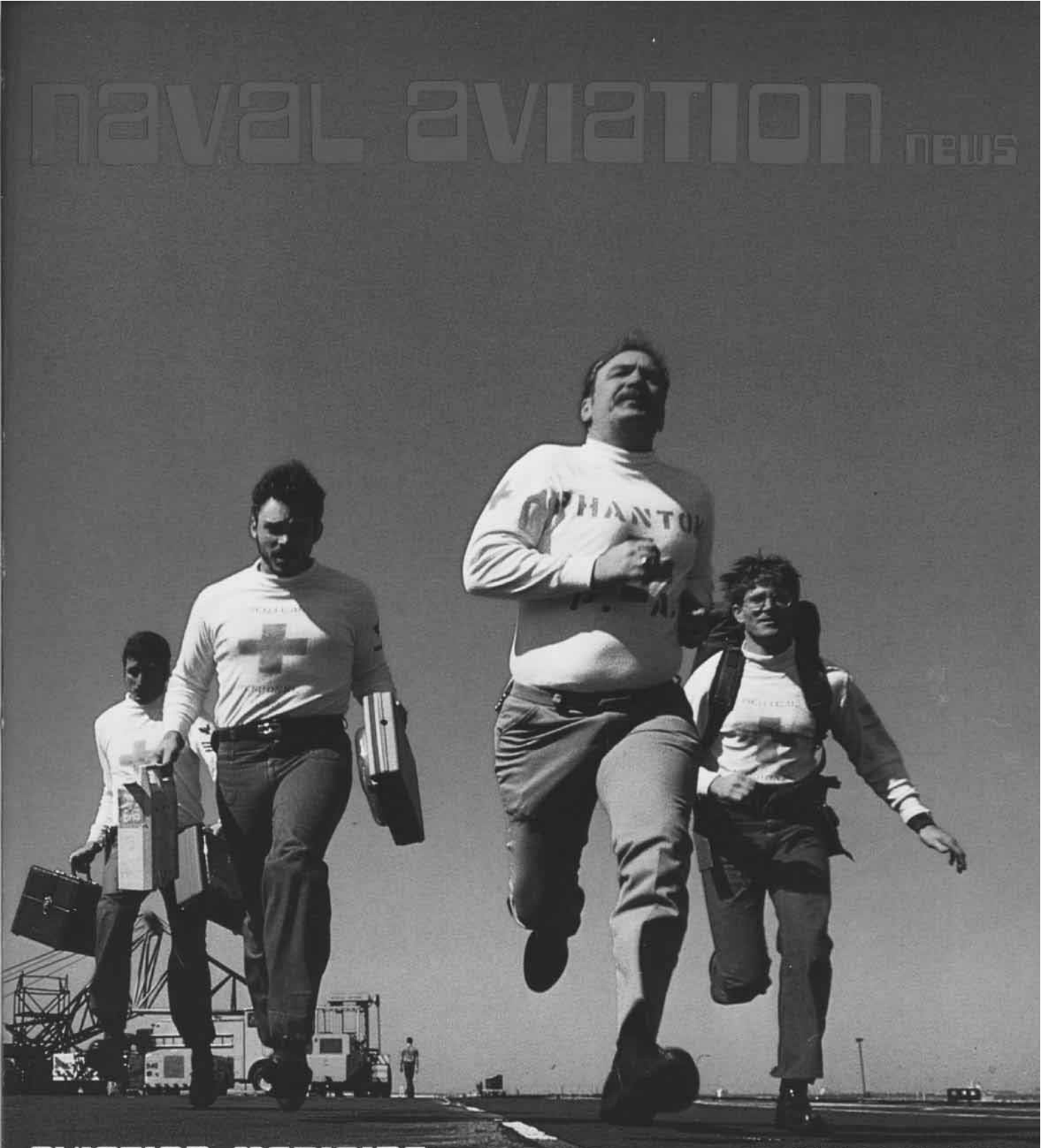
naval aviation news



AVIATION MEDICINE

January 1982

HM2 Dennis Pollard and HM3 Diana Lainhart rush from the emergency unit of NAS Oceana's branch clinic. As members of the accident watch crew, they are SAR-qualified hospital corpsmen and have the distinction of being the first two at Oceana to earn aircrew wings.

JOC Don Sallee

naval aviation news

Sixty-Fourth Year of Publication

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COVER—In a dash across Kennedy's flight deck, Physician's Assistant WO2 Alex Lyler leads (l-r) HM1 James Philip, HM3 James Donlan and HM3 Clayton Moen in a medical emergency drill. All four are part of a medical response team trained to respond to life-threatening medical emergencies aboard ship. They can reach any point on Kennedy within three minutes of the alert.
Photo by JOC Kirby Harrison.

Features

Departments

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DID YOU KNOW?

CH-53E Lift Tests

In its first external lift test since delivery to HMH-464, the CH-53E *Super Stallion* pictured carried a 16-ton cement block at MCAS(H) New River, N.C., last fall. This weight-lifting feat can't be matched by any other type of Marine Corps helicopter.

The *Super Stallion* is equipped with one of the most advanced helo automatic flight control systems. Both the Navy and the Marine Corps use the aircraft for extensive heavy lift operations, including the retrieval of other airplanes and helicopters. Besides transporting Marine Corps equipment, it can support the logistics of a forward-based AV-8 *Harrier* squadron. Navy missions include ship-to-ship and ship-to-shore logistics, support of mobile construction battalions and airborne mine countermeasures units. It can deploy more than 1,000 nautical miles and inflight refueling capability gives it an unlimited range.

Phoenix Inertial System

The AIM-54C *Phoenix* air-to-air missile successfully demonstrated its enhanced long-range performance in tests off the California coast. This improved version of Navy's primary fleet air defense weapon is being developed by Hughes Aircraft Company. The tests explored the new command-inertial function of the guidance system.

In its most recent test, the radar-guided AIM-54C was fired from a Navy *Tomcat* at a range of 90 miles from the BQM-34A drone target. The F-14 was flying at 36,000 feet, at a speed of Mach 1.55. The target was flying toward the launch aircraft at 30,000 feet and a speed of Mach 0.9. The unarmed missile passed well within what would have been a lethal distance for the warhead.

The addition of a strap-down inertial reference system gives the AIM-54C greater accuracy during the first phase of flight after launch. During this period, the missile depends upon target location data furnished by the launching aircraft – the "command" part of command-inertial. Because the inertial platform gives the missile precise information on its own position, the missile's guidance

system can be more accurately directed toward the target's position. In the terminal phase of the *Phoenix* flight, it switches on its own radar transmitter and guides, in the "active" mode, on the reflections from the target.

The inertial feature is one of several improvements Hughes has made in the AIM-54C. Others include a digital electronics unit, a solid-state radar transmitter/receiver, and a proximity fuse being developed by Naval Weapons Center, China Lake.

Goldthwaite Award

VT-19, home-based at NAS Meridian, Miss., was awarded the 1981 Vice Admiral Robert Goldthwaite Award. Sponsored by the Columbus Aircraft Division of North American Rockwell, the award is presented in recognition of outstanding achievements in the training of Naval Aviators and Naval Flight Officers within the Naval Air Training Command. The award is named after the man who, while serving in numerous capacities, contributed significantly to the training command.

Doolittle Award

Chief of Naval Operations, Admiral Thomas B. Hayward, was the 16th recipient of the J. H. Doolittle Award from the Society of Experimental Test Pilots at its annual awards banquet in Beverly Hills, Calif., last September. Established in honor of the pioneer test pilot General James H. Doolittle, the award recognizes outstanding technical management or engineering achievement in aerospace technology by a living member of the society. The permanent trophy is designed by the society's board of directors and contributed by TRW, Inc., with each year's winner receiving a small replica.

Newest Nimitz-class Carrier

PH2 E. G. Nocciolo, Jr.

SecDef Weinberger comments about the figure one that he just finished welding as part of Roosevelt's hull number, CVN-71. This is routine for a keel-laying ceremony. The carrier is slated for delivery early in 1988.

Secretary of Defense Caspar W. Weinberger announced the name of the fourth *Nimitz*-class carrier, CVN-71, at her keel-laying ceremony on October 31, 1981, in Newport News, Va. USS *Theodore Roosevelt* is named in honor of the 26th president of the U.S. and architect of U.S. naval seapower in the early 20th century. The nuclear-powered aircraft carrier will have two reactors and nuclear fuel for 13 years of normal carrier operations. It will be 1,092 feet long, with a beam of 252 feet, and will displace 93,405 tons. *Roosevelt* will be able to carry 6,280 crew members and assigned air wing personnel, and about 95 planes.

Grampaw Pettibone

From the mailbag:

Gonzo Mouse

The crew of the SH-3 helo briefed for what we thought was to be a routine night IFR ASW/plane guard mission. The launch was to include two SH-3 helos which would alternate in the plane guard role.

Arriving on the flight deck, we found that our aircraft had not yet been spotted for launch due to a fuel contamination problem. When the fuel problem was resolved, the aircraft was positioned for launch on spot #5, aft of the island structure. The second helo was up and ready for launch on spot #4. Preflight and engine turnup were normal except that the launch was behind schedule and things were getting a bit rushed.

The landing signal enlisted (LSE) director gave the signal to spread the rotor blades. The #3 main rotor blade had no blade walker and was bouncing off the flight deck as a result of the launching helo rotor wash. The rotor blade was inspected with no damage noted. The #2 engine was then started and rotors were engaged.

The other helo, already airborne, informed the air boss that it was unable to perform the plane guard mission due to a malfunctioning doppler system.

Just as we prepared to launch, the #1 engine turbine inlet temperature became excessive. The aircraft was then downed and the mad rush was on.

People were running everywhere in an attempt to ready another helo for the plane guard mission. The LSE and I attempted to unlock and spread the folded tail of the second helo. The LSE stood upon the tow bar and attempted to secure the tail pylon. I gave the tow tractor driver a signal to hold; however, he started the helo moving with the LSE still standing on the tow bar. I yelled to the driver to stop but the aircraft handler

shouted "no time" and ordered the driver to "move it."

The LSE jumped clear and the aircraft was towed forward to spot #1 with the tail section swinging free. The deck was "hot" with aircraft holding for launch on catapults #3 and #4 until a plane guard was airborne.

A rushed preflight was conducted in the dark conditions of the flight deck. After the #1 engine was started and rotor blades were spread, I climbed up to check the rotor head. The pilot waved me back down before this check was completed. I closed the transmission platform door as the #2 engine was started. The second crewman then informed me that the rescue hoist was down because of cable entanglement (bird's nest) and that the aircraft handlers broke the tail wheel locking pin while removing the tow bar. The metal locking pin could not be found and was now FOD rolling somewhere about the deck.

The LSE signaled to engage the rotors and the pilot told me to "button it up." We launched shortly thereafter and, as we cleared the bow, the air boss passed a "good job" to the crew.

The launch resumed. As we proceeded to plane guard position, we discovered that this aircraft was also down because of a bad gyro and that there were no life rafts aboard. To top it all off, we had to land right after the launch was completed to take on fuel to finish the flight. This hurry-up situation developed into a disorganized, unsafe evolution with a down aircraft with down SAR capability flying the night plane guard mission and, in all this chaos, the crew never saw the aircraft log books.

All I ask is, Gramps, what does it take?

Signed,
Gonzo Mouse

Grampaw Pettibone says:

Great jumpin' Jehoshaphat! It seems that Gonzo Mouse was more like a trapped rat in this fiasco.

This episode reminds me of the Pied Piper of Hamelin, except it had only one piper. This orchestration appeared to have several pipers, each playing a lot of sour notes in an effort to march Gonzo Mouse and company over the steel cliff and into the sea, much like the ill-fated rats of Hamelin.

Fortunately, this fiasco resulted in no mishap or injury. And like Gonzo Mouse, Old Gramps also wonders just what does it take? All it should have taken in this case was for one of several bandmasters to call this parade temporarily to a halt.

