ray technicians, make and fit dental prosthetics and work in clinical laboratories.

The name says it all for machinist's mates. Like MM1(SS) John S. Hakala, Sailors in this rating are responsible for the operation of the various engines, compressors and air conditioning equipment aboard ship.
Navy Enlisted Ratings

1.2 Million
Number of eggs served for breakfast aboard USS John F. Kennedy during a recent six month deployment.

Source: USS John F. Kennedy

DS
Data Systems Technician

EN
Engineman

DT
Dental Technician

EO
Equipment Operator
(becomes EQCM at pay grade E-9)

EA
Engineering Aide
(becomes CUCM at pay grade E-9)

GM
Gunner's Mate
(used at pay grade E-7 and above)

GMG (Guns)
GMM (Missiles)

FT
Fire Control Technician

Food preparation is what mess management specialists, like MS2(SS) Ronald R. Sturtz, are best known for. But they must also know how to manage the entire operation of a Navy dining facility or bachelor quarters.

EM
Electrician's Mate

EW
Electronic Warfare Technician

FC
Fire Controlman

Photo by Jo Ricks/AFJ

Forward ... From The Sea
GMGSN Harmony Wright of Grand Junction, Colo., inspects an M-14 rifle on board USS Barry (DDG 52). Gunner’s mates are responsible for operating, maintaining and repairing the Navy’s guns and guided-missile launching systems.

- Maintaining, testing and replacing aircraft engines are the duties of the aviation machinist’s mate. AD3 Zandy Marsh of Wichita Falls, Texas, works on a J52P8C engine while deployed aboard USS Enterprise (CVN 65).
AMH3 Marco A. Reyes works on the hydraulic lines of an S-3B Viking aircraft. Aviation structural mechanics are trained in the maintenance and repair of aircraft exteriors, landing gear, hydraulic systems and safety equipment.

A torpedoman’s mate does much more than maintain torpedo systems. As weapons experts they are called upon for other duties. TM2 Melton L. Ford of Greenville, Miss., takes over a .50-caliber gun mount aboard USS Enterprise (CVN 65).
Aviation electronics technicians are responsible for troubleshooting, maintaining and repairing many electronic systems aboard high-tech naval aircraft. Here, AT3 Gabrielle Hickman of Fighter Squadron (VF) 101, gives the thumbs-up during launch operations aboard USS George Washington (CVN 73).
The Super Hornet is an all-weather, day and night, multimission strike fighter that is harder to find, harder to hit, and harder to disable.

Both the single-seat E and two-seat F models offer longer range, greater endurance, more payload-carrying capability, more powerful engines, increased carrier bring-back capability, enhanced survivability and a renewed potential for future growth.

The first production F/A-18E/F Super Hornets will enter service with the U.S. Navy in 1999. The first operational squadron of Super Hornets will be ready for deployment in 2001.

<table>
<thead>
<tr>
<th>Statistics:</th>
</tr>
</thead>
</table>

**Primary Function:** Multirole attack and fighter aircraft  
**Contractor:** The Boeing Company  
**Unit Cost:** $35 million  
**Propulsion:** Two F414-GE-400 turbofan engines  
**Thrust:** 22,000 pounds (9,977 kg) static thrust per engine  
**Length:** 60.3 feet (18.5 meters)  
**Height:** 16 feet (4.87 meters)  
**Maximum Take Off Gross Weight:** 66,000 pounds (29,932 kg)  
**Wingspan:** 44.9 feet (13.68 meters)  
**Ceiling:** 50,000+ feet  
**Speed:** Mach 1.8+  
**Crew:** E model - One; F model - Two  
**Armament:** One 20mm MK-61A1 Vulcan cannon  
**External payload:** AIM 9 Sidewinder, AIM 7 Sparrow, AIM-120 AMRAAM, Harpoon, HARM, Shrike, SLAM, SLAM-ER, Walleye, Maverick missiles; Joint Stand-Off Weapon (JSOW); Joint Direct Attack Munition (JDAM); various general purpose bombs, mines and rockets.  
**First Flight:** December 1995  
**First Carrier Landing:** January 1997

34 in. Fuselage Extension

The fuselage is slightly longer — the result of a 34-inch extension.
Flying into the future

25% Larger Wing
A full 25 percent bigger than its predecessor, Super Hornet has nearly half as many parts.

35% Higher Thrust Engines
Increased engine power comes from the F414-GE-400, an advanced derivative of the Hornet’s current F404 engine family. The F414 produces 35 percent more thrust and improves overall mission performance. Enlarged air inlets provide increased airflow to the engines.

