

NAVAL AVIATION

NEWS



46th Year of Publication

SEPTEMBER 1965

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WHY WE ARE THERE

'We are in Vietnam to fulfill one of the most solemn pledges of the American nation. Three Presidents—President Eisenhower, President Kennedy and your present President—over 11 years have committed themselves and have promised to help defend this small and valiant nation. We just cannot now dishonor our word, or abandon our commitment, or leave those who trusted us to the terror and repression and murder that would follow. This, then, is why we are in Vietnam'—President Johnson, July 28



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■ COVERS

A VP-40 SP-5B takes on fuel from USS Currituck in South China Sea (photo by R. D. Moeser, JOC). Above, LCdr. H. P. Kreinke, commander of a VP-4 patrol plane, assists two Vietnamese observers (photo by Jean Cote, PH1). Back cover photograph of FDR deck was taken by P. H. Jenkins, PH3.

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NAVAL AVIATION NEWS

AirLant 'E' Winners Named Intrepid, VF-84 Honored Again

Two Atlantic Fleet aircraft carriers and four aviation squadrons have won over-all battle efficiency awards for FY 65, according to an announcement by Vice Admiral Charles T. Booth, ComNavAirLant.

The AirLant Battle "E" awards are presented annually to a CVA and a CVS and to squadrons in different categories for outstanding operational readiness during the fiscal year. Ships are also awarded individual pennants for outstanding departmental performance.

USS *Intrepid*, presently undergoing a FRAM overhaul at the Brooklyn Naval Yard, won the "E" in the CVS category for the second straight time. The ASW carrier's Weapons Department also won the "G" award for efficiency.

USS *Shangri-La* claimed the CVA "E" and also won Communications and Weapons Department awards.

VF-84's second consecutive "E" was presented in the all-weather fighter category. Other squadron winners included VA-12, VA-176,

and VF-62. Results are to be announced later for competition among patrol, anti-submarine, and helicopter antisubmarine squadrons.

CV departmental award winners included USS *Forrestal*, Operations; USS *Independence*, Engineering and Medical; USS *Randolph*, Air Engineering, and Medical; USS *Wasp*, Communications; and USS *Franklin D. Roosevelt*, Air. Overhauls for USS *Enterprise* and USS *Saratoga* and the late arrival of USS *America* kept those ships out of the competition.

New ASW Squadron Formed VSF-1 Commissioned at Alameda

The Navy's first antisubmarine fighter squadron, VSF-1, has been commissioned at NAS ALAMEDA.

VSF-1 was created to provide detachments of A-4 *Skyhawks* to ASW carriers primarily for defense of HUK groups. Such units were formerly obtained from A-4 attack squadrons.

The squadron's 300-plus officers and enlisted men and 24 *Skyhawks* will be based at Alameda. Its first commanding officer is Commander C. E. Waring.

Flatley Awards are Listed Air Safety Gains Also Announced

The Chief of Naval Operations has announced that *Coral Sea* (CVA-43), *Kearsarge* (CVS-33) and *Boxer* (LPH-4) have won the FY 65 Admiral Flatley Memorial Award for outstanding achievement in accident prevention during aircraft operations.

America, *Enterprise*, *Kitty Hawk*, *Ticonderoga*, *Randolph*, *Guam* and *Two Jima* did not qualify for the

competition owing to the limited number of landings recorded.

Although 35,000 more carrier landings were made in FY 65, the number of landing accidents decreased.

CNO also indicated that preliminary statistics show that all-Navy aircraft accident rate for FY 65 reached an all-time low of 1.25 per 10,000 flight hours. This is 9% improvement over the FY 64 rate of 1.37.

The following reductions in FY 65 accident rates were reported: Naval Air Reserve Training 24% (.68); NavAirPac, although conducting operations in a combat environment, 18% (1.54); Marine Air Reserve Training 18% (1.07); NavAirLant 9% (1.52); and FMF-Pac 5% (1.59).

Weather Honors Announced USS Coral Sea Wins Five Awards

USS *Coral Sea* (CVA-43) found herself a five-time winner when the Chief of Naval Operations announced the 1964 Naval Weather Service Awards.

Four of the awards won by *Coral Sea* were for excellence in surface observations; the fifth was for highest over-all proficiency in upper air observations.

The land stations award for surface observations went to NAF YOKOSUKA, Japan. The award for excellence in upper air observations by ships went, for the second year, to the USS *Kretchmer* (DER-329). The land station award was won by NS TRINIDAD.

The outstanding performance awards for ships went to USS *Pacano* (AGC-16) and *Ticonderoga* (CVA-14); and for land stations to NAS CUBI POINT, NAS JACKSON-



COMMANDER E. F. Verdery III, Executive Officer, NAS Pensacola, stops to view the F-11A Tiger which was recently put on display at the main gate of the air-station. This craft is used by the Navy's Blue Angels.

VILLE, NAS WILLOW GROVE, and the U. S. Fleet Weather Central at Pearl Harbor.

Other winners of the highest proficiency award in surface observations were, by ship category, USS *Taconic* (AGC-17), *Searcher* (YAGR-4) and USS *Vance* (DER-387). *Saratoga* (CVA-60), *Rehoboth* (AVP-50), and *Picket* (YAGR-7) were recognized for highest proficiency in upper air observations by ship type category.

Future Astronauts at Mugu Pilots Finish AF Aerospace School

Two pilots attached to the Naval Missile Center's Aerospace Operations Department at NAS POINT MUGU have become eligible for selection as future astronauts. Lt. Albert H. Best III and Lt. Merle D. Hewett became eligible recently when they completed the Air Force Aerospace Research Pilot School at Edwards AFB.