The tempo of ops and the scramble to complete the launch prompted a few hazardous shortcuts here and resulted in a serious breakdown in supervision.

This series of events normally occurs so insidiously that it becomes noticed only after calamity has struck.

ILLUSTRATED BY Osborn

From this, one may surmise that it's sometimes wise for the air boss to advise: "Let's take five and stay alive!"

The grim reaper had this gang well under way toward construction of a better mousetrap but, thanks to Lady Luck, it didn't slam shut.

An Anonymous Concern

Dear Gramps,

While on detachment from a CH-46 helicopter combat support squadron to an overseas-based auxiliary fleet support ship, I observed an incident which warrants a note to and perhaps a comment from Gramps.

Late one evening the ship encountered deteriorating weather conditions involving moderate winds and rough seas, which caused the ship to roll 15 to 20 degrees, with occasional roll to 25 degrees. Both of the CH-46 *Sea Knights* were airborne, conducting touch-and-go landing practice. It must be emphasized that this was a training, not an operational exercise.

True to Murphy's Law, conditions, which were marginal, worsened with darkness and recommendations by flight crews to secure operations were discounted by the officer in charge stationed in the tower. A short time later, one of the helo aircraft commanders (HAC) decided to terminate his mission when it became apparent that his copilot (pilot at controls) was experiencing increased difficulty in safely landing on the pitching deck.

Once on deck, the helicopter was secured. Attempts to push it into the hangar were severely hampered by the ship's movement. During one particular roll, the aircraft almost broke free from the handlers.

Meanwhile, the second helo continued to operate, making practice touch and goes. This was the pilot in command's first flight as an H-46 HAC during actual ship operations. The copilot, who was also HAC-qualified (with more than double the pilot's flight time), strongly opposed continuing the operation. However, he was junior to the pilot in command.

The HAC was experiencing significant trouble in landing. On several occasions, the helo touched down with sufficient lateral drift so that it skipped across the deck. This evolution continued approximately 30 minutes before the operation was terminated.

During the movement of the second helo into the hangar, the excessive roll of the ship caused it to slide out of control across the deck. Aircraft braking had little effect and crew members stood by for an inevitable "dunk in the drink." Fortunately, the ship reversed its roll and the handlers quickly chained the aircraft after it had made an 80-degree left turn and stopped just short of the edge.

Incidents of this nature require safety reports, yet the event went unreported. Perhaps this letter may help prevent similar incidents from happening again. Gramps, we sure were lucky this time.

Anonymous

Grampaw Pettibone says:

Holy sufferin' *Sea Knights*! This fiasco qualifies for the center ring of Barnum and Bailey with billing as C. C. Knight and the Sliding Yo-Yos.

There is enough meat in this pot of stew for us all to say grace over, starting with the OinC, HACs (both old and new), copilots, deck handlers, etc. Somebody should have been screaming like a mashed cat to knock this off! Operating a non-carrier-based HC detachment at sea involves the same responsibilities and risks to men and machines as operating aboard the carrier. Unlike on the carrier, it is conducted in more confined spaces and with only a handful of experienced aviation personnel. Every man here is truly his brother's keeper, not to mention, his own!

I question the accuracy of the author's assessment of the ship's roll at 25 degrees; however, I appreciate the sheer fright-at-night conditions under which it was made. Most importantly, I question the wisdom of conducting practice touch-and-go landings under conditions where hardware is sliding uncontrollably about the deck – whether it be 25, 20, or whatever degrees of roll.

Based upon the information provided, I can find no requirement to formally report such an incident, except via the anonymous report, since no damage, injury, or forced flight abort occurred.

If the conditions in this evolution were as stated, this crotchety old Monday morning quarterback agrees with the author – they were indeed lucky this time. To expose one's assets to these elements for such unnecessary risks is not at all conducive to perpetuation of the exposee's future performance as a Monday morning quarterback or on "Saturday Night Live!"

Old Gramps shares synonymous concern with the anonymous concern of this author. Your letter is gratefully appreciated. Hopefully, it will serve to prevent similar incidents from occurring.

Photos courtesy of Jan Herman, U.S. Navy Medicine, and the Navy Recruiting Command.

Naval Aerospace Medical Institute... where man is studied in terms of his environment

The bottom line at the Naval Aerospace Medical Institute (NAMI) is to keep as many men flying safely and effectively as much of the time as possible. The entire syllabus is planned and executed with that end in mind.

Although NAMI is physically located in Pensacola, Fla., its impact is evident wherever Naval Aviation operates. The school conducts a program that turns a fledgling flight surgeon into a pro and then continues to support him in the operating environment, perhaps in the form of an evaluation of some special medical problem that may emerge. While NAMI is a unique teaching, preventive medicine and evaluative entity, and not primarily a treatment facility, it is nevertheless the focal point of expertise in Naval Aviation medicine.

Overall, the Institute's mission is the clinical support of aviation, and the education and training of aviation medical personnel, flight surgeons, physiologists and psychologists, and aviation physiology technicians, as well as student pilots.

A physician, having completed internship after medical school, may apply to become a flight surgeon. If he is accepted, he is sent to NAMI for approximately six months of training. There, he must meet certain physical qualifications before he is permitted to fly and he is required to participate in the same programs that are so familiar to student Naval Aviators.

According to Captain R. Paul Caudill, Jr., commanding officer of NAMI, one of the school's concerns in training its student flight surgeons is the fact that many will serve in remote areas, perhaps aboard a carrier in the Indian Ocean, with no access to a major medical facility. They must receive good solid training so that they can make sound decisions on their own and be able to temporize if necessary until such time as an appropriate referral can be made.

One of the unique aspects of the NAMI school program is its emphasis on things already learned in a different way by the students, at another level of their experience. NAMI tries to relate the physician's knowledge and skill in a meaningful way to the working environment of the personnel for whom the physician will care. The flight surgeon must always be aware of the work performed by the patient and must understand the implications of what he does as a health care provider. It is absolutely imperative, for example, that an individual entrusted with a complex psychomotor skill job, whether a pilot, mechanic or corpsman in an emergency room, possess the mental alertness to perform his duties. While antihistamines might be routinely prescribed for a civilian office worker, they might result in disaster if administered to a carrier pilot performing a job where the margin for error is very small.

The flight surgeon in an operating environment filled with stress needs to be a psychiatrist as well, and so the school emphasizes psychiatry, especially in the area of

behavioral manifestations. Many crewmen aboard a carrier are quite young, undergoing a lot of adjustments in their early adult life. There are long hours with much pressure and stress, and it is essential that indications of behavioral problems be detected and dealt with at an early stage before they are translated into costly error. Ideally, the flight surgeon will be able to spend time with the crewmen in their units and have the opportunity to observe them on a firsthand basis.

Student flight surgeons receive about 65 hours of training in psychiatry. Therefore, they are better able to screen personnel, the ill, the well, the worried well, the worried ill. They can make more informed decisions on whether or not to refer patients to regional hospitals. At a time when the Navy's medical capabilities are fully em-

ployed, well-prepared referrals and well-screened patients become an important element in keeping the system functioning efficiently and effectively.

Virtually every Naval Aviator or Naval Flight Officer who enters flight training has his final pre-entry evaluation at NAMI before training begins. There is a distinct difference between the physicals given at NAMI and those done in a traditonal health care facility. The training of one Naval Aviator will cost the taxpayers something in excess of a half million dollars. His ability to perform his mission will directly affect the lives of others, to say nothing of some very expensive hardware. And because the investment and the stakes are so high, a critical judgment must be made at an early stage as to how an individual will stand up over the long haul.

That is why the school's aeromedical standards must be based on a projection of an aviator's future as well as his present performance. The school knows that it must select people who are not only willing to do difficult things when asked to – but who are able to. Some who do not meet the exacting requirements are very disappointed, but there are many paths to a rewarding career in Naval Aviation and many are able to make the necessary adjustment.

If, however, on completion of treatment, there is a question about his assignability, the individual is referred to NAMI for evaluation. Specialists take a detailed look at the problem and NAMI does everything in its power to enable the aviator to continue his career.

In the event someone is referred for evaluation, he is assigned a sponsor who is a member of the staff and acts as an intermediary in the process. The patient is evaluated over a period of four to five days by each of the major specialty clinics in the Institute. The evaluations are made by physicians whose total career has been centered around the support of aviation personnel. They do not focus entirely on the defect that brought him but look instead at all aspects of the case. Even so, the decision of the board is not final. It is rather a recommendation that is passed through the Bureau of Medicine and Surgery to the line for final approval.

To help in making critical determinations, NAMI maintains a file on microfiche of the medical records of the initial entry physical exam of every aviator who has entered Naval Aviation in the last 20 years. Included in this are annual physical reports, any hospitalization and post-hospital physical, any special action or unusual medical

Left, HM1 Dennis Deming, diving medical technician, operates valves of hyperbaric diving chamber as LCdr. A. Miller communicates with technician inside.

Right, Lt. Larry Schoenberg assists students in the use of oxygen equipment in altitude simulator. Students are accompanied by aerospace physiology technicians inside chamber and monitored from outside by other technicians.

One of the problems encountered by the Institute is that examinations performed elsewhere often do not reflect the findings turned up by NAMI. For example, NAMI has to select military aviators with superb visual acuity, the best eyes that can be put into the cockpit. Some candidates arrive in Pensacola believing that they have 20-20 vision when, in fact, they do not. However, those who have come that far are clearly well motivated and so every effort is made to ensure that no mistakes are made in the selection process. Anyone who experiences difficulty receives a minimum of three evaluations before a final decision.

Once the taxpayers' investment is made and the individual is designated a Naval Aviator, commitment to his support is total. If a medical problem arises during an aviator's career, it is customarily dealt with in the field.

condition. The Institute is now putting the data into automated data processing format for easy access.

There is a wide range of experience in aviation medicine among the aviation medicine personnel at NAMI, and many of the physicians assigned there have also spent quite a bit of time at sea. The focus is clearly operational and the people who work there understand the problem from a practical as well as a theoretical standpoint. Most have had at least one tour aboard a carrier. Some have had two or three tours, and are well versed in their knowledge of the operating environment and how human beings respond.

The student flight surgeon curriculum is broken down into 17 weeks of academic work and seven weeks of flight

training. After two days of administrative inprocessing, the students have two weeks of naval indoctrination at the Naval Aviation Schools Command. The academic segment, which consumes about 390 hours, consists of six units of clinical exposure that are vital for the operational flight surgeon.

Environmental physiology presents students with a spectrum of physiological problems, including the physiological effects of altitude such as hypoxia and hyperventilation, the biodynamics of acceleration, disorientation and visual illusions of flight, motion sickness and thermal stress. Implementing this are various training devices, simulators, low and high pressure chambers and all personal protective equipment.

Operational medicine introduces the students to preventive medicine, aeromedical evacuation procedures, communicable diseases, toxicology, drug and alcohol abuse, crash survival investigation, mass casualty management, aviation pathology, orthopedics, etc.

Otolaryngology is a course of great importance because it concerns the anatomy of the nose, sinuses, and middle and inner ear, where much of the danger of disorientation originates.

Ophthalmology/Optometry teaches the students the fundamentals of the visual system. Training in this course enables the naval flight surgeon to provide a variety of ophthalmic services independent of fixed medical support.

Neuropsychiatry consists of graduate-level training in psychiatry and neurology, preparing the flight surgeon to function effectively in an operational setting where specialty consultations are not readily available.

Internal medicine deals particularly with cardiopulmonary problems which confront the flight surgeon. The course familiarizes the student with the abnormal electrocardiogram. It teaches him to define the variations and develop an understanding of cardiovascular risk factors.

Student rides the Dilbert Dunker down the rails into the water where the device flips over. Student must free himself from his upside-down position.