33% Additional Internal Fuel
Structural changes to the airframe increase internal fuel capacity by 3,600 pounds, or about 33 percent. This extends the Hornet’s mission radius by up to 40 percent.

Two Additional Multi-Mission Weapons Stations
Super Hornet has two additional weapons stations, bringing the total to 11. For aircraft carrier operations, about three times more payload can be brought back to the ship.

Hot Link
To learn more about the Super Hornet check out this web site: http://www.navymil/aircraft/fa18/shornet.html

Photos & art courtesy of McDonnell Aircraft & Missile Systems

JANUARY 1998

Forward...From The Sea
Fighters, Bombers & Tactical Aircraft

**F/A-18 Hornet**

The F/A-18 Hornet, an all-weather aircraft, is used as an attack aircraft as well as a fighter. In its fighter mode, the F/A-18 is used primarily as a fighter escort and for fleet air defense; in its attack mode, it is used for force projection, interdiction and close and deep air support.

- **Wingspan:** 37 ft., 6 inches
- **Length:** 56 ft.
- **Height:** 15 ft., 3.5 in.
- **Speed:** Mach 1.8+
- **Range:** 2,073 miles
- **Armament:** 20mm M-61A1 Vulcan cannon; Sparrow II missile (fighter); Sidewinder missile (fighter); Guided / conventional air-to-ground ordnance (attack); Harpoon & HARM missiles
- **Crew:** 1 (A, C & E); 2 (B, D & F)

**Navy Aircraft**

- **VFA-63 Rampagers**
- **VFA-86 Sidewinders**
- **VFA-87 Golden Warriors**
- **VFA-94 Mighty Strikes**
- **VFA-97 Warhawks**
- **VFA-105 Gunslingers**
- **VFA-106 Gladiators**
- **VFA-113 Stingers**
- **VFA-115 Eagles**
- **VFA-131 Wildcats**
- **VFA-132 Privateers**
- **VFA-136 Kestrels**
- **VFA-146 Blue Diamonds**
- **VFA-147 Argonaughts**
- **VFA-151 Fighting Vigilantes**
- **VFA-192 World Famous Golden Dragons**
- **VFA-195 Dambusters**
- **VFA-203 Blue Dolphins**
- **VFA-204 River Rattlers**

**Marine Corps squadrons**

- **VMFA-112 Cowboys**
- **VMFA-115 Silver Eagles**
- **VMFA-122 Crusaders**

**VF-2 Bounty Hunters**
**VF-11 Red Rippers**
**VF-14 Tophatters**
**VF-31 Tomcatters**
**VF-32 Swordsmen**
**VF-41 Black Aces**
**VF-101 Grim Reapers**
**VF-102 Diamondbacks**
**VF-103 Jolly Rogers**
**VF-143 Puking Dogs**
**VF-154 Black Knights**
**VF-201 Hunters**
**VF-211 Checkmates**
**VF-213 Black Lions**

**EA-6B Prowler**

The EA-6B Prowler provides an umbrella of protection over strike aircraft and ships by jamming enemy radar, electronic data links and communications. It is a twin-engine, mid-wing aircraft designed for carrier and advanced base operations. The Prowler is a fully integrated electronic warfare system combining long-range, all-weather capabilities with advanced electronic countermeasures.

**F-14 Tomcat**

The F-14 Tomcat is a supersonic, twin-engine, variable sweep wing, fighter designed to attack and destroy enemy aircraft at night and in all weather conditions. The F-14 can track up to 24 targets simultaneously with its advance weapons control system and attack six with Phoenix AIM-54A missiles while continuing to scan the airspace.

- **Wingspan:** 64 ft. (unswept); 38 ft. (swept)
- **Length:** 61 ft., 8 inches
- **Height:** 16 ft.
- **Speed:** Mach 2+
- **Range:** 2,300 miles
- **Armament:** AIM-54s, AIM-7s and AIM-9s Air-to-ground ordnance; 20mm M-61A1 Vulcan cannon
- **Crew:** 2
Wingspan: 68 ft., 8 inches
Length: 53 ft., 4 inches
Height: 22 ft., 9 inches
Speed: 518 mph
Range: 2,645 miles
Armament: Harpoon missiles; rockets; mines; torpedoes; depth charges
Crew: 4

Navy squadrons
VAQ-129 Vikings
VAQ-130 Zappers
VAQ-131 Lancers
VAQ-132 Scorpions
VAQ-133 Wizards
VAQ-134 Garudas
VAQ-135 Black Ravens
VAQ-136 Gauntlets
VAQ-137 Rooks
VAQ-136 Yellowjackets
VAQ-139 Cougars
VAQ-140 Patriots
VAQ-141 Shadowhawks
VAQ-142 Gray Wolves
VAQ-209 Star Warriors

Marine Corps squadrons
VMAQ-1 Banshees
VMAQ-2 Panthers
VMAQ-3 Moondogs
VMAQ-4 Seahawks

P-3C Orion
The P-3C Orion is a land-based, long range anti-submarine warfare (ASW) patrol aircraft. Using sonobuoys and magnetic anomaly detection equipment, the P-3C detects, identifies and destroys enemy submarines.