The year-long school included extensive academic instruction in aerospace exploration and training in simulated space vehicle travel. Prior to reporting to the school, Lt. Hewett was assigned to Heavy Attack Photographic Squadron 62 at Jacksonville, Fla.

Quonset Hosts 'Bald Eagles' Members Tour Naval Facilities

A group of early Naval Aviators, known as the "Bald Eagles," descended on NAS QUONSET POINT, R. I., for a four-day convention beginning July 22. Officially known as The Early Naval Aviators Association, their membership includes many of those now living who were pioneers in Naval Aviation. Their designations as Naval Aviators, with few exceptions, number within the first 400 who qualified for their wings.

The reunion began with an informal reception and dinner at the Quonset Point Officers Club. Hosts for the evening were Rear Admiral Magruder H. Tuttle, Commander Fleet Air Quonset, and Captain William J. Scarpino, Commanding Officer of the Naval Air Station.

Among those in attendance were VAdm. C. R. Mason, USN (Ret), Rear Admiral John J. Schiefferlin,

USNR (Ret), Commander Patrick J. Byrne, USNR (Ret), and Gibson Gardner.

Along with scheduled social activities, the aviators toured a nuclear submarine at the Submarine Base at New London, Conn., were welcomed aboard the *Lake Champlain*, and took part in the Quonset Point/Davisville Navy Relief Carnival featuring the *Blue Angels*.

The purpose of the association is to advance the interests of Naval Aviation and assist associations which have similar interests.

AEW Unit Decommissioned Was a Unique Pax Organization

NAS PATUXENT RIVER's Airborne Early Warning Training Unit, Atlantic, has been decommissioned.

The unit enjoyed a unique position as the only school on the East Coast specializing in training crews for the *Super Constellation* type aircraft. With a staff of less than 400 officers and enlisted men, the unit trained more than 9,000 military personnel in some 30 courses since its commissioning in February 1958.

Besides its training program, AEW TULANT provided back-up crews for the North Atlantic barrier operations, participated in Wallops Island missile surveillance missions, and was called upon by NASA to support its Project Mercury Space Program.

The unit was decommissioned

primarily because of the establishment of land-based radar developments and further technological advances in the field.

Squadron for Oceanography Five Planes Assigned for Research

The first Navy aircraft squadron specifically organized to conduct oceanographic research was commissioned in July at NAS PATUXENT RIVER. The Oceanographic Air Survey Unit is under the technical control of the Commander, U. S. Naval Oceanographic Office, Rear Admiral Denys W. Knoll.

In his remarks at the commissioning, RAdm. Knoll said, "While the use of aircraft in oceanography is not new, we may expect even more effective support for our airborne oceanographic effort."

In 1953, the Oceanographic Office inaugurated Project *Magnet*. These planes logged over one-half million survey miles in support of a world-wide magnetic charting program. Since 1963, a *Super Constellation* has gathered surface temperatures and wave profiles for the Oceanographic Office's Antisubmarine Warfare Environmental Prediction System. Another project, *Birdseye*, has used planes for some four years in ice research in the Central Arctic Basin.

The new unit consists of four C-121 *Super Constellations* and one C-54 *Skymaster*. Commander H. R. Hutchinson is the new C.O.



THE FIRST FLIGHT of the Douglas TA-4E Skyhawk took place on June 30 at Palmdale, Calif. The aircraft, featuring twin tandem cockpits, a zero-level ESCAPAC ejection system, a steerable nose wheel and wing spoilers, is programmed for delivery to the Fleet in April 1966. Powered by a Pratt & Whitney J-52-P-8A (the same power plant used in the A-6A), the advanced jet trainer can put out 9,300 pounds of thrust with a maximum speed of Mach 1. The initial order of 35 will be assigned to replacement training squadrons.



GRAMPAW PETTIBONE

Stall-Spin-Splat

Two F-4B pilots and RIO's completed briefing for a live ordnance hop at approximately 1500 with a scheduled launch time of 1520. Weather at the base was good with 10 miles visibility, but there were broken clouds in the general area with tops to 35,000 feet. The lead pilot briefed his wingman: they would remain VFR at all times and not join in section but proceed to the operations area in a normal tactical formation.

After takeoff, the flight leader established his climb at 350 knots in a westerly direction. In an effort to remain clear of clouds, several heading and speed changes were made during the first few minutes of the flight. While climbing in a wings-level attitude at 350 knots, the lead pilot decided it would be necessary to make a climbing 360° turn in order to clear a build-up in his flight path. He went into burner and entered the turn in a 30° angle of bank and 30° nose high attitude. Even though his airspeed started to decrease, the pilot increased the angle of bank to about



Happy Landings!?!

35° and eased in more back stick pressure.

With the decreasing airspeed and increased angle of bank and nose position, the aircraft started to buffet. The pilot eased off on the back pressure but, before he could reduce the angle of bank, the aircraft went into negative "G" and rolled to the right in an inverted attitude. Altitude at this time was 23,500 feet and the pilot immediate-

ly retarded the throttles to idle and momentarily relaxed back pressure. He set six units angle of attack but noted the instrument was difficult to hold steady as he was going from negative to positive "G" and seemed to be hitting both sides of the canopy.

The RIO asked the pilot if he was all right. He replied by asking the RIO to call off the altitude. They were now at 21,000 feet in IFR conditions.