The academic segment is followed by the same land and sea survival training given to student Naval Aviators at the Naval Aviation Schools Command.

Student flight surgeons also take the same primary flight training in the T-34C *Mentor* that is given to student pilots. Here, the physician learns firsthand the physiological and psychological stresses experienced by the man-machine

Flight surgeon students are briefed on water survival, an essential phase of naval flight instruction.

Instructor and student confer near T-34C Mentors which are used for primary flight training.

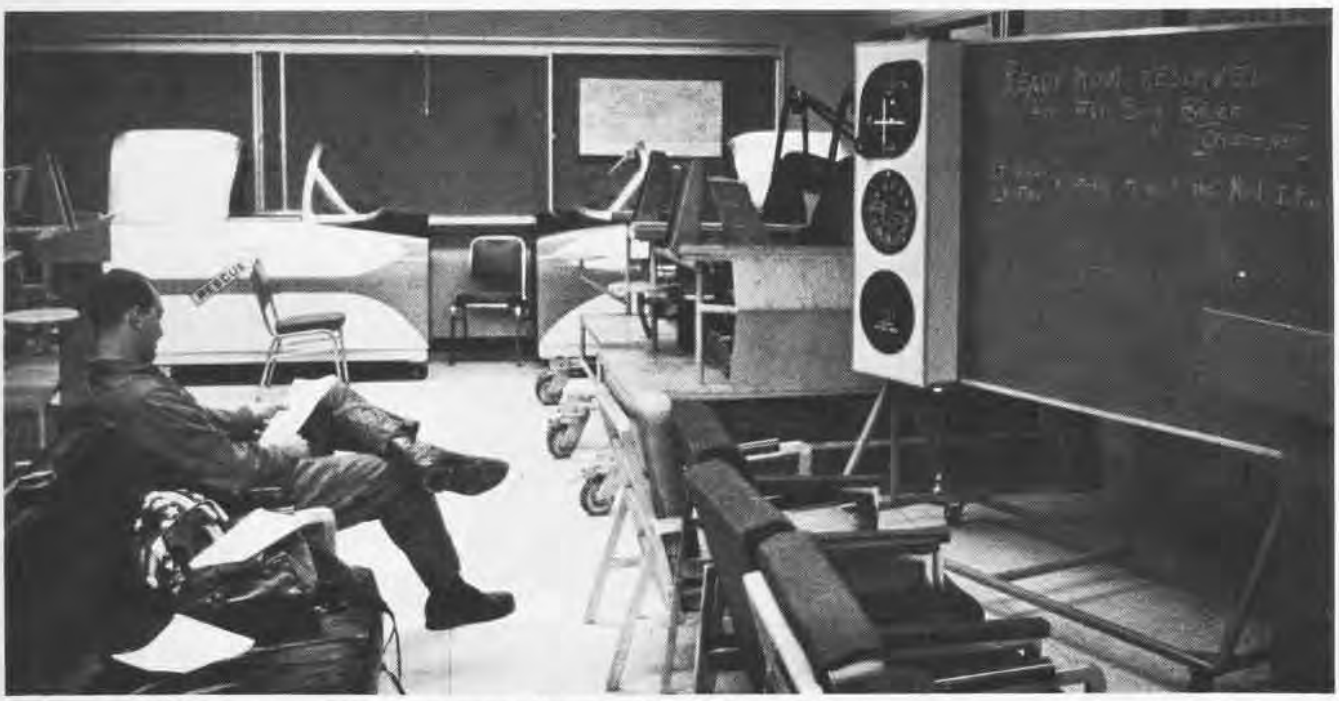
team within the hostile environment. Each student flight surgeon is expected to progress through the essentials of flight up to solo. Most stop at that point but, if qualified, a student may go on to solo in the aircraft.

Following graduation as a flight surgeon, the physician is usually assigned to a fleet or shore-based squadron, or may be sent to an air station. Because of the needs of the fleet, however, most will be assigned to operational squadrons, serving a two-year tour. By the end of a tour aboard an aircraft carrier, most young physicians find themselves more mature. Some have become deeply involved in aviation medicine and have developed a close identification with the Navy. Of these, some will elect to remain in operational pursuits while others may return to NAMI for residency.

Many leave aviation medicine and go into some other specialty. Some leave the Navy at this point to take a civilian residency or to go into private practice. A flight surgeon may decide to pursue a three-year residency in aerospace medicine. The first year is spent in obtaining a master's degree in public health at one of about 20 approved universities in the U.S. The last two years involve concentrated study at NAMI in a variety of aviation medicine subjects including three weeks of undersea medicine at Panama City, Fla., and six weeks of burn treatment training at the Army burn center in San Antonio, Texas.

On completion of the residency, the physician is eligible to go before specialty boards in preventive or aerospace medicine, a two to three-day process, following which he is fully certified as a specialist. Those board certified in aerospace medicine are assigned as senior medical officers aboard carriers. From there they move on to assignments in the Bureau of Medicine and Surgery; as Force Medical Officer, Commander Naval Air Force, U.S. Atlantic Fleet and its Pacific Fleet counterpart; or in NAMI; Naval Safety Center; Naval Air Test Center; and Marine air wings.

At NAMI, the student flight surgeon experiences the operational Navy firsthand in a controlled environment. It prepares him to be a successful practitioner of Naval Aviation medicine. It is where man is studied in terms of his environment.



Ready room used for flight surgeon student briefings also features training aids and simulators.

Acorn Oak Leaf Golden Wings

By Sandy Russell

Flying doctors, a different breed. The Navy's flight surgeons and dual designators (Naval Aviators/flight surgeons) have some unique characteristics and responsibilities which set them apart from other physicians. Their specialized knowledge and experience are invaluable to the Navy.

Where do we get our flight surgeons and dual designators and what motivates them to continue in aviation medicine? What advantages are there for a doctor in the military over one in private practice? The answers to these questions are both interesting and enlightening.

Captain David J. LeTourneau is Force Medical Officer, ComNavAirLant, NAS Norfolk, Va., and an aerospace medicine board-certified flight surgeon. He is frank to say that the draft was an important consideration in his decision to enter the Navy after internship. But there were other motivating factors as well. After all that studying in med school, Capt. LeTourneau says he was ready to do something different. "I looked forward to joining the Navy and going to flight surgeon school because I always loved to fly," he remembers. "After three years in the Navy, I got out, went into civilian residency in pediatrics and had a private practice for six years. Personally, I got bored with doing the same thing day after day and realized that in 10 years I'd still be doing the same thing. When the Navy offered me the opportunity of taking the aerospace residency, I came back in and, after three years of study, I was certified in aerospace medicine. I have never regretted it one bit. There's always a challenge and always something different. Variety really *is* the spice of life."

Capt. LeTourneau gets an opportunity to put his enthusiasm for aviation medicine to good use in recruiting flight surgeons. Each year around October, BuMed, NAMI, his staff and its West Coast counterpart host 200 Navy interns for three days in what is called a medical operational orientation visit. A Navy intern is a graduate physician who is commissioned as an officer in the Navy, is on active duty, and doing his first year of internship in a naval hospital. Two airplanes, one from each coast, fly the interns to NAMI for exposure to other facets of Navy medicine outside a hospital. One day each is spent in aviation medicine at Pensacola, the diving school at Panama City, Fla., and aboard a carrier, usually *Lexington*.

The response to this program has been very good and, consequently, the Navy has had an increased number of flight surgeon applicants. Even though an intern will have to spend an additional year and a half of obligated service before starting residency, many of them feel that it is worth it for an out-of-the-ordinary experience. All Navy interns must spend at least one year practicing operational medicine and many feel that the flight surgeon option is the most colorful and exciting. A lot of those who opt for the program were probably recruited at the three-week orientation. Most of the interns who take this trip are very favorably impressed. It exposes them to much of the Navy and Navy medicine that they might otherwise miss at such an early stage in their careers.

One particularly interesting opportunity is available to those uniquely qualified people who are designated Naval Aviators as well as physicians. It is called the dual designator program and its purpose is to enable flight surgeons to better understand the problems aviators encounter in actual flight situations. Since doctors are not allowed to bear arms, according to the Geneva Convention, the greatest need for dual designator officers is at home in training and research.

Commander Frederic L. Jackson, Head, Aerospace Medicine Operations Branch, Aerospace Medicine Division, Bureau of Medicine and Surgery, Washington, D.C., is coordinator of the dual designator program. Cdr. Jackson is one of the 12 members in this elite corps of naval officers who wear both the Gold Wings of a Naval Aviator and the acorn and oak leaf of the Navy medical officer. He has recently been approved for the master of public health program at the Uniformed Services University, Bethesda, Md.

This Department of Defense institution is one of the sources of Navy physicians other than direct recruitment from civilian institutions. The school trains about 100 students a year, divided among the three military services. The Navy receives about 35-40 doctors a year from the university. It is a full-time, four-year military program. The students wear uniforms to class every day and do the majority of their training in military hospitals. Their active duty summer training is done in a variety of military settings. Graduates come out of the program career-motivated, because they have been trained in a military environment all the way through.

Most of the Navy's doctors come through the Health Professions Scholarship Program, which provides an inactive reserve commission that pays tuition at a civilian medical school and a monthly stipend. The program requires 45 days of active duty every summer and an obligated term of active service. At the end of four years of medical school, students go into the intern program along with all other medical students who have applied to the Navy.

Like most dual designators, Cdr. Jackson was an aviator first, flying P-3s out of NAS Patuxent River, Md. When he decided that he was inclined toward scientific endeavors rather than the duties of a line officer, he looked to see where he might fit in best. He inquired about the Navy medical scholarship program, applied and went straight from the squadron to medical school. After med school, he went to Pensacola for a family practice residency and arranged a program with NAMI to undergo flight surgeon training concurrently with his residency. Upon graduation, he was assigned to NAS Patuxent River for three years as senior flight surgeon and head of the aviation medicine department.

There are two non-flying billets in the dual designator program. Cdr. Jackson is now assigned to one of them and the other is filled by Captain Loys E. Williams of the Crew Systems Division, Naval Air Systems Command, Washington, D.C.

Cdr. Jackson points out that a flight surgeon and a dual designator really serve entirely different purposes. A clinical flight surgeon practices aviation medicine in an operational setting, at sea with a carrier or with a shore-based squadron, to ensure that aviation personnel stay fit to fly. Dual designators provide aeromedical input into research and development programs. A dual designator who is in a research billet is not normally expected to perform clinical duties. Although most of them do practice some medicine because, as one doctor says, "There's a lot of satisfaction in taking care of your friends and their families."

In order to keep about six people involved in hands-on research, or test pilot flying, it is necessary to have about 12 people in the program. Some of them are in training and some are in clinical billets, where they fly as instructor pilots and practice medicine to maintain their skills, both as doctors and as pilots. In alternate tours, they function in research or test pilot flying billets, or as program managers for research programs. Cdr. Jackson explains that a test pilot deals with the flying characteristics of an aircraft as they affect the occupants, while a research pilot is concerned with aircraft life support systems, such as the ejection seat, instrument display, lighting, and the amount of visual, sensory and auditory input a pilot can handle.

"A dual designator does not take an aviator's billet, he fills a flight surgeon's billet," emphasizes Cdr. Jackson. "We're not taking away any fleet seats, just competing for a small amount of flight time. What we give in return is a fleet-experienced aviator who is also a trained physician, and who can go into the research and development community to ensure that the man and the aircraft are compatible. That's the whole purpose of the program." When a dual designator is in an aviator/flight surgeon billet, he must meet the same minimums as other pilots. He operates under the same set of instructions.

The dual designator program is very popular and the Navy has more applications than it can accept. It is a small program with the specific mission of making the pilot and the airplane more compatible. Cdr. Jackson feels that being on hand constantly to review developments and plans for the future, and putting these aviator/flight surgeons in positions where they have access to that information can have a very beneficial effect on a pilot's ability to get the most out of an airplane and to improve combat readiness. "It's like preventive medicine," he says. "It's hard to document exactly how many cases of illness you've prevented, but we think it's well worth the effort to keep the program going."

