

## Navair Air Capable Ship Aviation Facilities Bulletin

The Joint Strike Force (JSF) Office at the Naval Air Systems Command (NAVAIR) tasked the Naval Surface Warfare Center, Carderock Division, to develop a ship motion database. The purpose of this database is to provide readily accessible ship motion data for air-capable ships to support design and development of JSF aircraft and to support shipboard operations. This report provides a description of the application and content of the database computer program as well as other supporting programs. Lists citations with abstracts for aerospace related reports obtained from world wide sources and announces documents that have recently been entered into the NASA Scientific and Technical Information Database.

The U.S. Navy is ready to execute the Nation's tasks at sea, from prompt and sustained combat operations to every-day forward-presence, diplomacy and relief efforts. We operate worldwide, in space, cyberspace, and throughout the maritime domain. The United States is and will remain a maritime nation, and our security and prosperity are inextricably linked to our ability to operate naval forces on, under and above the seas and oceans of the world. To that end, the Navy executes programs that enable our Sailors, Marines, civilians, and forces to meet existing and emerging challenges at sea with confidence. Six priorities guide today's planning, programming, and budgeting decisions: (1) maintain a credible, modern, and survivable sea based strategic deterrent; (2) sustain forward presence, distributed globally in places that matter; (3) develop the capability and capacity to win decisively; (4) focus on critical afloat and ashore readiness to ensure the Navy is adequately funded and ready; (5) enhance the Navy's asymmetric capabilities in the physical domains as well as in cyberspace and the electromagnetic spectrum; and (6) sustain a relevant industrial base, particularly in shipbuilding.

This classic study is considered essential reading for its analysis of fast aircraft carrier development in WWII. It provides a fascinating record not only of the U.S. Navy's metamorphosis from a battleship-oriented to a carrier-centered fleet, but also of the heated debates that took place over the changing naval strategy. With an insider's grasp of the famous individuals involved, award-winning naval historian Clark G. Reynolds takes readers from the war rooms of Washington to the flight decks of the Pacific. He vividly describes the battles over the concept of fast carriers between the air admirals and battleship admirals and offers little-known details gleaned from personal interviews and private diaries.

This book is a meticulously detailed history of British aircraft-carrying ships from the earliest experimental vessels to the Queen Elizabeth class, currently under construction and the largest ships ever built for the Royal Navy. Individual chapters cover the design and construction of each class, with full technical details, and there are extensive summaries of every ship's career. Apart from the obvious large-deck carriers, the book also includes seaplane carriers, escort carriers and MAC ships, the maintenance ships built on carrier hulls, unbuilt projects, and the modern LPH. It concludes with a look at the future of naval aviation, while numerous appendices summarise related subjects like naval aircraft, recognition markings and the circumstances surrounding the loss of every British carrier. As befits such an important reference work, it is heavily illustrated with a magnificent gallery of photos and plans, including the first publication of original

plans in full colour, one on a magnificent gatefold.??Written by the leading historian of British carrier aviation, himself a retired Fleet Air Arm pilot, it displays the authority of a lifetime's research combined with a practical understanding of the issues surrounding the design and operation of aircraft carriers. As such *British Aircraft Carriers* is certain to become the standard work on the subject.

While not as famous as their larger and faster sister ships such as the Essex- and Yorktown-class carriers, escort carriers made an enormous contribution towards Allied victory both in the Pacific and Atlantic theatres. Rather than relying on size or speed, it was their sheer numbers that made them so effective. Indeed, the Casablanca-class escort carrier was the most-produced aircraft carrier in history. In partnership with the Royal Navy, they provided the backbone of Allied anti-submarine efforts in the Atlantic, finally and irrevocably turning the tide of the war against the U-boats in 1943. In the Pacific, they provided the air cover for the series of landings which led to the doorstep of Japan by 1945. These robust ships faced submarine, air, and even surface threats from the Japanese, but proved able to contend with everything thrown their way. Fully illustrated with contemporary photographs and unique specially commissioned artwork, this book shines a new light on these unjustly overlooked workhorses of the US Navy – ships that helped usher in the Allied victory over the Axis powers in the Atlantic and Pacific.