Wingspan: 99 ft., 8 in.
Length: 116 ft., 10 in.
Height: 33 ft., 8 inches
Speed: 473 mph
Range: 2,383 miles
Armament: Harpoon missile; MK-46 torpedoes; mines, depth charges;
Crew: 4

VP-1 Screaming Eagles
VP-4 Skinny Dragons
VP-5 Mad Foxes
VP-8 Tigers
VP-9 Golden Eagles
VP-10 Red Lancers
VP-16 War Eagles
VP-26 Tridents
VP-30 Pro's Nest
VP-40 Fighting Marlins
VP-45 Pelicans
VP-46 Grey Knights
VP-47 Golden Swordsmen
VP-62 Broad Arrows
VP-64 The Condors
VP-65 Tridents
VP-66 The Liberty Bells
VP-69 Totems
VP-91 Black Cats
VP-92 Minutemen
VP-94 Crawfishers

S-3B Viking
The S-3B Viking is a jet aircraft used in the detection and attack of submarines and as an armed scout in the anti-surface role. Extremely versatile, the Viking is also equipped for tanking, mining and limited electronic surveillance. S-3B's high speed computer system processes information generated by acoustic and non-acoustic target sensor systems.
Navy Aircraft

Command & Control Aircraft

E-2C Hawkeye

The E-2C Hawkeye is the Navy’s all-weather, carrier-based tactical warning and control system aircraft. It provides airborne early warning and command and control functions for the carrier battle group. Additional missions include surface surveillance coordination, strike and interceptor control, search and rescue guidance and communications relay.

Wingspan: 80 ft. 7 in.
Length: 57 ft. 6 in.
Height: 18 ft. 4 in.
Speed: 389 mph
Range: 1,500 + miles
Armament: None
Crew: 5

VAW-77 Night Wolves
VAW-78 Fighting Escargot
VAW-112 Golden Hawks
VAW-113 Black Eagles
VAW-115 Liberty Bells
VAW-116 Sun Kings
VAW-117 Wallbangers
VAW-120 Greyhawks

E-6A Mercury

The E-6A Mercury provides secure, survivable, jam resistant strategic communications relay for fleet ballistic missile submarines. It performs the Navy’s TACAMO (“Take Charge and Move Out”) mission of linking ballistic missile forces with national command authority during time of crisis.

Wingspan: 148 ft. 4 inches
Length: 152 ft. 11 inches
Height: 42 ft. 5 inches
Speed: 610 mph
Range: 6,700 miles
Armament: None
Crew: 14

VQ-3 Ironman
VQ-4 Shadows

Transport Aircraft

C-9B Skytrain

The C-9B Skytrain is used for fleet logistics support, intratheater airlift and airlifting Naval Reservists to and from training sites.

Wingspan: 93 ft. 3 in.
Length: 119 ft. 3 in.
Height: 27 ft. 5 in.
Speed: 565 mph
Range: 2,000 miles
Armament: None
Crew: 8

VR-46 Eagles
VR-52 The Taskmasters
VR-56 Globemasters
VR-57 Conquistadores
VR-58 Sunseekers
VR-59 Lonestar Express

C-130 Hercules

The C-130 Hercules, a four-engine turboprop aircraft, is the workhorse of the military services. Besides hauling people and cargo, it plays a variety of other roles including gun-ships, weather watchers, tankers, fire-fighters and aerial ambulances.

Wingspan: 132 ft. 7 inches
Length: 97 ft. 9 inches
Height: 38 ft. 3 inches
Speed: 374 mph
Range: 2,350 miles w/ max. payload; 5,200 empty
Armament: None; can be fitted with 7.62mm mini-guns, 20mm Vulcan cannons, 40mm Bofors cannons and 105mm Howitzer
Crew: 5

VR-54 Revelers
VR-55 Minutemen
VR-62 Nor’easters

C-2A Greyhound

The C-2A Greyhound provides critical logistics support to aircraft carriers. Its primary mission is carrier on-board delivery. Powered by two T-6 turboprop engines, it can deliver a payload of up to 10,000 lbs.