When asked why he prefers Navy medicine to private practice, Cdr. Jackson quickly sums it up, "There is no civilian equivalent. There may be two or three jobs in the whole U.S. where a doctor can fly for a large aircraft company, but that's it. There is no place else where you can fly high-performance aircraft in the morning and practice medicine in the afternoon."

Some dual designators have had unusual career experiences and, consequently, are able to make unique contributions to Naval Aviation. Capt. LeTourneau tells about Captain James C. Baker, who started out as a Naval Aviator but eventually left the Navy to attend medical school. While a medical student, he flew helicopters for the Army Reserve and later went into private practice. He then elected to return to active duty with the Army in order to complete his residency in pathology. In the early seventies, he rejoined the Navy under the dual designator program and has flown as a test pilot at the Naval Air Test Center, Patuxent River, Md. Until recently, he was a research pilot with the Institute of Aviation Medicine in Lakenheath, England, under the Navy personnel exchange program. Capt. Baker has an engineering background and much experience in research and development as a test and research pilot. With his years of medical practice in pathology, he knows a lot about human factors. Capt. LeTourneau says, "He is a great asset to the Navy in whatever capacity he serves."

"There's no place else where you can fly high-performance aircraft in the morning and practice medicine in the afternoon."

What makes a flight surgeon different from an ordinary physician? Captain C. G. Jeffrey, Senior Medical Officer at NAS Oceana's Naval Regional Medical Center Branch Clinic, says, "The doctor steps into a special category when he enters the ready room and flies with the squadron personnel. Understanding the operational requirements placed on the crew gives him an insight into what they're doing. He then becomes part of the crew and they talk to him a little more. The crew begins to find out who he is and whether to trust him or not. Some flight surgeons they don't trust and some they do. It has to do with how he handles things."

Capt. Jeffrey got his wings in 1952 and flew *Banshees* with a night-fighter squadron out of Atlantic City. Later he became a flight surgeon and, at one point in his medical career, was interested in getting into the space program. Unfortunately, the timing was not right. He got his board certification in aerospace medicine, had a tour aboard *Forrestal*, then went to NAS Meridian, Miss., as an instructor.

It is essential that the flight surgeon, perhaps more than any other kind of physician, establish an atmosphere of trust in his dealings with his patients. The Naval Aviator must know that the flight surgeon will always act in his best interest as well as that of the Navy. That's what it is all about. If a pilot has a medical problem which affects his flying it is the flight surgeon who will work it out with him. The Navy spends a lot of money training its aviators and it will not lightly make the decision to ground one unnecessarily. The flight surgeon is primarily concerned with

Flight surgeon LCdr. Rob Carnes (l.) recently checked out in the rear seat of the F-14. LCdr. Dennis McPhate (r.), a dual designator, is an instructor pilot in the Tomcat at VF-101.

JOC Don Sallee

keeping Naval Aviators flying.

Another form of flight surgeon involvement concerns an aviator who is not doing well as a replacement air group student. Three "downs" may suggest he's not capable of passing the syllabus presented to him, either the academic or flight phase. At that point, he may be referred to a field Naval Aviator board, on which the flight surgeon is a key member. The doctor will study such things as family problems, stress dynamics, occupational adjustments and other factors that can affect a pilot's performance. The flight surgeon's judgment will be an important consideration for the board, and a basically good aviator can often be saved for the Navy.

A flight surgeon may also find himself a member of an accident board where he considers the medical aspects which may be involved. He is sometimes a member of an air station accident watch crew, which is ready to go to the scene at a moment's notice. He is often involved in ensuring that the team, made up mostly of hospital corpsmen, is qualified in emergency medical care.

Being a good flight surgeon is more than sharing a cup of coffee with squadron pilots in the ready room. Flight surgeon Lieutenant Commander Rob Carnes, assigned to Carrier Air Wing Six at Oceana, says, "We see things differently than the average physician does. A lot of this has to do with rapport. If they trust you, they'll talk to you. If they see you as a threat to their careers, they won't. When people ask me why we (flight surgeons) fly with them, I say that once you've flown with someone you know what his job is, and there's a certain mutual trust and understanding you develop."

LCdr. Carnes joined the Navy in 1966 and became an enlisted aircrewman. He says he chose the Navy because it seemed more colorful than the other services. "I heard a saying once," Carnes remembers, "that a North American blue jacket can do just about anything at any time and, having been a sailor, I think that's true. Even a person in a specialized rate is pulled out of his job occasionally to do something else. It's variety that breeds resourcefulness. I think you could put a sailor on a desert island and he could make something out of it." LCdr. Carnes later got out of the Navy and went to college. He got accepted by a medical school and then applied for a Navy scholarship. That's usually the way it's done. The student is responsible for getting accepted into a medical school and then joins the Navy's medical program.

Why does a doctor stay in the Navy when he could make so much more money in private practice? LCdr. Carnes has an answer.

"The thing that keeps me in," he says, "is that I can still practice that wonderfully pure form of clinical medicine where you can order a test or get medication for a patient regardless of its cost, and you don't end up talking to the insurance company in order to get your patient's money back. The cost of ancillary services in private practice is extremely high. Also, there's a popular notion that Navy physicians are both immune to malpractice and to any form of peer review," he goes on. "That's absolutely incorrect. Anytime that anything happens to a patient under your care, you've got to answer to someone in the chain of command, and that keeps you honest." He feels he has learned more by taking care of entire families and by sharing other doctors' patients than he would have in private practice. He and his wife also like to travel. As he says, "There's no way that you could take your private practice and move it to Honolulu!"

Lieutenant Commander Dennis McPhate is a dual designator and instructor pilot in the F-14 *Tomcat* at VF-101, NAS Oceana, Va. He joined the Navy in 1965 and flew *Phantoms* until he decided to pursue a medical career. When he got into medicine, he found he truly missed aviation. After internship, he went through flight surgeon school and entered the dual designator program. Concerning his career with the Navy he says, "I like the people, the type of flying, the attitude toward flying, and the excitement of carrier aviation."

When LCdr. McPhate is not instructing students in the F-14 fleet replacement training squadron, he is working at Oceana's branch clinic seeing patients. When at the squadron and not flying, his services are always available to assist and counsel squadron personnel. Wearing both hats requires a lot of time and energy. A dual designator must maintain proficiency in his aircraft and still be a practicing clinician. It is very difficult because both of those areas require constant exposure to remain competent. Meeting all requirements and still meeting family commitments takes a lot of schedule juggling, but the feeling of accomplishment is worth it.

Aviation and medicine are each challenging, exciting and satisfying careers. Those who choose to combine them appear to have the best of both worlds. The Navy's flying doctors certainly *are* a special breed, one which Naval Aviation could not do without!

A urinalysis is part of a day's work for HM3 Albert Taylor. At right, dressed in flight deck gear, HM1 James Philip is prepared for training as a member of the carrier's medical response team.

This Hospital Gets Underway

Story and Photos by JOC Kirby Harrison

They have the same modern, medical facilities you might expect in a 50-bed civilian hospital in a small, industrial community. There is a laboratory, pharmacy, X-ray equipment, outpatient service, and even a medical response team for emergencies.

But the average community hospital doesn't cast off lines and get underway for the Mediterranean every eight months or so. The aircraft carrier *John F. Kennedy* does, and she takes her sick bay along. With the sick bay go some six physicians and about 40 corpsmen. Normally included among these are a senior medical officer, medical administrative officer, general medical officer, physician's assistant and two flight surgeons from the embarked air wing. The enlisted corpsmen include X-ray, operating room, lab and aerospace medical technicians as well as a pharmicist and preventive medicine officer.

"We have many of the same medical requirements and same preventive medicine programs as a community hospital in a highly industrialized area," says Lieutenant Com-


SMAN

Special magnification glasses are an aid to HM3 John Ryan, below, as he cleans an infected toe. At right, a skeleton used in teaching and diagnosing medical problems peers over HM2 Larry Fusaro's shoulder in Kennedy's aerospace lab.

mander Peter Garms, the administrative medical officer aboard *Kennedy*.

Preventive medicine aboard the carrier includes insect control, checking for asbestos fiber levels, overseeing proper sanitation procedures, and monitoring of personnel for hearing conservation.

The closeness of living and working aboard ship makes preventive medicine a necessity. Aboard *Kennedy*, nearly 5,000 men live and work in the confines of an area a foot-and-a-half shorter than New York City's Chrysler Building.

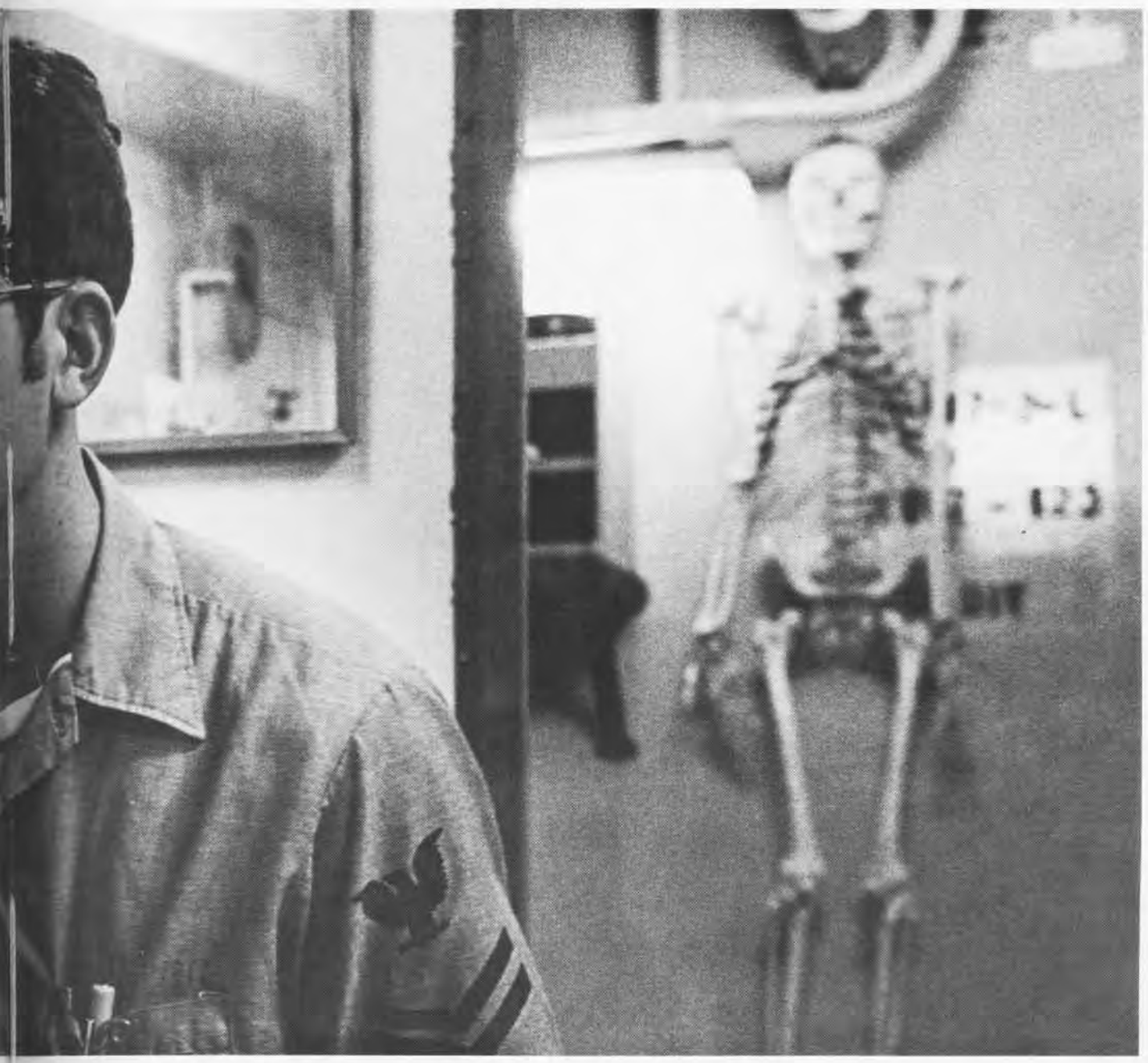
"If you have an outbreak of something in a population so concentrated, you have to move fast to cut it off," explains Chief Corpsman Don Moore. "The best way is to make sure it never gets a chance to start by practicing preventive medicine."