The pilot applied left rudder and the aircraft stopped rotating, but he was hanging in the straps. He then applied back stick pressure and, as the airspeed started to build, he increased the back pressure. The RIO stopped calling off altitudes and when the pilot saw the altimeter go through 14,000 feet, he told the RIO to eject. After he heard the RIO leave the aircraft, he followed immediately.

While descending, pilot observed the F-4B in a flat spin prior to impact with the ground. He seemed to be coming down in the general vicinity of the burning aircraft. Knowing there was ordnance aboard, he pulled the left parachute shroud lines to drift clear of the wreckage. The pilot and RIO were picked up by helo. They suffered only minor injuries.



Say! who is paying for this non-sense?



An F4B aint hay!



Grampaw Pettibone says:

Jumpin' Jehosophat! If a trick like this don't make you fog up your bifocals, nothin' will. This lad put out a lot of effort in tryin' to corner the poor judgment market and darn near did it.

His wingman tried real hard to maintain his position, but when he saw what a mess this could turn into, he got out of the rat race but quick. He informed the lead pilot that he was unable to maintain flight integrity and would maintain 23,000 feet on a heading of 200°. In 10 seconds he was in the clear, wings level, at an airspeed of 320 knots.

Headwork like this wingman demonstrated we can use, but we sure can do without the other type.

ILLUSTRATED BY *Opburn*



Smokin' Pilot

A four-plane division of A-4's received taxi clearance late one afternoon for a scheduled night hop. While the four aircraft were en route to the duty runway, the pilots were instructed to hold their position owing to an emergency—a P-2 with an engine feathered.

One of the A-4 pilots stopped his aircraft in a position from which he could observe the P-2 making the emergency landing. When he saw the P-2 pilot waved off for another approach, he cocked his nose wheel so he would not have to hold the brakes. Feeling he would not resume taxiing for several minutes, he decided at that point to smoke a cigaret.

He removed his oxygen mask and laid it on his left knee. He then removed his right glove. While holding the book of matches in his left hand, he struck a match with his right hand to light the cigarette. The pilot immediately noted an excessive white glow from the match indicating the presence of excessive oxygen.

He quickly tried to extinguish the match with his gloved left index finger and thumb. While attempting to extinguish the match, he noted a small blue flame on the webbing of his oxygen mask which was resting on his left knee. He brushed his mask with his left hand and simultaneously his right hand was burned by the match which had not been extinguished. He dropped the burning match be-

tween his legs. When the match fell past the seat pan, the seat pack burst into flame.

The pilot realized it was too late to make any further attempts to extinguish the fire and concentrated on abandoning the aircraft. He opened the canopy manually and pulled the emergency harness release. He attempted to raise up and push himself back in the cockpit in an effort to keep clear of the fire in the seat. After releasing the rocket jet fitting on the torso harness, the pilot dove over the wind screen but one foot hung on something in the cockpit. He quickly kicked free, swinging by one hand on the pitot tube over the right side to the deck.

As the pilot ran from the burning aircraft, the drop tanks fell from the racks and ruptured. He ran toward the nearest crash truck but it was already on the way to the burning A-4. The crash crew foamed the cockpit and area around the aircraft. The crash crew chief secured the seat and then the throttle which had been left in the idle position.

The pilot received first and second degree burns on the inside of both thighs and the aircraft sustained overhaul damage.



Grampaw Pettibone says:

Great balls of fire! Smokin' at any time is bad enough, but to light a cigaret in the cockpit of a high performance aircraft when you know darn well there is a high oxygen

content is just downright foolhardy. There is no way to justify a trick like this. Any pilot who can't do without a smoke for a couple of hours had better start thinkin' about changin' his profession.

Every airman has been told time and time again that tobacco smoke contains at least two poisons, nicotine and carbon monoxide. Carbon monoxide rates as one of the deadliest gases known to man. Minute quantities produce visual disturbances and decrease night vision. The effects are even worse at altitude. This lad was plain lucky to get out of this mess with just a hot seat; he could have ended up in the statistics column.

Strike Two A-4's

Two A-4's departed a mid-west NAS on a point-to-point IFR flight plan. Their weather briefing advised of scattered thunderstorms en route with tops to 25,000 feet. During climb out, instrument conditions were encountered. The assigned flight level was progressively raised from FL 280 to FL 350 and finally to FL 390. With the flight in instrument conditions at FL 390, both canopies frosted over and, in a very few minutes, things really turned to worms. The leader noted his DME and radio were out, whereupon he saw the altimeter unwinding. At about the same time the wingman's gyro horizon and TACAN went off. As the leader descended, the wingman decided to separate and go on partial panel, but neither pilot regained control of his aircraft. Both pilots ejected successfully.



Grampaw Pettibone says:

Oh my achin' ulcer! All A-4 Monday morning quarterbacks can take a bow if you figured generator icing. But you say AFC 243A fixed this problem a coupla years ago, so how can this happen? Beats me, gents! The change is coded "URGENT" and is simple to incorporate. Somehow the change was not in these two birds and the need for the change has once again been confirmed.

'Course, extending the Ram Air Turbine probably would have saved the scooters but the problem must be recognized to be corrected.

Ol' Gramps just hopes that all airplane drivers—and especially scooter pilots—learned a lesson from this one.



CROWD AT McDONNELL RAMP OBSERVES ARRIVAL OF HISTORIC F-4's #999, USMC; #1,000, USN; #1,001, USAF

NAVY ACCEPTS 1,000TH F-4 PHANTOM

AT A BRIEF CEREMONY July 7, 1965, in St. Louis, Robert W. Morse, Assistant Secretary of the Navy (Research and Development), accepted delivery of the 1,000th F-4B *Phantom II* from J. S. McDonnell at the McDonnell Aircraft plant.