Since Admiral Sergei G. Gorshkov was appointed to the office of commander in chief of the Soviet Navy in 1956, the Soviet Union has made a massive investment in naval construction, training, and operations. As a result, the Soviet Navy has grown from a coastal defense force to one of the world's two strongest navies. This book offers a detailed assessment of every major aspect of the Soviet Navy, from fleet structure and training facilities to command and control procedures and warfare and intelligence collection capabilities.

Joint shipboard helicopter operations (JSHO) rank among the most challenging types of joint operations. JSHO require US Army, US Air Force, and special operations personnel operate alongside US Navy (USN), US Marine Corps (USMC), and US Coast Guard (USCG) personnel in unfamiliar work and living spaces, with equipment not specifically designed for shipboard capability, and in an operating environment which is characterized by tightly constrained space and an unforgiving nature. It is incumbent every soldier or airman embarked understand their responsibilities during the many evolutions that transpire during each ship's daily routine and the challenges those evolutions present to their unit's daily operations. Unlike some joint operations where the Services are assigned operational areas and interact with each other on the margins (via communications channels, across boundary lines, etc.), JSHO require continuous interaction, coordination, and teamwork to accomplish the simplest of tasks. When planning JSHO, joint force commanders (JFCs) must consider a number of factors, the foremost of which are the impact such operations may have on the overall joint operation. Among these considerations are the mission tradeoffs associated with the displacement of naval aircraft; the removal of the ship from its place in the expeditionary ship and/or embarked unit mission capabilities resulting from emission control or hazards of electromagnetic radiation to ordnance requirements, wind limitations, and/or location requirements. While the mission tradeoff impact of embarking other Service helicopters on small air-capable ships is rather

straightforward, JSHO aboard an aircraft carrier or amphibious aviation assault ship is more difficult to assess because these ships are complex, multi-mission platforms. Further, the choreography required for high deck density operations necessitates meticulous planning. This publication provides doctrine for planning, coordinating, and conducting joint shipboard helicopter operations from US ships with flight decks. This is a print on demand edition of a hard to find publication. Contents: (1) Introduction; (2) Background: Proposed 313-Ship Fleet; FY 2010 Shipbuilding Request; (3) Oversight Issues for Congress: Adequacy of Proposed 313-Ship Fleet: Adequacy of Shipbuilding Plan for Maintaining 313 Ships; Shortfalls Relative to 313-Ship Goals; Affordability of Shipbuilding Plan; (4) Legislative Activity for FY 2010: FY 2010 Defense Authorization Act; FY 2010 DoD Appropriations Act; Resolution Directing Submission of FY 2010 30-Year Shipbuilding Plan; Legislation on Individual Shipbuilding Programs. Appendixes: (A) December 2009 Press Reports About Draft FY 2011 30-Year Shipbuilding Plan; (B) Adequacy of Planned 313-Ship Fleet; (C) Size of the Navy and Navy Shipbuilding Rate. Charts and tables.

The availability of land bases from which to launch and maintain military, diplomatic, and humanitarian relief operations is becoming increasingly uncertain because of physical or political constraints. The ability to operate from a sea base, therefore, is likely to become more and more important. The Defense Science Board recently concluded that Sea Basing will be a critical future joint military capability and that DOD should proceed to develop such capability. Following the DSB report, the Navy requested that the National Research Council (NRC) convene a workshop to assess the science and technology base, both inside and outside the Navy, for developing Sea Basing and to identify R&D for supporting future concepts. This report of the workshop includes an examination of Sea Basing operational concepts; ship and aircraft technology available to make Sea Basing work; and issues involved in creating the sea base as a joint system of systems.

Navy-Modified LCOM is a resource consumption/utilization analyzer which simulates dynamically the support operations of an aircraft carrier, air capable ship, or air base. In attempting to execute an input flying schedule, LCOM carries out maintenance, repair and servicing operations on the system's aircraft. LCOM is uniquely flexible. The necessary resources and the flow of operations are entirely declared and defined by the user's inputs. Thus, the analyst may make his model large or small, simple or complex. Essentially a discrete-event simulation, LCOM can be used to analyze any servicing complex, such as a hospital, motor pool, or job shop. The Navy-Modified LCOM User's Manual describes the model in detail, while providing input and run instructions as well as a sample problem.