When the flu bug bit during *Kennedy's* last Mediterranean deployment, the virus initially spread like fire in a hayloft. Quick response by the ship's medical personnel kept it from being worse. Just 750 of the crew were diagnosed as having suffered through the flu.

During refresher training last year, medical personnel on *Kennedy* faced a different problem when ventilation was lost in the engineering spaces. In a short time, temperatures had climbed as high as 150 degrees Fahrenheit.

"At one point we had 10 people on intravenous feeding for rehydration, and we were literally packing some of the guys in ice to cool them," recalls LCdr. Garms.

According to Garms, it illustrates the potential for disaster aboard an aircraft carrier. In training for a "ramp strike" mass casualty scenario, the medical staff of *Kennedy* estimates that as many as 75 casualties might result from such an aircraft crash into the ship's fantail section.



"There would be everything from burns, broken bones and lacerations – and of course deaths," says Garms. "And we have to remember that in spite of drills, we must be flexible, because the real thing never goes the way you plan it in the drill."

During the 1981 refresher training, an arresting cable snapped and the broken ends whipped about the deck like a dull knife. A crewman on the flight deck jumped too late to clear the cable. Both his feet were very nearly torn off.

The medical response team and corpsmen on watch in the ship's island were with the victim in minutes. Less than 45 minutes after the accident, he was flown off the carrier and was en route to a hospital.

"We thought he'd probably lose both feet," recalls Garms. "But he came back aboard to visit the other day and he was walking on crutches. They saved his feet, and he may even be medically qualified to stay in the Navy."

The medical response team is a four-man unit designed to answer the medical alert alarm. The alarm is passed for any injury considered life-threatening and in which the patient cannot immediately be taken to sick bay facilities. The team can reach any point on the ship in less than three minutes, and during refresher training consistently did so in drills.

A major part of medicine aboard *Kennedy*, and any carrier, is training for the emergency situation. Aboard *Big John*, the medical staff has carried it a step further.

Garms points out that in any mass casualty situation, one of the first requirements will be for blood. Since facilities for storing blood aboard a carrier are minimal, *Kennedy* has what the crew refers to as their "walking blood bank." The bank consists of numerous volunteers,

Electrocardiogram results are part of a retirement physical for IMCS David Burnette. Below, a Kennedy crewman who fell overboard is met by ship's doctors and corpsmen.

including the entire Marine Detachment. Each individual's blood has been typed in advance and all are aware they may be asked to act as donors on short notice. "We may never need them, and I hope we never do," says Garms. "But it's a good feeling to know they are available."

During *Kennedy's* last Mediterranean cruise, many of the bank's members got practical experience when donations were needed at the hospital in Naples, Italy. Volunteering was something the medical staff did a lot of during that deployment, from providing urgently needed medical supplies to the Naval Support Activity at Souda Bay to delivery of a difficult-to-obtain drug for a heart patient on another Mediterranean island.

Aboard ship, sick bay personnel conduct a vigorous cardiopulmonary resuscitation (CPR) program. A total of 511 persons on *Kennedy* were certified in CPR during their last cruise. In compliance with new directives, the goal is to train everyone aboard in the basics of CPR and care of an obstructed airway.

At sea, medical personnel man the flight deck battle dressing station around the clock, with one corpsman out on deck during every launch and recovery cycle. To cut response time to flight deck emergencies even further, the corpsman on the flight deck wears transceiver headgear, placing him in direct contact with operations.

Overall, the medical facility aboard *Kennedy* has much in common with the community hospital. Between the lines, there are many differences — among them the sea periods, long hours and the knowledge that when something goes wrong, it can go wrong in a very big way.

"Not exactly the love boat, is it?" was the rhetorical question of one corpsman.

No. And Dr. Welby isn't likely to be hanging out a shingle and making house calls to the line shack. No television stars here.

But if you're looking for a group of medical professionals to do the job, look no further than *Kennedy*, or any other Navy aircraft carrier.

XTB2D-1

By Harold Andrews

Among the many Navy aircraft that emerged under Ed Heinemann's direction at the Douglas El Segundo plant, probably the least known is the XTB2D-1. Born in the period following Pearl Harbor, it was intended to meet a clearly identified need in carrier aircraft operations, capable of carrying greater loads and/or flying longer ranges as a torpedo bomber, and also performing extended range or duration scouting missions. As events transpired, only two X airplanes were built and flown, and neither flew very many flights before being retired in 1947 for use in barrier tests.

With the greatly intensified activities that followed Pearl Harbor early in 1942, Douglas was asked to submit a proposal for a new design torpedo bomber capable of multi-torpedo attacks, high-altitude bombing or long-range scout missions; a twin-engine design was suggested based on BuAer design studies. By April, Douglas had submitted several design alternatives, recommending a single-engine airplane using the Pratt and Whitney 28-cylinder XR-4360 engine then being developed. The design proposed included a tricycle landing gear, external carrier for bombs and up to four torpedoes, powered gun turrets, a dual rotation propeller, and a three-man crew. It would be operable from Essex-class carriers. Further design development of this preferred design led to an increase in wing area and span for adequate carrier takeoff and landing performance — resulting in a 70-foot span. It was the largest aircraft seriously considered for carrier operations in that period.

A letter of intent in November 1942 initiated the program for two XTB2D-1s, powered by XR-4360-8 Wasp Major engines, driving counter-rotating four-bladed Hamilton Standard propellers. A static test airframe was also included. Airplane mock-up inspection took place in March 1943, with the power plant mock-up installation in May. During this period, the question of production was raised, Douglas finally being requested to submit a proposal for 25 additional aircraft in December. By this time design development, including the results of Douglas flight tests on flap concepts incorporating lateral control devices, resulted in design changes to include full span flaps, as well as extended-span horizontal and vertical tail surfaces to provide adequate stability. Delays in delivery of an XR-4360 engine delayed the start of full-scale power plant nacelle ground tests until March 1944, when jigs for the aircraft's construction were also being built. Production action also began in March for a total of 25 airplanes, with tooling to produce 100 aircraft per month. Over the next three months, construction of the first airplane and static test article proceeded satisfactorily and the power plant ground test running started. Club props were used since an actual eight-blade dual propeller had not yet been delivered.

June brought a complete reversal of the March production decision. Based on the successful Fast Carrier Task Force operations in the Pacific and assessment of their attack aircraft experience, and also based on the progress in aviation technologies during the early war years, the Navy turned completely to single-place attack designs (VBT class) for future needs. At Douglas, high priority development of the new XBT2D-1 (later AD/A-1) was initiated. The TB2D program was cut back to the original two airplanes, some concern for the large size and experimental features entering into the decision along with the policy change. Since the XTB2D-1 development was well along, it was continued to explore the design features, as well as to provide an ongoing backup program in case operational requirements changed again. However, it was assigned a very low priority, so Douglas could concentrate on the XBT2D-1.

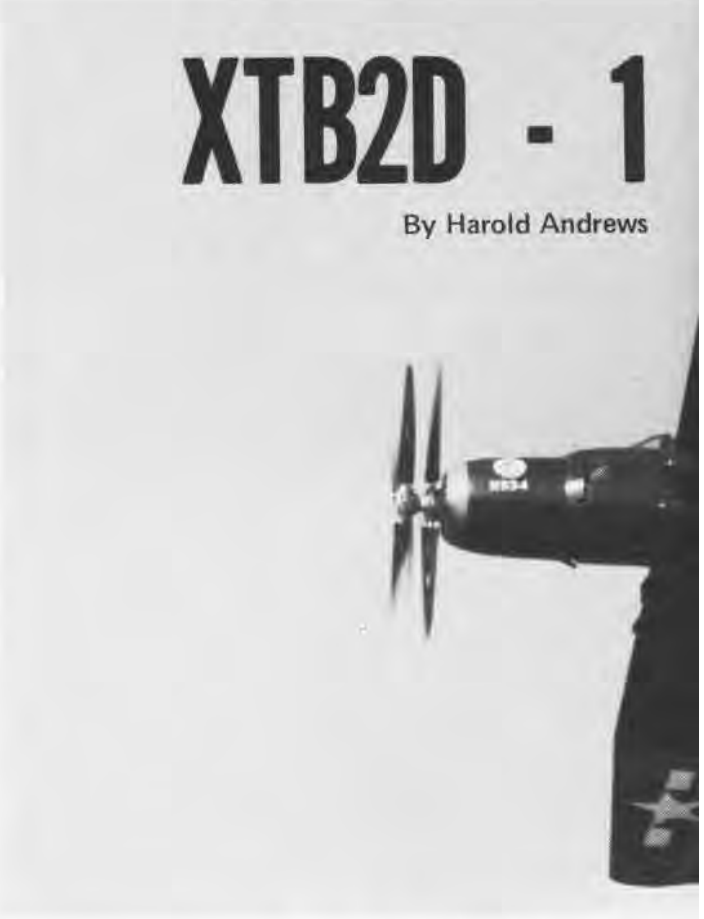
The low priority and delays in propeller delivery resulted in the first flight date slipping from the fall to early 1945. Meanwhile, consideration was given to installing a jet engine in the second aircraft for flight installation experience. This was turned down, but it was agreed to complete the second airplane like the first, without the power turret and the under fuselage tub for the bomb-sight and tunnel gun. Relocation of the second crewman further aft with extensive electronic equipment was proposed as a step towards offsetting the resulting center-of-gravity shift and providing a usable military capability in the changing combat environment.

Initial taxi tests and liftoffs in February 1945 were followed by further delays due to engine problems, the first three flights occurring in May with generally satisfactory results, although the third flight ended in an emergency landing due to propeller problems. While awaiting a new propeller, modifications to reduce wing outer panel dihedral and vertical tail height were incorporated, flight testing resuming in June in preparation for ferrying to Patuxent River for Navy evaluation. Before test completion, both inboard flaps separated from the airplane while being retracted from the dive brake position. The pilot completed a successful emergency landing.

In August, the second airplane made its first flight in the same configuration as the modified first one, but the flight ended in an emergency landing due to engine failure. In fact, the dual rotation engine gearing froze on rollout. The engines were grounded pending redesign of the nose section. New propeller blades were also found necessary, and the repaired #1 as well as #2 remained grounded until May of 1946 when flight testing resumed. In June another forced landing due to reduction gear failure resulted in concern over adequate engine reliability for safe flight testing. Plans were made to substitute the different gear ratio nose section and six-blade dual rotation Aeroproducts propeller which had not experienced as many problems in other flight test installations. These were delivered in December.

During early 1947 continuation of the flight program was reviewed, and by June it was decided to accept the aircraft for barrier testing of dual rotation propeller tricycle gear aircraft, closing out the development of a design that no longer fit into the carrier aviation picture, even though it promised to meet the very ambitious design goals considered vital five years earlier.

Appreciation is extended to Dr. W. J. Armstrong and Ms. Judy Walters for assistance in making this feature possible.