Secretary Morse, as the main speaker, lauded the F-4 as "the world's best fighter aircraft." Lieutenant General T. P. Gerrity, Air Force Deputy Chief of Staff for Systems and Logistics, termed it the "Air Force's 'No. 1' fighter."

During his address, Secretary Morse noted the built-in growth potential, as the most significant fact about the *Phantom*. From one basic airplane have evolved four different models with unlimited possibilities. The United Kingdom has contracted to purchase the F-4, equipped with British engines, for both the Royal Navy and the Royal Air Force.

The two basic models of the *Phantom*, the Navy and Marine F-4B and the Air Force F-4C, differ only in details that are modifications to meet the specific combat requirements of the individual services. In addition, last year, a reconnaissance version of the *Phantom*, designated the RF-4B for the Marine Corps and RF-4C for the United States Air Force, was

added to the aircraft inventory.

The Marine Corps tested the *Phantom* and found that it pro-

vided the characteristics required for close air support. When the Air Force accepted the *Phantom* as a strike aircraft for the Tactical Air Command, the F-4 became the first combat aircraft to be used concurrently by three services as a tactical weapon.

Designed and developed as a two-place, twin-jet all-weather aircraft, the *Phantom II* has established 15 world speed, altitude and time-to-climb records. In its fighter-bomber role, the *Phantom* has the greatest firepower of any U. S. fighter. Approximately eight tons of miscellaneous external payload (conventional or nuclear bombs, fuel tanks, rockets, napalm, guns, missiles, mines, etc.) can be carried on five stations beneath the wings and fuselage.

Since the first production model was delivered to the Navy on December 29, 1960, 19 Navy and nine Marine squadrons have become operational. The 1,000th *Phantom*, delivered four and one half years later, was flown to NAS MIRAMAR by Lt. A. A. Holt, pilot and LCdr. J. T. McHugh, NFO.

Guests on hand for the occasion included Vice Admiral Paul H. Ramsey, Deputy Chief of Naval Operations for Air, and Vice Admiral I. J. Galantin, Chief of Naval Material.



MR. McDONNELL AND VADM. RAMSEY

THE NFO: A STRANGE BUT NOT SO NEW BREED

By Ltjg. Richard Booth, USN

PAVLOV SAID, in so many words, "With every cause, there is an effect." Out of the conflict of WW II, there arose a *cause*—the need for more advanced combat weapons and the people to use them. The *effect* became the institution of lethal weapon systems and the people who man them. Some of these people are a new, but not so new, breed of airmen who arose out of the need for technical know-how, an extra pair of hands, or another man in the cockpit. What follows is a brief summation of the NFO (NAO) and his beginnings.

The Naval Flight Officer is an officer responsible for the many and varied flight duties not involving actual control of an aircraft. The title "Flight Officer" represents a relatively new concept in Naval Aviation of the pilot/flight officer team. Actually, the history of the non-pilot flight officer is almost as old as Naval Aviation itself.

Soon after the first few Navy airplanes were replaced by newer models, it became apparent that these new machines were too complicated to be flown and repaired by the pilot alone. Specialists were needed to supervise the many ground functions necessary for flight, and eventually to assist the pilot in the performance of his inflight duties. By 1941, airplanes had become so complex that a full year was re-



THE NAVAL FLIGHT OFFICER began to appear on flight crews during WW II. This airship navigator filled a job necessary for the mission but not requiring pilot attention.

quired to train the aviator. It was at this time that the aviation non-pilot officer became a large and important part of the personnel structure of Naval Aviation.

With pilot training cut as short as possible, other Navy men were trained to maintain the aircraft and its complicated parts. They were taught navigation, bombing, gunnery and meteorology. They learned to operate complex electronic equipment and complete communications and intelligence tasks. They performed every ground and inflight function necessary to complete the mission. A large percentage of these specialists were commissioned as officers in the United States Navy.

In the years following WW II, the prestige of the non-pilot flight officer declined. The postwar cut-back reduced his number. The wartime non-pilot officer assumed other duties within the Fleet or returned to civilian life.

With the outbreak of hostilities

in Korea, there was a need for the skills of the non-pilot officer. A great many of them were either trained or recalled from inactive duty. After Korea, the Navy was busy patrolling the frontiers of every ocean. Naval Aviation had commenced transition to more effective weapons, such as the jet aircraft, the guided missile, atomic weapons and nuclear power.

Again, aircraft increased in complexity. Specialization of Naval personnel became more needed than ever. The safe flight of modern, high-performance aircraft required the continuous application of a pilot's skills and left little time for auxiliary functions within the aircraft.

A new weapon was no longer a simple instrument of destruction, but an engineering marvel of electronics that measured its destructive power in megatons and its range in hundreds of miles. Each new weapon required a specially configured airplane to carry it and



NAVIGATION STUDENTS today train in modified Convairliners where they apply classroom techniques in a flight situation. Student in center is obtaining a star fix.

a computer to deliver it accurately. Weapons and aircraft were married solidly in the intricate bonds of electronics. The offspring of this union was the weapon system as we know it today. It consists of a weapon and a delivery vehicle whose functions are controlled by a team of highly-trained technical professionals—Naval Aviators and Naval Flight Officers.

The Navy reorganized to handle the challenge of the weapons system. Nearly every officer became an expert in one or more of the tasks of procuring, delivering, maintaining and operating new weapons systems in Naval Aviation.