Wingspan: 132 ft. 7 inches
Length: 97 ft. 9 inches
Height: 38 ft. 3 inches
Speed: 374 mph
Range: 2,350 miles w/ max. payload; 5,200 empty
Armament: None; can be fitted with 7.62mm mini-guns, 20mm Vulcan cannons, 40mm Bofors cannons and 105mm Howitzer
Crew: 5

VR-54 Revelers
VR-55 Minutemen
VR-62 Nor’easters

Photo by PH3 Chris Vickers
Training Aircraft

T-45A Goshawk

The T-45A Goshawk is used for intermediate and advanced portions of the Navy pilot training program for jet carrier aviation and tactical strike missions.

Wingspan: 80 ft., 7 inches
Length: 56 ft., 10 inches
Height: 15 ft., 11 inches
Speed: 357 mph
Range: 1,796 miles
Armament: None
Crew: 4

VRC-30 Providers
VRC-40 Rawhides

VT-21 Redhawks
VT-22 Golden Eagles

Wingspan: 30 ft., 10 inches
Length: 39 ft., 4 inches
Height: 14 ft.
Speed: 620 mph
Range: 1,150 miles
Armament: None
Crew: 2 (instructor, student)

VRC-30 Providers
VRC-40 Rawhides

VT-21 Redhawks
VT-22 Golden Eagles

Blue Angels
1998 Schedule

March
14 NAF El Centro, Calif.
21-22 Davis-Monthan AFB, Tucson, Ariz.
28-29 NAS Kingsville, Texas

April
4-5 MCAS Beaufort, S.C.
18-19 Barksdale AFB, Bossier City, La.
25-26 NAS Norfolk

May
2-3 Ft. Lauderdale, Fla.
9-10 Chattanooga, Tenn.
16-17 Andrews AFB, Camp Springs, Md.
20 U.S. Naval Academy, Annapolis, Md.
24 NAS Meridian, Miss.
30-31 NAS/John Reserve Base Fort Worth, Texas

June
6-7 Coreys Island, N.Y.
13-14 Eau Claire, Wis.
20-21 Grissom AFB, Ind.
27-28 Niagara Falls, N.Y.

July
4-5 Traverse City, Mich.
11 Pensacola Beach, Fla.
18-19 Dayton, Ohio
25-26 Latrobe, Pa.

August
1-2 Hanscom AFB, Bedford, Mass.
8-9 Seattle
14-16 MCAS Miramar, Calif.
22-23 Chicago
29-30 Offutt AFB, Neb.

September
5-7 Chesterfield, Mo.
12-13 Halifax, Nova Scotia
26-27 Reading, Pa.

October
3-4 Stockton, Calif.
10-11 San Francisco
17-18 Houston
24-25 NAS Jacksonville, Fla.
31 NAS/John Reserve Base New Orleans

November
1 NAS New Orleans
6-7 NAS Pensacola, Fla.

VRC-30 Providers
VRC-40 Rawhides

VT-21 Redhawks
VT-22 Golden Eagles

JANUARY 1998
Navy Aircraft

Helicopters

SH-60 Seahawk

The SH-60 Seahawk is a twin-engine helicopter used for anti-submarine warfare, search and rescue, drug interdiction, anti-ship warfare, cargo lift and special operations. It is an air platform based aboard cruisers, destroyers and frigates.

Length: 64 ft., 10 in.
Height: 17 ft.
Speed: 144 mph
Range: 380+ miles
Armament: 2 MK-46 torpedoes
Crew: 3

Navy squadrons

HS-2 Golden Falcons
HS-3 Tridents
HS-4 Black Knights
HS-5 Nightdippers
HS-6 Indians
HS-7 Shamrocks
HS-8 Eight-ballers
HS-10 War Hogs
HS-11 Dragonslayers
HS-14 Chargers
HS-15 Red Lions
HSC-4 Red Wolves
HSC-5 Firehawks
HSL-37 Easy Riders
HSL-40 Airwolves
HSL-41 Seahawks
HSL-42 Proud Warriors
HSL-43 Battle Cats
HSL-44 Swamp Fox
HSL-45 Wolfpack
HSL-46 Grandmasters
HSL-47 Saberhawks
HSL-48 Vipers
HSL-51 Warlords

CH-46 Sea Knight

The CH-46D Sea Knight is used by the Navy for shipboard delivery of cargo and personnel. Additional tasks such as combat support, search and rescue, aeromedical evacuation of casualties may be assigned.