This book summarizes current understanding of the scientific, clinical, and technical issues surrounding the use of contact lenses. It discusses the special occupational conditions experienced by military personnel, particularly in extreme

environments, that give rise to the question of whether or not to use contact lenses. Experts in optometry, ophthalmology, visual psychophysics, and engineering describe recent developments in design and use; and representatives of the military services provide examples of actual situations in aerospace settings. Considerations in Contact Lens Use Under Adverse Conditions will be of particular interest to those involved in the design of contact lenses and those responsible for occupational safety and health matters in the private sector.

Published to coincide with the centennial celebration of U.S. Navy aviation, this book details the history of U.S. Navy aviation from its earliest days, before the Navy's first aircraft carrier joined the fleet, through the modern jet era marked by the introduction of the F-18 Hornet. It tells how naval aviation got its start, profiles its pioneers, and explains the early bureaucracy that fostered and sometimes inhibited its growth. The book then turns to the refinement of carrier aviation doctrine and tactics and the rapid development of aircraft and carriers, highlighting the transition from propeller-driven aircraft to swept-wing jets in the period after World War II. Land-based Navy aircraft, rotary-wing aircraft, rigid airships, and balloons are also considered in this sweeping tribute.

Step aboard the floating cities that patrol international waters, launch aircraft from their decks, and decide the fate of war. Behold the king of naval warfare: the aircraft carrier. Soon after the Wright Brothers' historic flight in 1903, officials explored the airplane's military applications. The seaplane and the flying boat were conceived to combine air and naval operations, but their potential proved limited. Aircraft that could operate from the deck of a ship, however, offered tremendous possibilities. A few visionaries seized the opportunity, and by mid-century the aircraft carrier eclipsed the battleship as the preeminent weapon of naval warfare. Since the first successful launch of an airplane from the deck of a naval ship in 1910, "fighting flattops" have evolved into immense, nuclear-powered vessels--floating cities capable of launching dozens of aircraft performing a variety of missions, including attack, escort, antisubmarine patrol, and deterrence. This illustrated history covers that evolution, from the first tentative steps taken by naval aviators before World War I to the roles these massive ships have played in the War on Terror. While author Michael Haskew focuses on US Navy carriers, he also provides coverage of parallel and competing carrier developments overseas. In addition to explaining the technologies behind past and present carriers and their aircraft, Haskew reexamines major engagements involving carriers, especially the epic Pacific battles of World War II, as well as personalities who were central to carrier development and deployment and naval doctrine relating to carriers. Filled with carefully curated period photography and modern images showing aircraft carriers throughout the decades, *Aircraft Carriers* is a celebration of naval warfare's most important innovation.

**ELECTRONIC FILE CHARACTERISTICS:** 36 files; Adobe Acrobat (.PDF), MS Word (.DOC), MS Excel (.XLS), and MS PowerPoint (.PPT). **PHYSICAL DESCRIPTION:** 1 CD-ROM; 4 3/4 in.; 11.7 MB. **ABSTRACT:** The Flight Deck Manning for MPF(F) Aviation-Capable Ships Study assesses the Maritime Preposition Force (Future) (MPF(F)) manning requirements to establish an air-capable MPF(F) squadron in the 2015 timeframe. This study examined the impact of operating 97 Marine Corps aircraft aboard the MPF(F) and addressed the major issues of manning requirements to the individual billet level, sourcing of military occupational specialties (MOSs) or ranks/ratings to fill those billets, training requirements to meet both safety and competency requirements, and composite costs associated with the courses of action (COAs) examined. Those COAs involved Navy-only, Marine Corps-only, and a combination of Navy and Marine Corps manning alternatives. In conjunction with subject-matter experts who ensured that operational realities were considered, the study team analyzed the training

requirements for the Marine MOS personnel that would fill billets aboard the MPF(F) ships. Marine Corps MOS descriptions were assessed against the U.S. Navy rank/rating skill requirements identified in the battle bills of U.S. Navy amphibious ships to determine commonality and shortfalls in current training. A Flight Deck Manning and Training Requirements Generator modeling tool was built and used during the study to determine the manning and training requirements for a wide variety of potential MPF(F) designs currently under consideration. The modeling tool was constructed to accommodate changes in the number of flight spots per ship and to account for a mix of ship configurations. Based on the analysis and data, conclusions and recommendations were made to assist the Marine Corps in planning the design and personnel requirements to support a MPF(F) capability.