A program to provide Naval Flight Officers to the Fleet was set forth in the spring of 1959 as a result of the General Aviation Training Conference. The result of this conference was the establishment of the Basic Naval Aviation Officers School as a part of the Training Department of the U. S. Naval Air Station at Pensacola, Fla. The Basic NAO School became a commissioned unit on August 1, 1963, with Commander C. C. McBratnie as the first Commanding Officer.

Although not subjected to the same physical standards as aviators, NFO candidates must pass a stringent physical examination and be aeronautically adapted. Generally, NFO candidates must have at least

20-200 vision correctable to 20-20. Those interested in supersonic aircraft that operate over 45,500 feet must have at least 20-40 vision. Candidates are selected from college graduates and college students with two years of completed study.

The mission of the Basic Naval Aviation Officers School is to provide academic training and flight indoctrination for non-pilot aviation officers and officer candidates to prepare them for advanced and technical training. Eventually, the students are designated Naval Flight Officers in one of the following categories: Radar Intercept Officer, Attack Reconnaissance Navigator, Bombardier Navigator, Electronic Countermeasures Officer, CIC Officer, Navigator, Controller, and Antisubmarine Warfare Tactical Coordinator. The school also provides this basic training to Maintenance and Air Intelligence Officers. To accomplish this mission, the 16-week curriculum of the school is divided into two very closely related phases of *academics* and *flight indoctrination*.

The *academic* phase totals 523 hours of classroom work. It includes studies in Navigation, Aircraft Communications, Fleet Aviation Operations, Meteorology, Air Intelligence and Recognition, Naval Leadership, Naval Aviation Information, Aviation Flight Physi-

ology, and Technical Fundamentals.

The *flight indoctrination* phase is designed to determine aeronautical adaptability, permit selection for further training, and provide standardized flying indoctrination for all students. This phase consists of flights in the C-45 multi-engine trainer and the T-2A single engine jet trainer. During 20 flight hours, the student receives instruction in navigation and radio equipment, acrobatics, visual and instrument flight rules and regulations, and cross-country flight planning. In addition, he acquires the background to request intelligently advanced duty training and Fleet



ONE OF the earliest crewmen was the enlisted radio operator on the old airships.

duty in an aircraft type of his choice.

Detailed records are kept on each student's progress. Before the end of the course, these records are assembled and reviewed by a board of senior officers at the school in order to select and recommend advanced training assignments to the Chief of Naval Air Basic Training.

The current training cycle for almost all students reporting to the Basic NAO School begins at the U. S. Naval School of Pre-Flight, NAS PENSACOLA. College graduate civilian selectees (AOC) and two-year college civilian selectees (OCAN) receive an intensive 14-week course at Pre-Flight. Upon completion, the AOC is commissioned Ensign, USNR. OCAN students are commissioned upon completion

of advanced training. Officers entering from the Fleet or from the Naval Academy, NROTC Universities and Officer Candidate School, receive a modified four-week course at Pre-Flight. Selected attrited flight students from any of the above sources may become NFO's.

The Basic NAO School normally has from 12 to 16 classes on board. The school graduates a class every two weeks and, since established, it has graduated more than 3,300 officers and officer candidates. It is staffed by 57 officers and 105 enlisted personnel.

After graduating from the Basic NAO School, the student proceeds to an advanced training assignment. Radar Intercept students, NFO (I), and Controller students, NFO (C), are transferred to Glyco, Ga., for training.

The NFO (C) student receives approximately 260 hours of academic instruction. The first 120 hours include courses in the function of CIC, operations plans and orders, radio reporting, basic electronics, CIC electronics equipment, fundamentals of electronic warfare and air operations, Fleet air operations, and basic air control intercept procedures. The second phase includes 60 hours of advanced study of CIC electronics equipment. Another phase of 71 hours is devoted to synthetic training. Finally, 64 hours are devoted to inflight training in the EC-121K *Connie*.



CREWMEN, no matter what the era, must be familiar with weather, maps and charts.



THERE MUST be a basic understanding and a mutual trust established between the pilot and his crewmen if the mission is to be carried out in a safe and efficient manner.

The NFO (I) student receives about 260 hours of technical training on equipment, local flight rules and survival, jet flight planning and navigation, and airborne intercept procedures and tactics. Inflight training consists of approximately 60 hours.

On completion of training at Glyco, the NFO (C) is transferred to a Fleet squadron, and NFO (I) students are transferred to CRAW squadrons for further training in their specialty and designation as Naval Flight Officers.

All navigation, NFO (N), anti-submarine warfare, NFO (S), and bombardier, NFO (B), students are assigned to the navigation school at NAS Corpus Christi, Texas, for advanced training. The navigation school covers dead reckoning and celestial navigation. Subjects included are *Loran*, pressure patterns, polar navigation, driftmeters, and grid navigation. The student is trained in airways and radar navigation with special emphasis on intercepts, mining, surface targets and coast line navigation.

After completing the navigation course at Corpus Christi, the students are designated NFO (N). The prospective NFO (B) is transferred to a CRAW squadron at Sanford,

Fla., Whidbey Island, Wash., or Oceana, Va., for further training toward the NFO (B) designation. The remaining group of NFO (N)'s are either assigned directly to the Fleet as navigators or to one of the VP-RAG squadrons at North Island or Jacksonville for training in antisubmarine warfare tactics which will eventually lead to assignment and designation as NFO (S).

At the present time, the Naval Flight Officer has gained a seat aboard the A-3, AD-5, E-1B, E-2A, P-2, P-3, G-130, EC-121, F-4, A-5, A-6 and will eventually strap into the supersonic F-111B.