Length: 46 ft.
Height: 17 ft.
Speed: 165 mph
Range: 132+ miles
Armament: None
Crew: 4

HMM-365 Blue Knights
HMM-764 Moonlighters
HMT-204 White Knights

Navy squadrons

HC-3 Pack-Rats
HC-5 Providers
HC-6 Chargers
HC-8 Dragon Whales
HC-11 Gunbearers

HSCQ Firehawks
HSL-37 Easy Riders
HSL-40 Airwolves
HSL-41 Seahawks
HSL-42 Proud Warriors
HSL-43 Battle Cats
HSL-44 Swamp Foxes
HSL-45 Wolfpack
HSL-46 Grandmasters
HSL-47 Saberhawks
HSL-48 Vipers
HSL-51 Warlords

CH-53 Sea Stallion

The CH-53 Sea Stallion transports personnel, supplies and equipment in support of amphibious and shore operations. Other variants of CH-53 are the RH-53P and the MH53E, which are used for mine countermeasures.

Length: 67 ft., 5 in.
Height: 24 ft., 11 in.
Speed: 184 mph
Range: 665 miles
Armament: None
Crew: 3

Navy squadron

HC-4 Black Stallions

Did You Know?

The Super Hornet has 17 cubic feet of usable space for system upgrades.

Source: CHNFC

Marine Corps squadrons

HMM-161 Greyhawsks
HMM-162 Golden Eagles
HMM-163 Ridgerunners
HMM-164 Knightriders
HMM-165 White Knights
HMM-166 Sea Elks
HMM-261 Raging Bulls
HMM-263 Thunder Eagles
HMM-264 Black Knights
HMM-266 Fighting Griffins
HMM-268 Red Dragons
HMM-364 Purple Foxes

Forward ... From The Sea

ALL HANDS
Marine Corps squadrons

HMH-361 Flying Tigers
HMH-362 Ugly Angels
HMH-363 Red Lions
HMH-461 Iron Horses
HMH-462 Heavy Haulers
HMH-464 Condors
HMH-465 War Horses
HMH-466 Wolfpack
HMH-772 Hustlers
HMT-301 Windwalkers
HMT 302 Phoenix
HMT 303 Atlas

H-3H Sea King
The H-3H is a twin engine, all-weather helicopter used to detect, classify, track and destroy enemy submarines. It also provides logistic support and search and rescue capability. The UH-3H and VH-3 are configured for combat support roles.

SH-2G Seasprite
The SH-2G Seasprite is a ship-based helicopter with anti-submarine, anti-surface threat capability, including over-the-horizon targeting. It extends and increases shipboard sensor and weapon capabilities against several types of enemy threats.

<table>
<thead>
<tr>
<th>Marine Corps squadrons</th>
<th>H-3H Sea King</th>
<th>SH-2G Seasprite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length: 54 ft., 9 in.</td>
<td>Length: 52 ft., 9 in.</td>
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</tr>
<tr>
<td>Height: 17 ft.</td>
<td>Height: 15 ft.</td>
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</tr>
<tr>
<td>Speed: 136 mph</td>
<td>Speed: 172.5 mph</td>
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</tr>
<tr>
<td>Range: 623 miles</td>
<td>Range: 391 miles</td>
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</tr>
<tr>
<td>Armament: Two MK-46 torpedoes</td>
<td>Armament: Two MK-46/MK-50 torpedoes</td>
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</tr>
<tr>
<td>Crew: 4</td>
<td>Crew: 3</td>
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</tr>
</tbody>
</table>

JANUARY 1998

Joint Strike Fighter

The carrier-based version of the JSF will provide first-day-of-the-war survivable strike capability, combined with outstanding low-speed flight handling characteristics. JSF will have a stronger internal structure, landing gear and arresting hook design for catapult launch and arrested landing.

- 24,000-pound class empty weight
- 36-foot wing span with no wing fold
- Internal & external payload capability
- Multirole supersonic aircraft
DD 21 is a ship being designed to conquer the technological challenges of the 21st century. Design characteristics such as submarine-like survivability and a significantly reduced radar signature, achieved through a fully integrated topside design, will significantly expand the mission of the surface combatant.