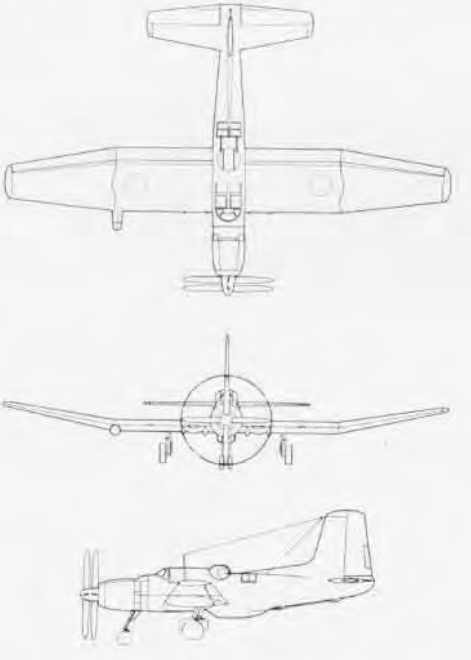


XTB2D-1

Span	70′
Length	46′
Height	18′6″
Engine	
One P&W XR-4360-8	3,000 hp
Maximum speed (scout)	295 kts
Service ceiling (scout)	27,900′
Maximum range (scout)	2,050 nm
Crew (basic design)	3

Armament

Four .50 machine guns, fixed.
Three .50 machine guns, fixed.
Up to four MK 13-2 torpedoes or up to 8,000 lbs. bombs.



OMEGA
it works

By Robert Knapp

"We like to think we're the consumers' union for the airborne Navy," smiled Charlie Sakran from his desk in Hangar 306 at the Naval Air Test Center, Patuxent River, Md. "To us in test and technical evaluation and our partners in operational evaluation falls the responsibility for helping to assure that the avionics that go aboard Navy aircraft are the best for the mission — cost-efficient, reliable and maintainable.

"We'll take something like this Omega radio nav receiver and fly it for three months before op eval even gets involved," said Sakran, who heads navigation systems engineering in the Anti-submarine Aircraft Test Directorate.

"We'll start with a new system like this by accumulating a statistical data base so we can quantify average operational characteristics," he explained to visitors from Washington. "We make sure that the system is totally compatible with a particular aircraft. That includes receiver antenna placement to assure the best possible signal reception. We'll assure that there's no interference from or with other electronic systems aboard. We make sure that the system interconnects properly with rate-aiding sensors that provide necessary information like airspeed and heading.

"We'll interrupt the power of an Omega receiver to test for operational recovery. We'll put in errors at start-up and see how it can correct itself. We'll subject it over and over again to every possible eventuality and circumstance that years of experience have shown us can befall a piece of avionics equipment."

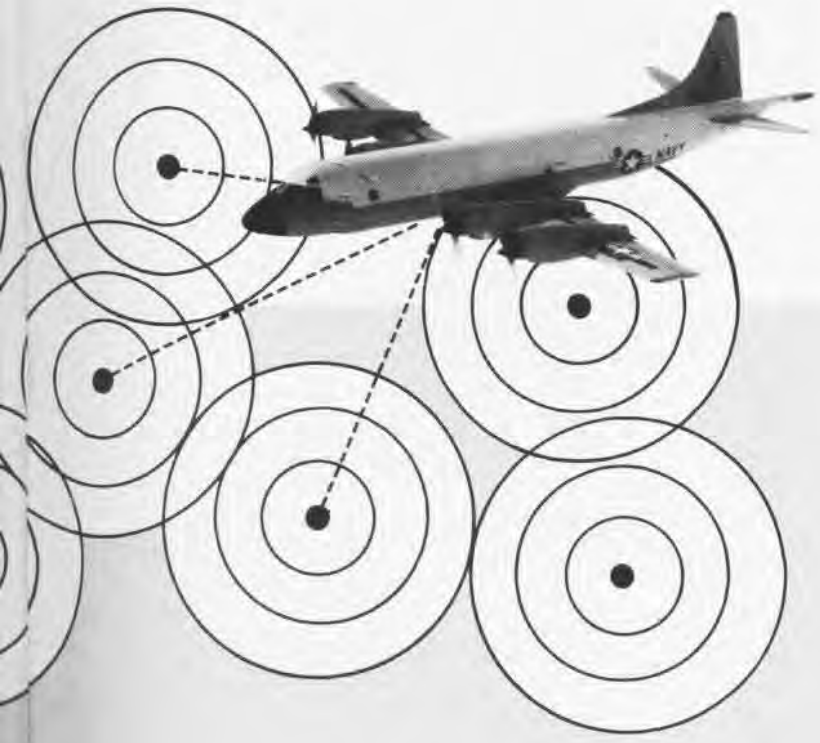
Airworthiness, structural integrity, safety of electrical wiring, ability to withstand the harsh carrier environment of catapult launches and arrested landings, radio signal acquisition and tracking capability and navigation accuracy are among the myriad of comprehensive tests devised and conducted by Sakran's group.

"When a new system clears the Center, it's as thoroughly tested and evaluated as technically-capable people can test and evaluate," Sakran affirmed. He and his eight engineers and technicians average 12 years of experience in airborne navigation systems.

"Our constituency is the crews who fly the long-range patrols and off the decks of carriers in mid-ocean," he said. "And we don't work in an ivory tower. This is an operational environment. There are aircraft in the hangar just below my desk. And P-3s parked right outside. We work very closely with the aircrews and fly right with them. This equipment has to work accurately, reliably and be easy to maintain."

Although just one of many avionics functions, navigation is especially critical for over-the-ocean aircrews. Most aircraft carry multiple navigation systems and Omega is frequently one of these. It has been operational aboard Navy aircraft in increasing numbers for more than 10 years. Sakran believes it is the most cost-effective, long-range aircraft navigation system ever developed. Omega can provide position-fixing accuracy to within a mile or two almost anywhere in the world, day and night, in any weather.

Omega grew out of the Navy's intent 20 years ago to phase out the older Loran radio navigation system that provides only limited coverage in the northern hemisphere. Omega was conceived as a navigation system for ships. But Naval Research Laboratory work through the 1960s proved that aircraft-mounted antennas could receive the very low frequency signals. In the 1970s, lightweight, compact, digital airborne receivers were developed that could process the signals



with a precision necessary for fast-moving aircraft use.

Omega now is a full-fledged navigation aid, operational aboard Navy, Army and Coast Guard fixed wing and rotary wing aircraft. Alex Hertzberg, Omega acquisition manager for the Naval Air Systems Command, lists the A-3, P-3A/B/C, C-9B, C-130E, EC-130Q, C-118, C-131, RH-53D and CH-53D as Omega-equipped.

The base on which the airborne receivers home is a worldwide network of seven – soon to be eight – very low frequency (10-14 kHz) transmitting stations operating under an international partnership. Each of the transmitters produces precisely controlled and timed signals continuously repeated at each of five slightly separated frequencies. The seven operational stations are located in Hawaii, North Dakota, Norway, Argentina, Liberia, La Reunion (off the coast of Madagascar) and Japan. An eighth station in Australia is expected to become operational in the not-too-distant future. The network is synchronized so that only one station is transmitting at any instant on one of the four common frequencies. Individual station identification is maintained by its own unique frequency sequence and actual duration of signal transmission.

As an aircraft flies toward or away from a transmitter, the signal characteristics detected by the Omega receiver aboard vary precisely to match the changing distance. By recording and processing signals from two or more transmitters, a receiver's built-in computer or microprocessor can draw intersecting lines in its memory and translate the computed position fix into a continuously updated visual display of latitude and longitude. The most capable receivers constantly listen to several transmitters simultaneously (the Omega stations as well as the Navy's own VLF transmitters) and automatically compute position from a selection of the best incoming signals. These receivers can test themselves and even correct erroneous information inadvertently read into them from other sources.

The entire network requires a total of only 10 seconds to transmit a complete set of rhythmic, verse-like signals so that any Omega-equipped aircraft can automatically refine its positional data six times each minute.

In addition to providing accurate geographic position, Omega supplies a number of other navigational statistics including wind direction and velocity, ground speed and drift, heading, true airspeed, compass heading and magnetic variation, distance and time to a given waypoint.

Any of this information may be selected and displayed on a control-display panel. This panel, a receiver/processor unit and an antenna, comprise the entire system, which weighs a total of about 35 pounds and has an accuracy of one nautical mile. The only input required from the flight crew is the initial insertion of the aircraft's latitude and longitude, the Greenwich mean time, and the day/month/year prior to takeoff. Once supplied with this basic data, the system functions independently to supply the crew with constantly updated navigational data.

Omega has carved its own niche aboard long-range Navy aircraft alongside inertial, Doppler, and other dead-reckoning and position-fixing systems. According to Charlie Sakran, "Omega will be around beyond 2001. It works!"

PEOPLE·PLANES·PLACES

Awards

Aviation Boatswain Mate of the Year certificates for 1981 were presented by RAdm. L. C. Chambers, Vice Commander, NavAirSysCom, to ABE1 Michael F. Hoben, a chief petty officer selectee representing the Pacific Fleet, and ABE1 Albert Annunziata, assigned to *John F. Kennedy*, representing the Atlantic Fleet.

1st Lt. Curtis Mamzic of VMA-214 has been selected to receive the Foss Award presented by the American Fighter Aces Association for excellence in the air combat maneuvering stage of flight training. This is the first time the award has been presented. It is named after Maj. Joseph Foss, one of the leading Marine Corps aces during WW II.

AMS2 William Reynolds of HC-1, Det 6 has received the Sikorsky Helicopter Rescue Award for participating in the rescue of 17 civilians in the South China Sea last March. Reynolds also received the Navy Achievement Medal for his part in other rescues.

HSL-36 is the recipient of the 1981 Squadron of the Year Award for East Coast LAMPS squadrons. This is the second year in a row that the squadron has won the award.

Lt.Col. Alfred J. Allega has been named Aviator of the Year for 1981 by the Marine Corps Aviation Association. Lt.Col. Allega is C.O. of HMM-163.

For the second year in a row, VP-69 is the reserve community's winner of the AVCM Donald M. Neal Award for aircraft maintenance excellence. Located at NAS Whidbey Island, Wash., the squadron is assigned to Commander Reserve Patrol Wing, Pacific. The award, known as the Golden Wrench Award and presented annually by Lockheed, is dedicated to the memory of the late AVCM Neal who made significant contributions in the field of patrol aircraft maintenance during his naval career.

Blue Angels

Cdr. David L. Carroll has been selected as the C.O. and flight leader of the Navy Flight Demonstration Squadron, the *Blue Angels*. He is a combat veteran with over 290 missions, 800 carrier landings and 4,000 flight hours. Cdr. Carroll is the 20th flight leader of the *Blue Angels* since their beginning in 1946.

Lt. Scott Anderson has been selected to fly with the *Blue Angels*. Lt. Anderson served with VA-83 and VA-174 prior to being chosen. He has accumulated over 1,500 flight hours in tactical jets and over 300 carrier arrested landings. He will serve as narrator and advance liaison officer for the 1982 season and will fly as demonstration pilot during 1983-84.

Anniversaries

The U.S. Navy Aviation Supply Office, Philadelphia, Pa., celebrated its 40th anniversary on October 1, 1981. ASO was founded in 1941, to fill the need for a centralized coordinated supply system. It is unlikely that anyone then could have

envisioned the scope and magnitude of today's operations. 2,400 civilians and 65 Navy personnel work at the 135-acre compound to expedite delivery of aeronautical material to Navy and Marine Corps squadrons throughout the world.

VP-46, one of the oldest continuously operating patrol squadrons in the Navy, just recently celebrated its 50th birthday. Established as VP-5S in September 1931, in Coco Solo, Canal Zone, the squadron changed its designation eight times until September 1948, when it became VP-46. During its colorful history, the squadron has performed its sub hunter/killer mission in 12 different aircraft from the PM-2 to the present P-3C *Orion*.