Career opportunities for the Naval Flight Officer have been enhanced by new regulations and policies. This is marked by the change in March from the 135X designator (Naval Aviation Observer) to the 132X designator (Naval Flight Officer). The immediate effect of this designator change was to increase greatly the prestige of the Naval Flight Officer as the regulation outlined detailing procedures that will consider the Naval Aviator and the NFO indiscriminately for almost all billets. The NFO will be restricted from only those billets requiring actual knowledge of aircraft control skills.



ITS TAILHOOK down to catch a MOREST cable, a Marine A-4 Skyhawk lands on the new expeditionary airfield at Chu Lai, Vietnam. The runway, still incomplete, was built of SATS panels by Seabees of MCB-10. Marines assigned to MABS-12 built support facilities.

BATTLE ZONE AIRFIELD—VIETNAM STYLE

Americans fought in a different kind of battle in the bitter Vietnam war not long ago, a battle that pitted a team of Seabees and Marines against a brutal enemy they couldn't kill with bullets or bombs. This enemy was composed of sand, heat, and time; it was attacked with bulldozers, sweat, and 24-hour workdays. The objective was a strange one—an airfield that was only a desert when the fight started. Naval Aviation News presents a story in words and photographs gathered by men who witnessed the battle; their names are on page 40.

THE STUBBY Marine Corps A-4 Skyhawk screamed out of the sky and was jerked to a halt in a little more than 300 feet, its tailhook snagged by a mobile arresting gear (MOREST) cable. Its pilot, Colonel John D. Noble, became the first aviator to land a fixed-wing aircraft on the new expeditionary airfield at Chu Lai, Vietnam.

The landing must have looked almost too easy to Seabees of Mobile Construction Battalion (MCB) 10 and to Marines assigned to Marine Air Base Squadron (MABS) 12. For almost a month, they poured a lot of sweat and labor into the Chu Lai sand so there would be an airfield for Colonel Noble to land on and facilities to support him and his Skyhawk.

A crash project from the start, the job was this:

- Establish a beachhead at Chu Lai.
- Land the men and the machines to construct a fully operational expeditionary airfield, 8,000 feet long, out of the sandy stretch

of land some 50 miles south of Da Nang.

- Provide the facilities to support operational squadrons of Marine Air Group (MAG) 12, who would use the airfield.

- Be prepared, incidentally, to fight off marauding Viet Cong guerrillas.

The Skyhawks that would land at Chu Lai were needed for close air support. Their Marine pilots were trained to fly the 500-mph aircraft as members of an air-ground team that takes its orders from a single commander. Once the A-4's had a base from which to operate, the armed Army helicopters that had the support assignment could be released for other duties.

That was the reason there had to be an airfield at Chu Lai.

So, the Fourth Regimental Landing Team landed to set up a defense perimeter. MCB-10, led by Commander John M. Bannister, hit the beach the next day and the Seabees made the first battalion-size landing in a combat zone since

WW II. Then the first detachment of MABS-12 came ashore from the LST USS *Windham County*, to be met by squadron commander Lieutenant Colonel Alexander Wilson. He and his staff flew in from Da Nang.

The Seabees built the airfield; MABS-12, the support facilities.

Sand and sun were the enemies to overcome in this part of Vietnam, and the battle started early. Wheeled vehicles lost traction; tracked vehicles towed them free. Tons of equipment and supplies and material waited to be brought ashore over causeways stretching from LST's and LCU's to the beach; at the same time men were told to take frequent breaks to avoid sunstroke. Nightfall brought a drop in the temperature; the tempo of offloading operations quickened.

The supplies included a product that was to make the airfield unique. Called SATS (Short Airfield for Tactical Support) matting, it consisted of 144-pound, 2-by-12-foot interlocking panels of extruded aluminum on which a plane like the Skyhawk can land. At Chu Lai,



CAUSEWAY STRETCHES from LST to Chu Lai beach as vehicles come ashore to support combined Seabee-Marine airfield project.



GUIDING IN heavy equipment taken from LST offshore, Marines move part of machinery, material, and supplies needed in Chu Lai.



FLEET MARINE Force Commander, Lieutenant General Victor Krulak, inspects airfield site with Lt. Frank Newcomb, assigned to MCB-10.