Like today’s Arleigh Burke-class guided-missile destroyers, DD 21 will be a multi-mission ship, capable of providing forward presence and deterrence, and operating as a vital part of naval, joint and combined maritime forces to gain battlespace dominance in littoral operations. But unlike today’s destroyers, DD 21’s primary mission will be land attack support for ground forces. Armed with 5-inch/62 extended range guided munitions and 155mm Howitzers, the ship will provide naval gunfire support up to 100 miles inland. A land attack missile system will extend support between 100 and 200 miles. Tactical Tomahawk missiles will be able to reach targets from 200 to 1,600 nautical miles.

DD 21 will have the most advanced undersea warfare combat systems ever installed on a surface combatant. The ship’s hangar will house attack helicopters as well as a system of unmanned aerial vehicles (UAV). In concert with other ships, DD 21 will contribute surveillance and force to establish and maintain local air superiority.

The DD 21 program emphasizes more than just improved offensive and defensive capabilities. Because DD 21’s design will incorporate only the most advanced systems and materials on the market today, ships of the class can remain battle-ready with minimal maintenance and greatly reduced manpower. The current target manning requirement for DD 21 is 95 crewmembers.

DD 21 will be a smart ship, manned with an elite crew, ready to further the Navy’s mission of “Forward ... From the Sea.”
Way of Doing Business

Artist's conception courtesy of Lockheed Corp

Hot Link
To learn more about DD 21 check out this web site: http://www.chirlo.navy.mil/navpallb/opn/n96/2000.html

JANUARY 1998

Forward...From The Sea
## Rank Insignia of Navy Commissioned Officers (O)

<table>
<thead>
<tr>
<th>Pay Grade/Rank</th>
<th>Hat, shoulder, collar</th>
<th>Shoulder boards</th>
<th>Sleeve</th>
</tr>
</thead>
<tbody>
<tr>
<td>O-1 Ensign</td>
<td>gold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O-2 Lieutenant Junior Grade</td>
<td>silver</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O-3 Lieutenant</td>
<td>silver</td>
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<td></td>
</tr>
<tr>
<td>O-4 Lieutenant Commander</td>
<td>gold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O-5 Commander</td>
<td>silver</td>
<td></td>
<td></td>
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<tr>
<td>O-6 Captain</td>
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<td></td>
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<tr>
<td>O-7 Rear Admiral (Lower Half)</td>
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<tr>
<td>O-8 Rear Admiral (Upper Half)</td>
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<tr>
<td>O-9 Vice Admiral</td>
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<td>O-10 Admiral</td>
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<td>O-11 Fleet Admiral</td>
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## Rank Insignia of Navy Warrant Officer (W)

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<th>Shoulder boards</th>
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<tbody>
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<td>W-1 Chief Warrant Officer</td>
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<td>W-3 Chief Warrant Officer</td>
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<td>W-4 Chief Warrant Officer</td>
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### Rate Insignia of Navy Enlisted People (E)

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<td>E-4 Petty Officer Third Class</td>
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<td>E-6 Petty Officer First Class</td>
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<td>E-7 Chief Petty Officer</td>
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<td>E-8 Senior Chief Petty Officer</td>
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<tr>
<td>E-9 Master Chief Petty Officer</td>
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<tr>
<td>E-9 Master Chief Petty Officer Of The Navy</td>
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### Line /Staff / Warrant Officer Corps Devices

- Line
- Supply Corps
- Medical Corps
- Nurse Corps
- Medical Service Corps
- Dental Corps
- Judge Advocate General Corps
- Law Community
- Christian Chaplain
- Jewish Chaplain
- Civil Engineer
- Ship's Clerk
- Diving Officer
- Ordnance Technician
- Cryptologic Technician
- Repair Technician
- Security Technician
- Boatswain
- Data Processing Technician
- Engineering/ Nuclear Power Technician
- Aerographer
- Air Traffic Control Technician
- Aviation Boatswain
- Aviation Electronics Technician
- Aviation Ordnance Technician

* Device for Explosive Ordnance Disposal not pictured
** Device for Muslim Chaplain still under review
# FY98 Monthly Basic Pay Chart

## Cumulative Years of Service

<table>
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<tr>
<th>Pay Grade</th>
<th>Under 2</th>
<th>Over 2</th>
<th>Over 3</th>
<th>Over 4</th>
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<th>Over 8</th>
<th>Over 10</th>
<th>Over 12</th>
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</tbody>
</table>

## Enlisted Members

### Monthly Amounts

- As a senior enlisted advisor of a military service, an E-9 basic pay is $4325.10.
- Pay under over over over over over over over over over over over over over over over over.
- Maximum amount that can be paid is $9225.

### Warrant Officers

- Officers with more than four years active duty as enlisted or warrant.
- Officers with more than four years active duty as enlisted or warrant.