Rescues

Flying over unfamiliar terrain in a foreign country with no navigational aids and decreasing visibility in a life or death situation may sound like the plot for a new movie thriller, but to Lt. John Christenson, it was a true story. Lt. Christenson is assigned to HS-9, embarked aboard *Nimitz*. The carrier was on a routine port visit to Naples, Italy, when the duty officer received a medical evacuation request from Commander, U.S. Sixth Fleet aboard *Puget Sound* in Gaeta. ComSixthFlt had been requested to medevac a local 16-year-old Italian boy with serious head injuries from an automobile accident. Lt. Christenson, Lt. Dave Small and P O James Selle immediately flew to Gaeta. The HS-9 helo landed at the Gaeta fuel pier where the injured boy was taken aboard for a 35-minute flight to Rome. An ambulance was waiting at Ciampino airport to rush the boy to a hospital.

On a low-level training flight around the island of Great Inagua in the Caribbean, a flight of two VC-10 TA-4Js from Guantanamo Bay, Cuba, came upon a 30-foot sailboat aground on the desolate southeast corner of the island. The flight, with Lt. Bob Richards as lead and LCdr. Phil Mansfield flying tactical wing, observed no activity on the boat. Two miles down the beach they saw three persons waving their arms frantically. Mansfield contacted Miami Center and, fortunately, Coast Guard Flight 5792 was within 50 miles of the site of the shipwreck. A radio and emergency rations were parachuted to the survivors, three German nationals who had been stranded for four days, their supplies nearly depleted and hope for rescue waning. Soon after, the survivors were picked up.

Sea Cadets

David Blake, 14 years old, spent his vacation not at summer camp but with VFP-306 on the squadron's annual deployment to NAS Fallon, Nev. A member of the Sea Cadets, he was learning firsthand

about tactical aircraft by serving as a plane captain's assistant. While at Fallon, his duties included handling and servicing VFP-306's photoreconnaissance RF-8G *Crusaders* under the watchful eyes of the squadron's maintenance personnel. David wonders if any of his ninth-grade classmates at Madison Junior High in Upper Marlboro, Md., enjoyed their vacations as much as he did.

Honing the Edge

Marine OV-10A Broncos from the Marine Observation Detachment located at MCAS(H) Futenma, roll down the runway at NAS Cubi Point, R.P., during Operation Cope Thunder 81.

Cpl. Bill Taylor

Along with U.S. Air Force planes and support squadrons, U.S. Navy and Marines, the Philippine Air Force and elements of the Royal Australian Air Force assumed their roles as aggressors in Operation *Cope Thunder 81*. The two main objectives of the exercise were to increase air combat capabilities and enhance pilot/ crew member survivability. Additionally, the exercise gave pilots the opportunity to hone their flying skills in combat-simulated situations.

The *Aardvarks* of VF-114, while embarked aboard *America*, participated in what was billed as a "turkey shoot" to demonstrate their operational readiness. During a four-day exercise, *Aardvark* aircrews fired 1 AIM-54 *Phoenix*, 3 AIM-7 *Sparrows*, and 10 AIM-9 *Sidewinder* missiles at high-speed maneuvering targets, simulating air combat scenarios. By the end of the exercise, the *Aardvarks* had qualified for 34 Battle Es.

Guadalcanal, under the command of Capt. T. A. Mercer, participated in *Display Determination 81*, an amphibious assault exercise off Turkey. The exercise commenced last September just east of the Straits of Messina between Sicily and Italy, as Turkish, Italian, Greek, French and U.S. forces rendezvoused.

Established

A new helicopter squadron was established recently at MCAS(H) Tustin, Calif. Marine Heavy Helicopter Squadron-465 is the latest addition to Marine Aircraft Group-16 and will fly the CH-53E *Super Stallion*.

Disestablished

VC-3 faded away into naval history recently as its disestablishment ended 41 years of service to both surface and air units of the Atlantic and Pacific Fleets. VC-3 provided air and ground-launched target services for the Navy and Marine Corps.

Change of Command

CVW-8: Capt. David W. Hoffman relieved Cdr. Frederick L. Lewis.

H&MS-10: Maj. Joseph A. Mitchell, Jr., relieved Maj. William E. Ransbottom.

PatWing-1: Cdr. Robert W. Chase relieved Cdr. Alexander C. Konczey.

VA-27: Cdr. Dennis V. McGinn relieved Cdr. James S. Zayicek.

VA-46: Cdr. Thomas R. Mitchell III relieved Cdr. Morris M. Kemple, Jr.

VF-21: Cdr. Bob Canepa relieved Cdr. Bob Tracy.

VFP-306: Cdr. Leonard E. Johnson relieved Cdr. Robert F. Norrell.

VMFA-115: Lt.Col. James A. Davis relieved Col. Jack B. Hammon.

VP-23: Cdr. Michael T. Korbet relieved Cdr. Edward L. Naro.

The Naval Aviation Hall of Honor was dedicated on October 14, 1981, at the Naval Aviation Museum aboard NAS Pensacola, Fla. The first 12 members were enshrined, all of whom were pioneers whose contributions did much to determine the nature and thrust of Naval Aviation today: Vice Admiral P. N. L. Bellinger, Warrant Machinist Floyd Bennett, Rear Admiral Richard E. Byrd, Jr., Lieutenant Commander G. DeC. Chevalier, Lieutenant Colonel Alfred A. Cunningham, Glenn H. Curtiss, Commander Theodore G. Ellyson, Eugene B. Ely, Rear Admiral William A. Moffett, Rear Admiral Albert C. Read, Captain Holden C. Richardson and Admiral John H. Towers.

In his address at the dedication ceremony, Vice Admiral Wesley L. McDonald, Deputy Chief of Naval Operations (Air Warfare), spoke of the Museum as "a repository of the nostalgia and mystique of Naval Aviation, which inspires pride in older aviators . . . and excitement in the new Naval Flight Officers and Pilots . . . ." He added that it was only fitting that the Museum which holds the machinery of Naval Aviation should recognize the magnificent men who helped create the proud tradition.

Admiral Thomas Moorer, USN(Ret.), former Chief of Naval Operations and Chairman of the Joint Chiefs of Staff, stated that the enshrinees had imagination, knowledge and courage, and that with those traits they created Naval Aviation as we know it today.

Each year there will be additions to the Hall of Honor. The selectees for 1982 are: General Roy M. Geiger, Glenn Martin, Admiral Marc A. Mitscher, Admiral Arthur W. Radford, Vice Admiral Charles E. Rosendahl and Commander Elmer F. Stone.

Stokes Litter

A Life Saver

Photos by LCdr. R. H. Little.

The Stokes Litter is shown at left with hoisting sling, flotation and netting in position and, above, being hoisted aboard a helicopter. Belay line and V-strap help to position the litter from the ground.

By LCdr. Charles T. Fowinkle

Most Naval Aviators will never have to eject from their aircraft. Occasionally, however, circumstances make this expeditious means of egress a prudent option to take. While such exits are almost always undertaken without ill effect, there is always the chance of injury.

Certain types of injury present special problems for the helicopter rescue team. One such injury is that involving the spinal column and this usually means that the patient must be immobilized so that the problem is not aggravated. The Stokes Litter is ordinarily the best device for dealing with this situation.

Unfortunately, the protective frame and flotation gear used on the standard Navy Stokes Litter designed for shipboard operations is excessively heavy and bulky, making it extremely difficult to maneuver through the cabin door of a rescue helicopter. Further, the shackle used for highlining aboard ship is not compatible with the Navy double rescue hook, employed on all Navy helos, without an adapter.

To develop an acceptable litter for open-water rescue, the SAR Model Manager at NAS Pensacola, Fla., evaluated available devices and chose the Coast Guard version of the Stokes Litter as the basic model. This version had more streamlined construction and a flotation collar superior to the old Navy highline type. After the flotation collar was redesigned still further for better storage, a five-pound weight was added to the foot which lifts the patient's head from the water and makes it easier to secure him to the litter. Modification was also made to the lift assembly by adding carabiner locking devices or rings to allow the lifting assembly to be detached from the basic litter for inspection, maintenance or replacement. This has also made it possible to hoist a shipboard-type litter aboard a helo, if the latter has been modified with the new flotation collar. Even if it has not been so modified, a flotation kit can be lowered and rigged aboard ship.

To correct the problem of the survivor and litter swinging about, a weighted trail line with a V-strap has been attached to the litter. This provides directional stability and control during hoisting.

Instructions for both the new sling assembly and the flotation collar will soon be published in the Navy Aviation Crew Systems Rescue and Survival Equipment Manual, NAVAIR 13-1-6.5. Litter kits to modify the Navy Stokes Litter are available through open purchase at low cost from Life Saving Systems Company, P.O. Box 3134, Apollo Beach, Fla. 33570.

Procedures for operation of the Stokes Litter have been developed by the SAR Model Manager based on his tests and evaluations. These procedures have been incorporated into a standard aircrew training program and will be reflected in the Navy Search and Rescue Manual NWP 37-1. The newly modified Stokes Litter is now being carried by most station SAR units and some squadrons. It will be used fleetwide in the near future.

Further information on the use and acquisition of the new Stokes Litter kit is available through the SAR Model Manager's office, autovon 922-2265, commercial (904) 452-2265.

VMO-2 on the Road

By Sgt. Keith Brumley

The shapes in the distance drew closer; the buzzing grew louder. A group of about 30 Marines watched as the planes approached. The two Marine OV-10 *Bronco* reconnaissance aircraft drifted lower, slowly approaching the runway. The first plane and roadway met smoothly, and the *Bronco* taxied down the highway. The second followed closely behind.

Last August, a four-plane detachment from Marine Observation Squadron Two, stationed at Camp Pendleton, Calif., used about 2,000 feet of Stuart Mesa Road, near Edson Range, as an airstrip. "We're doing road operations," said Captain David P. Delahunty, one of the squadron pilots. "They're making practice passes to get the feel of the road."

First Lieutenant Mike E. Schoelwer, an aerial observer with the squadron, explained the road ops. "They're drills to help us get used to setting down in places where there aren't any airstrips. In combat, there isn't always an airfield right where you want it. The *Bronco* is designed for this type of work. It can take off in about 1,000 feet, but we're using a 2,000-foot stretch of road here, for safety's sake."

Lt. Schoelwer continued, "The *Bronco* is the last of the fly-by-the-seat-of-your-pants planes we have. We might need to fly in and take a peek at something right under the enemy's nose. The *Bronco* can cruise at 180 miles per hour at an altitude of 100 feet. That's pretty hard to pick up on a radar screen."

Marines from the 1st Reconnaissance Battalion, 1st Marine Division, were there to practice parachute inserts from the back of the planes. Each *Bronco* can carry four combat-equipped Marines.

"They're going to make their jump at Case Springs," said Lt. Schoelwer. "Then, the planes will come here to our forward 'airfield.' "

With twin propellers rotating, a *Bronco* roared to life, whisking down the road and leaving a cloud of dust in its wake. Quickly, it lifted off and headed toward its destination.

"Maybe we'll be doing this for real someday," Lt. Schoelwer said. "We have to be ready."

Sgt. Bill Dasher

Command History

By Roy A. Grossnick, Assistant Historian

In order to make an intelligent assessment of the problems, you must know the history of problems. Adm. Arleigh A. Burke, CNO, 1955-1961.

NOW HEAR THIS. The time has come for the submission of the annual unit Command History. To help simplify the process of writing a command history, the Naval Aviation History Office (Op-05D2) provides a brief guideline for the Naval Aviation community. It is designed to amplify Command History Instruction OPNAV 5750.12C as it pertains to aviation commands and to present a consolidated list of basic information to be included in the command history.

Aviation commands responsible for submitting command histories to the Naval Aviation History Office include those units which are listed in the Standard Navy Distribution List (SNDL), such as wings, groups, squadrons, aircraft carriers (CV, LHA and LPH), air stations, air rework facilities, special schools, aviation shore commands, etc. The data requested below is an amplification of the material in enclosure (1) "Guide for the Preparation of Command Histories" which accompanies OPNAVINST 5750.12C.