The future national security environment will present the naval forces with operational challenges that can best be met through the development of military capabilities that effectively leverage rapidly advancing technologies in many areas. The panel envisions a world where the naval forces will perform missions in the future similar to those they have historically undertaken. These missions will continue to include sea control, deterrence, power projection, sea lift, and so on. The missions will be accomplished through the use of platforms (ships, submarines, aircraft, and spacecraft), weapons (guns, missiles, bombs, torpedoes, and information), manpower, materiel, tactics, and processes (acquisition, logistics, and so on.). Accordingly, the Panel on Technology attempted to identify those technologies that will be of greatest importance to the future operations of the naval forces and to project trends in their development out to the year 2035. The primary objective of the panel was to determine which are the most critical technologies for the Department of the Navy to pursue to ensure U.S. dominance in future naval operations and to determine the future trends in these technologies and their impact on Navy and Marine Corps superiority. A vision of future naval operations ensued from this effort. These technologies form the base from which products, platforms, weapons, and capabilities are built. By combining multiple technologies with their future attributes, new systems and subsystems can be envisioned. Technology for the United States Navy and Marine Corps, 2000-2035 Becoming a 21st-Century Force: Volume 2: Technology identifies those technologies that are unique to the naval forces and whose development the Department of the Navy clearly must fund, as well as commercially dominated technologies that the panel believes the Navy and Marine Corps must learn to adapt as quickly as possible to naval applications. Since the development of many of the critical technologies is becoming global in nature, some consideration is given to foreign capabilities and trends as a way to assess potential adversaries' capabilities. Finally, the panel assessed the current state of the science and technology (S&T) establishment and processes within the Department of the Navy and makes recommendations that would improve the efficiency and effectiveness of this vital area. The panel's findings and recommendations are presented in this report.

"This brochure presents the highlights of the Shipboard Aviation Facilities Certification Program. It briefly explains and pictorially illustrates, in a non-technical manner, the need for the program, how it was established, and the evolution of supporting technical bulletins. It further describes the ship's pre-inspection role, the procedures for requesting and conducting certification inspections, determining certification status, and the helicopter operating and support facilities"--Foreword.

The Naval Aviation Maintenance Program (NAMP).: Maintenance data systemsFlight Deck Manning for MPF(F) Aviation-Capable Ships Study (CD-ROM).

In the post-1945 era, the aircraft carrier has remained a valued weapon despite

the development of nuclear weapons, cruise and ballistic missiles, and highly capable submarines. At times, as in the early days of the Korean and Vietnam Wars and in the Falklands conflict, carriers alone could deploy high-performance aircraft to the battlefield. In other operations, such as enforcing the no-fly zones and the U.S. invasions of Afghanistan and Iraq, only carriers could provide the bases needed for sustained combat and support operations. This second volume of Norman Polmar's landmark study details the role of carriers in the unification of the U.S. armed forces and strategic deterrence, fiscally constrained Great Britain, the development of British Commonwealth and ex-colonial navies, and the efforts of France and the Netherlands to rebuild their fleets. The role of the modern carrier-nine nations currently possess them-is discussed, as are the issues confronting nations that might acquire them. Chapters on the Soviet Union's effort to produce carriers are included for the first time. The development of both carrier planes and the many "oddball" aircraft that have flown from carriers-such as the U-2 spy plane-are also examined. Appendixes include comprehensive data on all carriers built and converted through 2006. This volume is a valuable companion to the critically acclaimed Volume I, which covers aircraft carrier development and operations from 1909 to 1945.

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