### Commissioned Officers

<table>
<thead>
<tr>
<th>Cumulative Years of Service</th>
<th>Pay Grade</th>
<th>Monthly Amount</th>
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<td>6881.40</td>
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<td>O-7</td>
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<td>9</td>
<td>O-6</td>
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<td>O-5</td>
<td>3512.70</td>
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<td>2231.70</td>
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<td>9</td>
<td>O-1</td>
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### Officers With More Than Four Years Active Duty as Enlisted or Warrant

<table>
<thead>
<tr>
<th>Pay Grade</th>
<th>Monthly Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>3E</td>
<td>0.00</td>
</tr>
<tr>
<td>2E</td>
<td>0.00</td>
</tr>
<tr>
<td>1E</td>
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### Aviation Career Incentive Pay

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<thead>
<tr>
<th>Phase I Years of Aviation Service</th>
<th>Monthly Amount</th>
</tr>
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<tbody>
<tr>
<td>2 or less</td>
<td>$125</td>
</tr>
<tr>
<td>Over 2</td>
<td>$156</td>
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<tr>
<td>Over 3</td>
<td>$188</td>
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<tr>
<td>Over 4</td>
<td>$206</td>
</tr>
<tr>
<td>Over 6</td>
<td>$650</td>
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</table>

### Hazardous Duty Incentive Pay

<table>
<thead>
<tr>
<th>Phase II Years of Service as an Officer</th>
<th>Monthly Amount</th>
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<tbody>
<tr>
<td>Over 18</td>
<td>$585</td>
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<tr>
<td>Over 20</td>
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<tr>
<td>Over 22</td>
<td>$385</td>
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<tr>
<td>Over 25</td>
<td>$250</td>
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### Hazardous Duty Incentive Pay

<table>
<thead>
<tr>
<th>Warrant Officer Grade</th>
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</tr>
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<tbody>
<tr>
<td>E-7 to E-9</td>
<td>$200</td>
</tr>
<tr>
<td>E-6</td>
<td>$175</td>
</tr>
<tr>
<td>E-5</td>
<td>$150</td>
</tr>
<tr>
<td>E-4</td>
<td>$150</td>
</tr>
<tr>
<td>E-1 to E-3</td>
<td>$150</td>
</tr>
<tr>
<td>W-4 to W-5</td>
<td>$250</td>
</tr>
<tr>
<td>W-3</td>
<td>$175</td>
</tr>
<tr>
<td>W-2</td>
<td>$150</td>
</tr>
</tbody>
</table>

### NOTE

- The Basic Allowance for Quarters is being replaced by a new basic allowance for housing (BAH). The new BAH amounts will be published in an upcoming issue.

---

* Maximum amount that can be paid is $9225.
### Monthly Submarine Pay Chart

<table>
<thead>
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<th>Pay Grade</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>14</th>
<th>16</th>
<th>18</th>
<th>20</th>
<th>22</th>
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<tbody>
<tr>
<td>E-9</td>
<td>225.00</td>
<td>225.00</td>
<td>225.00</td>
<td>270.00</td>
<td>295.00</td>
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<tr>
<td>E-8</td>
<td>225.00</td>
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<td>310.00</td>
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<td>330.00</td>
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<tr>
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<td>255.00</td>
<td>265.00</td>
<td>275.00</td>
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<tr>
<td>E-6</td>
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<td>170.00</td>
<td>175.00</td>
<td>215.00</td>
<td>230.00</td>
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<td>255.00</td>
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<tr>
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<td>195.00</td>
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<td>80.00</td>
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<td>100.00</td>
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</tr>
<tr>
<td>E-3</td>
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</tr>
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### Monthly Career Sea Pay Chart

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<th>Over</th>
<th>Over</th>
<th>Over</th>
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<th>Over</th>
<th>Over</th>
<th>Over</th>
<th>Over</th>
<th>Over</th>
<th>Over</th>
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</thead>
<tbody>
<tr>
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<td>100.00</td>
<td>120.00</td>
<td>175.00</td>
<td>190.00</td>
<td>350.00</td>
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<td>375.00</td>
<td>390.00</td>
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<td>410.00</td>
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<td>375.00</td>
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<td>400.00</td>
<td>400.00</td>
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</tr>
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### Proposed 1998 Basic Allowance for Subsistence