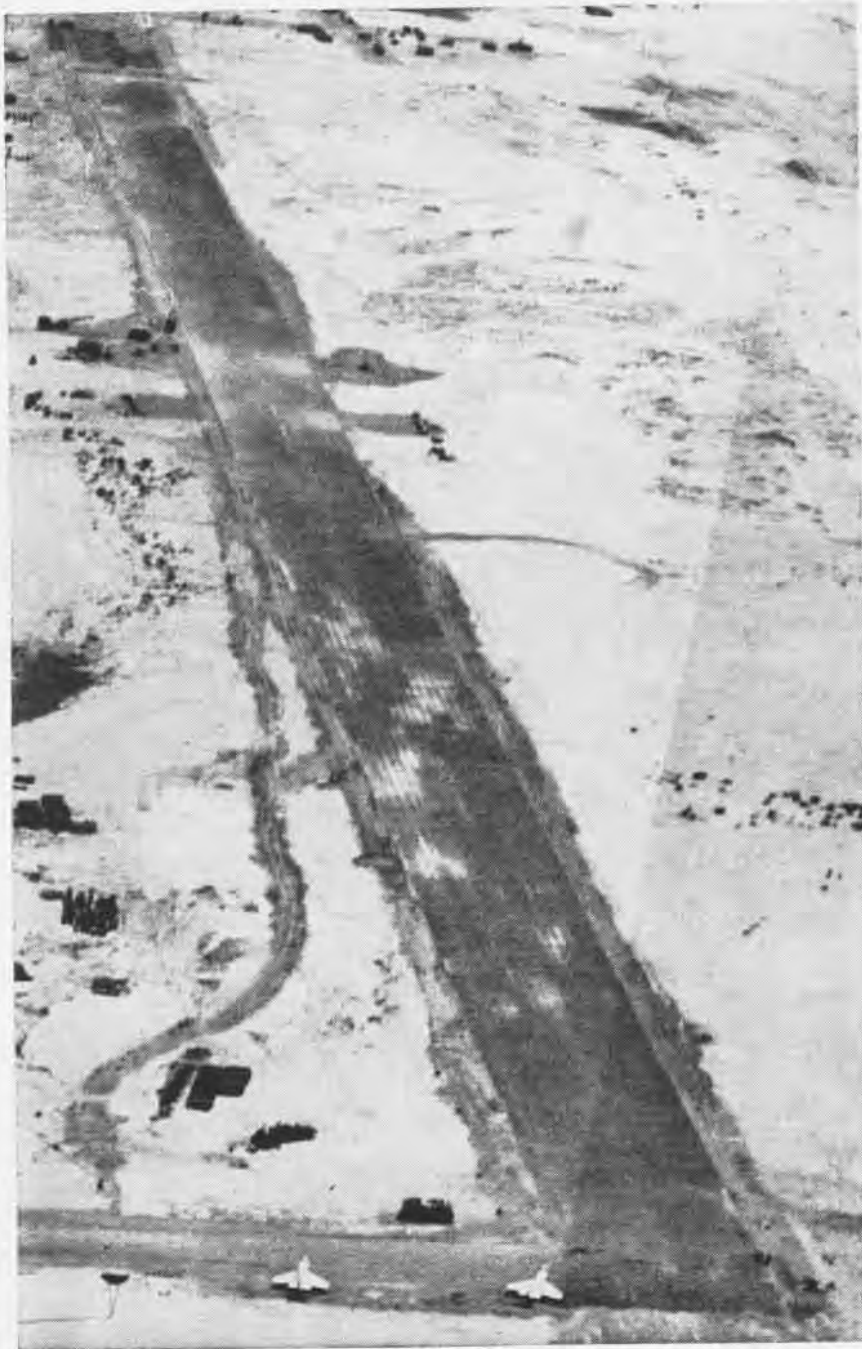
EARTH FILL pours into a waiting dump truck as MCB-10 Seabees work in round-the-clock shifts to get the Chu Lai airfield ready.



ALUMINUM MATTING is staged at airfield site as MCB-10 crews work on runway. Seabees averaged 400 feet per 8-hour shift.



SEABEE CREW eases a 2-by-12 foot aluminum matting section into place on expeditious airfield. Each panel was placed by hand.



WITH WORK still needed to complete its 8,000-foot length, the Chu Lai airfield opened partially, thanks to MOREST gear, to A-4's just twenty-three days after MCB-10 landed.

every one of the panels used was laid by hand.

Construction of the runway brought built-in problems. The shifting sand had to be stabilized and compacted to hold the weight of both the matting and the aircraft. Seabees whipped this headache by various means—after they moved tons of earth so as to have a reason-

ably straight level to work with.

ALL THE WORK at Chu Lai was done under combat conditions. The equipment operators were protected by armed Seabees and Marines who rode with them. Other Seabees guarded the project and the base camp built before MCB-10 personnel turned their attention to

the airfield. Landing Team Marines continued to man the outer defense perimeter.

MABS-12 completed its own temporary billeting area early in the project—and it included a foxhole for every man. The Marines slept with their rifles within easy reach as tractor operators cut service roads through sand dunes and ordnance crews hacked out revetments for the bombs, napalm, and rockets due to arrive.

For 23 days both units fought the battle with the sand, the heat, and the deadline. Then, with 4,500 feet of the runway still to be built, Colonel Noble brought in his *Skyhawk*. Seven other pilots, representing advance elements of VMA-225 and VMA-311, landed.

A month to the day later, the 1,000th MOREST landing was made at Chu Lai. First Lt. Conrad W. Hamilton of VMA-225, returning from a bombing run, had the honor. Someone reported that, by employing the MOREST gear for the first time in a combat situation, the *Skyhawks* were able to use the Chu Lai airstrip weeks before the field was finished.

The 25-man MOREST crew, which installed the system within 12 hours after the first 3,500 feet of runway were completed, celebrated in the usual manner. They cut off 1st Lt. Hamilton's shirttail.

There was no report that any MCB-10 representatives attended the ceremony. They were probably too busy finishing the last 4,500 feet of runway.

Marine Outfits Honored Will Receive Unit Commendation

The Secretary of the Navy has approved the award of the Navy Unit Commendation to the following units for participation in the Vietnamese action during the noted dates: Sub Unit NR 2, Marine Air Base Squadron 16 (Apr. 62—Nov. 64), MMH-362V (Apr. 62—Jul. 62), MMH-163 (Aug. 62—Jan. 63), MMH-162 (Jan. 63—Oct. 64), MMH-261 (Jun. 63—Sep. 63), MMH-361 (Oct. 63—Jan. 64), MMH-364 (Feb. 64—Jun. 64), and MMH-365 (Oct. 64—Nov. 64).