- The mission of the command and the name of the immediate senior command (all commands).
- A brief chronology of major events (all commands). It should include: At-sea periods; deployment dates; locations; major activities, operations or exercises; significant changes (new planes and their bureau numbers, weapons, equipment, etc.); major aircraft accidents (date and bureau number of aircraft); unit awards.
- A narrative should follow the chronology to provide any amplifying information necessary to explain any major events. Significant or interesting anecdotes may be included.
- The name of aviation units, special units or tenant units assigned.
- Information on major construction projects or developments (air stations and major aviation shore commands).
- Enclosures
  - (1) Copy of the change of command brochure.
  - (2) Copy of the cruise/deployment report.
  - (3) Copy of major studies or reports involving Naval Aviation (staff studies, intelligence reports, etc.).

The following is an *example* of the way a command history should be submitted.

1981 Command History for VF-00

VF-00 is assigned to Carrier Air Wing (CVW) 69 with the mission to intercept and destroy enemy aircraft in all-weather conditions, in order to establish and maintain local air superiority, and to have the capability of conducting air-to-surface attack operations with conventional weapons.

CHRONOLOGY OF EVENTS, 1 January — 31 December 1981

JANUARY

1 - Stand-down during holiday period, located at NAS Oceana.
6 - Continued transition to new F-14 *Tomcat*.
7 - Last F-4S BuNo 153843 transferred.
10 - Received two new F-14s BuNos 183455 and 183459.
12 - Squadron moved aboard USS ALWAYS-AT-SEA (CV-100) and underway for carrier qualifications in the Virginia Capes operating area.
14 - VF-00 F-14 BuNo 183459 crashed after launch.
16 - USS ALWAYS-AT-SEA returned to Norfolk and VF-00 debarked for NAS Oceana.
18 - VF-00 engaged in conventional weapons training and competitive exercises at NAS Oceana for the remainder of the month.
20 - Preparations for Overseas Movement were instituted by VF-00.
31 - Received the Pistol Pete Award for the top fighter squadron.

FEBRUARY

2 - Squadron moved aboard USS ALWAYS-AT-SEA and underway for missile firing exercises in Cape Hatteras operating area.
3 - VF-00 F-14 aircraft successfully fired five AIM-9 missiles.
6 - USS ALWAYS-AT-SEA returned to Norfolk and VF-00 debarked for NAS Oceana.
7 - Extensive ground training conducted and preparations for upcoming cruise continued.
10 - Aboard USS ALWAYS-AT-SEA for Dependents' Day Cruise. VF-00 aircraft conducted flight demonstrations. Returned to NAS Oceana.
12 - VF-00 Change of Command, Cdr. Xwy relieved Cdr. Abc (see enclosure (1)).
15 - Loaded aboard USS ALWAYS-AT-SEA and underway for six-month Mediterranean Sea deployment. En route to Med via Caribbean Sea.
18 - Involved in Operation MIDLINK 81.
25 - Arrived Rota, Spain. Conducted turnover with VF-010.
26 - Underway, transit Straits of Gibraltar and conducted flight ops in Western Mediterranean Sea.
28 - Arrived Cannes, France.

MARCH

etc. . .

. . . a story of the past and a guide for the future

NARRATIVE

JANUARY

Fighter Squadron ZERO ZERO began 1981 by continuing the transition to the new F-14 aircraft. Pilots and ground crew personnel received extensive training in the new procedures for the F-14. Five pilots attended training courses with VF-900 on the F-14. The two new F-14 aircraft received on 10 January brought the number of F-14s on board to 12. During carrier operations, an F-14 had a flameout after launch and crashed into the sea. The pilot Cdr. Xyz and RIO Lt. Mno ejected. They were picked up by an HC-2 helicopter and returned to the carrier deck. Neither man suffered any injuries. Carrier qualifications were completed and all VF-00 pilots qualified for day and night carrier operations. After returning to NAS Oceana on 16 January, VF-00 began a period of intensive training. Flights were conducted daily and competitive exercises were held in gunnery and air combat maneuvers. Administrative and operational preparations were begun for the forthcoming Med deployment. VF-00 received the Pistol Pete Award for the top fighter squadron of 1980. It was presented to the squadron by RAdm. Wins in ceremonies at NAS Oceana.

FEBRUARY

In early February, VF-00 aircraft fired five AIM-9 missiles resulting in two targets destroyed. After many long hours of preparation VF-00 boarded USS ALWAYS-AT-SEA for her seventh Med cruise. VF-00, along with units from Canada, Mexico and Great Britain, participated in joint exercise called MIDLINK 81. It was designed to provide a unilateral response to the invasion of island nations in the Caribbean. VF-00 performed all its missions in the exercise in an outstanding manner and received a "well done" from Carrier Division 10, RAdm. Cando. Valuable information and operating procedures were received from VF-010 during turnover ops in Rota, Spain. VF-00 conducted 117 hours of flight operations during February.

MARCH

etc . . . .

ENCLOSURES

Enclosure (1) Copy of the change of command brochure for VF-00.

Enclosure (2) Copy of the February-August 1981 Med intel/cruise report.

When command histories are classified, ensure downgrading instructions are included because they facilitate the dissemination of the material in the command history. If there are any questions, please contact the Naval Aviation History Office (Op-05D2) at (202) 433-4355, autovon 288-4355, address Bldg. 146, Washington Navy Yard, Washington, D.C. 20374. Command History reports are due on 1 March for the previous year.

Hallmarks of accomplishment. . .deserve to be remembered and studied. Adm. James L. Holloway III, CNO, 1974-1978.

Only by measuring the lessons of the past can we forge a yardstick for the future. Vice Admiral Malcom W. Cagle, USN(Ret.)

Letters

F4D-1/F-6A Skyray

I am asking for help from your readers on the third, and final, article in a series I'm writing, entitled "Douglas Skyray in Fleet Colors." This installment will deal with VF-881/VF-882 at NAS Olathe, Kans.; Naval Air Development Unit, South Weymouth, Mass.; Naval Air Test Facility, Lakehurst, N.J.; Naval Air Facility, China Lake, Calif.; Pacific Missile Test Center, Point Mugu, Calif.; Naval Air Test Center and U.S. Naval Test Pilot School, Patuxent River, Md.

I would appreciate hearing from any personnel from these units, or the loan of photographs showing their aircraft.

Nicholas M. Williams
American Aviation Historical Society
P.O. Box 184
Waverly, IA 50677

Nimitz

I, like Kirk Douglas (see *NANews*, Sept. 1981, page 17), was recently on *Nimitz* at sea and witnessed day and night flight operations. I also felt the tragedy as he did. The Navy is very fortunate to have those 6,000 men on board the carrier. I only wish every taxpayer could see and experience flight operations as I did.

Edith M. Bibb, Program Manager
Naval Electronic Systems Command
Washington, DC 20360

Aircraft Boneyard

I am writing a book on the Military Aircraft Storage and Disposition Center at Davis Monthan AFB, Ariz. If anyone has photographs of aircraft stored there that I could borrow, please contact me at the address below.

P. D. Chinnery
70, Carnarvon Drive
Hayes, Middlesex
UB3 1PX England

Invasion of Japan

I am writing a book to be titled *The Invasion of Japan* which is scheduled for publication in 1983. It will deal with the period beginning with the fall of Saipan to the Japanese surrender, and with the hypothetical question which must be asked. What if we had elected to invade Japan?

I would be interested in hearing from those who were involved in operations in that theater during the period in question and especially from those who may have taken part in invasion planning.

George McMillan
Coffin Point
Frogmore, SC 29920

Oops

It was with a great deal of interest that I read the article in your September 1981 issue entitled, "Seeing the Problem from a Different Perspective." It also humored my superiors that the aircraft pictured on page 10 was a "Memphis-based" T-2C with our former commanding officer's name on it, especially since we had always thought that the aircraft was Meridian-based. Could you elucidate on this?

Ltjg. Michael E. Liebmann
PAO, VT-19
NAS Meridian, MS 39309

Ed's note: Sorry, we goofed. The caption should have read Meridian-based.

Walter Hinton who flew the NC-4 on the world's first flight across the Atlantic is dead at the age of 92. The last surviving member of the NC-4 crew passed away in his sleep at a Florida nursing home on October 28, 1981.

One of the nation's well-known aviators of the early 1920s, Hinton had enlisted in the Navy in February 1908 and served as a Quartermaster on several Navy ships including the historic cruiser *Olympia*. Selected for flight training at Pensacola, he was designated a Naval Aviator in 1917 and served as Operations Officer to Lieutenant Commander Richard E. Byrd hunting German submarines off Halifax, Nova Scotia, during the final stages of WW I.

In December 1920, a year and a half after his flight across the Atlantic, Lieutenant Junior Grade Hinton was in the headlines again for his part in a sensational balloon flight which deposited him and two other Naval Aviators in the icy wilderness near Hudson Bay, Canada. Given up for lost, they walked out through heavy snows, emerging to a hero's welcome some 31 days later.

Leaving the Navy in 1921, Hinton made a highly publicized flight from New York to Rio de Janeiro, chalking up another world's first. Then in 1924-25 he explored the remote tributaries of the Amazon River by air as pilot for the Rice Scientific Expedition, flying far into the deep jungles where no white man had penetrated before. His adventures were chronicled in the April 1926 edition of *The National Geographic Magazine*.

During the 1930s, Hinton made a flying tour of the United States for the Exchange Clubs of America to promote aviation. Later as Chairman of a Chamber of Commerce Committee he was a driving force for the construction of National Airport in the nation's capital.

Among his numerous awards is a large gold medal, one of only seven struck by the U.S. Congress to honor the participants in the 1919 transatlantic flight. Other personal medals include the Navy Cross, Air Force Cross of Great Britain, Knight Military Order of the Tower and Sword of Portugal, and the Alberto Santos Dumont medal recently presented to him by the Government of Brazil.

On November 20, 1981, the ashes of the intrepid aviator were inurned with military honors beside the ashes of his wife Carrie Susan Hinton, who had predeceased him.

In life, Walter Hinton walked with the giants of early American aviation and was himself a respected member of that exclusive club. He possessed a remarkable memory for the details of events long past and was an irreplaceable window into the exciting beginnings of flight. We are grateful that he shared many of his recollections with *Naval Aviation News*. Hinton the aviator and Hinton the man will be sorely missed by all who knew and admired him.

The *Eagles* of Patrol Squadron Sixteen have the primary mission of detecting, tracking and, in time of war, destroying hostile submarines. Secondary missions include mine laying, shipping surveillance, reconnaissance, and search and rescue operations. VP-16 was commissioned in May 1946 at Cecil Field as a reserve squadron, VP-ML-56, operating six amphibious PBY *Catalinas*. Redesignated Patrol Squadron 741 in 1949, the squadron continued to operate in reserve status until the commencement of hostilities in Korea in 1951. At that time the venerable *Catalinas* were replaced with Lockheed P2V-2 *Neptune* patrol bombers. In February 1953, VP-741 became part of the regular Navy with the new designation VP-16 and in 1964 the squadron began transitioning to the Lockheed P-3A *Orion*.

VP-16 has served throughout the world, operating from Iceland to the Cape of Good Hope, from the fjords of Norway to the Gulf of Thailand. Its diverse activities have included participation in space capsule recovery, ice patrols, numerous multination exercises and Christmas gift drops to Eskimo children. During the Vietnam hostilities, VP-16 was awarded the Navy Unit Commendation for combat support flights on Yankee Station and for Market Time patrols off the coast of Vietnam.

The *Eagles* of VP-16, based at NAS Jacksonville, Fla., currently fly the P-3C *Orion*. The squadron is skippered by Commander Dan Oliver.

naval aviation news