<table>
<thead>
<tr>
<th>Enlisted (Daily) Rations in kind not available</th>
<th>Emergency conditions</th>
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<tbody>
<tr>
<td>&lt;4mos. $7.73</td>
<td>&lt;4mos. $10.26</td>
</tr>
<tr>
<td>All Other $8.38</td>
<td>All Other $11.10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>On leave or authorized to mess separately</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;4mos. $8.86</td>
</tr>
<tr>
<td>All Other $7.43</td>
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</tbody>
</table>

*Source:* (All Charts): Defense Finance and Accounting Service
As a stand-alone computer user, you strive to get the most out of your machine — more memory, more storage, and faster processing speed all make your computer "platform" a better tool to get the job done. In a local area network environment, the emphasis shifts to making the network faster, stronger and more capable. While it’s important to make sure each individual computer maintains minimum requirements, overall performance is dictated by the network.

*Network Centric Warfare*, an information network, will use the advances in communication and computing technology to connect widely dispersed and diverse forces into an effective and coordinated team. But the "revolution" is not just about hardware and software, it’s about awareness. Our forces will have a significant information advantage. No longer dependent on information being "passed along," units can act on changing situations as they happen to exploit weaknesses and counter enemy strategies to accomplish the overall mission. This "speed of command," a fundamental change in the way the Armed Forces operate, is the cornerstone of this new doctrine.

VADM Arthur K. Cebrowski, director of Space Information Warfare Command and Control, is setting the pace for the Navy’s move to *Network Centric Warfare.* "This revolution in military affairs is driven by the seismic upheaval in information technology that is causing a tidal wave of change throughout society.”

The Navy and Marine Corps will continue to invest in fully-capable ships, aircraft and equipment. But the design of these platforms will center on which part each one plays in the "grid." It’s a new way of doing business in a changing world.
Real-time Awareness

“The information revolution has fundamentally changed the nature of naval warfare. The battlefield of the 21st century will be one in which the force with mastery of the information spectrum will prevail, making information superiority critical to our warfighting success.”

Admiral Jay L. Johnson
Chief of Naval Operations

A submarine receives the latest satellite imagery and launches an unmanned aerial vehicle to provide up-to-date reconnaissance. Constant flow of information enables a SEAL team insertion ashore with the least risk of detection, as well as continuous support of battle groups and landing forces.

A SEAL team provides on-scene digital imagery of potential targets and enemy movements via satellite to the battle network.

F/A-18 Hornets receive imagery of target areas from the network. Pilots are provided with real-time information on threats and targets.

Hot Link
To learn more about Network Centric Warfare check out these web sites:
http://copernicus.hq.navy.mil
Snapshots

I
1
uss
Saipan (LHA 2)
Local Ops, Western Atlantic

USS Dwight D. Eisenhower (CVN 69)
Local Ops, Western Atlantic

USS John C. Stennis (CVN 74)
Local Ops, Western Atlantic

USS Essex (LHD 2)
Local Ops, Eastern Pacific

USS Bataan (LHD 5)
Local Ops, Western Atlantic

Counter Drug Operations
Caribbean & Eastern Pacific

West African Training Cruise
South Atlantic

Facts and Figures

| Total Ships: | 347 |
| Ships Underway: | 180 (52%) |
| Ships Deployed: | 107 |
| Total Personnel: | 610,356 |
| Active Duty: | 390,069 |
| Reserve: | 220,287 |
| 8 Exercises/Operations ongoing |
| Port Visits to 13 countries |

Note: As of Nov. 17, 1997
Exercise Nobile Shirley 97-2
Mediterranean Sea

USS Nimitz (CVN 68)/Air Wing 9
Operation Southern Watch
Arabian Gulf

USS Independence (CV 62)/Air Wing 5
Inport Yokosuka/Atsugi, Japan

Maritime Interception Operations
Arabian Gulf

Exercise Neon Falcon '98
Arabian Gulf

USS Peleliu (LHA 5)/13th MEU(SOC)
Ops, Arabian Sea

USS Belleau Wood (LHA 3)
Port Visit Okinawa

USS George Washington (CVN 73)/Air Wing 1
In transit to Arabian Gulf

Key

Carrier Battle Group
LHAs, LHDs and LPHs
Destroyers
Guided-missile cruisers

JANUARY 1998
Sailors: The Real Smart Weapons

The Fleet is heading into the 21st century with a vision of highly trained Sailors operating some of the most advanced technology imaginable. You can be part of that vision. We want men and women who are not afraid of new challenges to continue serving their country. Education, adventure and experience are as close as a visit to your Command Career Information Team or a call to 1-800-FOR-NAVY. See how far your career can take you. Meet with a member of the Team today.

Navy ... Let the journey continue.