Other pilots, now elsewhere, are also entitled to receive the award.

'Apollo' Selections Made LCdr. Kerwin Joins NASA Team

One geologist, two physicians and three physicists have been named by the National Aeronautics and Space Administration to the 28-man team of astronauts in training for the *Apollo* program at the NASA Manned Spacecraft Center, Houston, Texas.

Among the six selected is LCdr. Joseph P. Kerwin, staff flight surgeon for Air Wing Four, NAS Cecil Field, Fla. Kerwin has been a Naval Aviator since 1962.

LCdr. Kerwin received his Doctor of Medicine degree from Northwestern University Medical College in 1957 and attended the U. S. Navy School of Aviation Medicine at Pensacola in 1958.

With one of the others chosen by NASA, Frank C. Michel, an assistant professor of space sciences at Rice University, LCdr. Kerwin reported for training at the Houston Space Center late in July.

The remaining four appointees joined an Air Force class of cadets for a year of pilot training at Williams AFB, Arizona. They will continue their training as crewmen for the *Apollo* program at Houston.

System Can Aid SAR Tries MILS Could Spot Downed Planes

Aircraft ditching in the vast, uninhabited areas of the Pacific can be located by the Pacific Missile Range's Missile Impact Location System (MILS), PMR officials have revealed. The system was discussed at a recent conference on search and rescue held in Hawaii.

Present searches for aircraft lost over the Pacific are long, costly, and often unfruitful. Use of PMR's MILS stations can save time, money, and lives, Navy officials say. The system involves the use of a sound fixing and ranging (SOFAR) device which aircraft in trouble would drop in the ocean.

The device explodes at a depth of 2,500 feet and the sound is picked up by MILS stations. Bearing lines are drawn and a fix is made. PMR maintains three of the stations, located on Oahu in Hawaii and at Midway and Wake Islands, and also uses additional

Navy hydrophone installations on the U. S. West Coast and an Air Force station at Eniwetok Atoll to obtain supplementary data.

Each of the stations has the same general facilities, PMR Project Manager James T. Sims said, to form a network of undersea hydrophones and sensitive recording equipment. The hydrophones have picked up a SOFAR blast as far as 3,000 miles away.

Wings 'Spliced' for an F-4 Spells Savings at North Island

The Overhaul and Repair Department at NAS North Island recently "spliced" the left side of one F-4 *Phantom II* wing to the right side of another to make one serviceable wing assembly. Test-flown, the aircraft proved ready for service.

The successful mating of wings from two different aircraft is the first such operation performed on an F-4 by the Navy, according to North Island.

The project was significant because after an F-4 has operated, cumulative tolerances make it difficult to join halves of two different wings successfully. But North Island succeeded and thus saved approximately \$162,000 and put a jet fighter back in the air.



THE P&W TF 30P-1 turbofan engine, powerplant for the General Dynamics F-111 variable sweep wing fighter, has successfully completed official ground endurance tests required for military qualification, according to USAF. Grumman Aircraft is principal subcontractor for Navy version of the F-111.

NOTS Tries Kite Flying Flight Conducted by a Canadian

"Go fly a kite," they told Dr. Pierre St. Amand—and he did it without getting angry. On the contrary, he did it enthusiastically, because this was a very special kite. It was designed by a French-Canadian free-lance inventor, Domina Jalbert. It takes its shape without rigid members like a balloon, but inflates itself like a parachute. Made of lightweight nylon balloon cloth, it rises into the air like a kite, then glides or "flies" like a wing.

It can carry meteorological instruments into the air—Benjamin Franklin style—or it might carry them through dangerous ice clouds after being launched.

"We bought two of these remarkable kites in October 1964," says Dr. St. Amand, head of the Earth and Planetary Sciences Division at the Naval Ordnance Test Station, China Lake, Calif., "and we've been experimenting with them off and on, whenever we had some free moments, to see how we might be able to use them to loft experimental devices. There's nothing very firm about the prospects for the kites or, perhaps more properly, airfoils, but we're hopeful."

The inventor, Domina Jalbert, had visited China Lake to take the 10-foot-square airfoil-kite on a "trial flight" in company with Dr. St. Amand, Commander Paul T. Jorgensen, military assistant at the Earth and Planetary Sciences Division, and Ray Cote, a test pilot for Ryan Aeronautical. Jalbert's headquarters are at his Space Recovery Systems Center firm in Boca Raton.

The kites at China Lake are 100 feet square in area. When inflated, they take on the shape of an airfoil with five rectangular openings in the leading edge, 12 by 18 inches in size. Each opening dwindles to a tapered, closed air pocket; the kite is inflated when wind is compressed into the pockets.

As the kite rises into the wind, it behaves as a true kite with the wind acting upon it as on a sail. But when it moves into a more nearly horizontal position, the partial vacuum on its upper surface gives it a lift and is responsible for keeping the air-trap chambers open.

WITH THE MARINES IN VIETNAM



AT DAWN with the sun barely high enough to illuminate maneuvers, a U.S. helicopter leaves with local Vietnamese Marines as others get ready to board another whirlybird.

Air-Mailed Steel

The skies were clear, but it rained over Ba Gia for two days.

For the Viet Cong, who profess to like monsoons, this particular deluge was deadly. It rained flares, bombs, rockets and shell fire on three VC battalions for two days.

Ba Gia is a Republic of Vietnam Army (ARVN) outpost located 17 miles southwest of a Marine Corps Aviation thunderhead known as Chu Lai. There are three *Skyhawk* jet squadrons based there.

Three VC battalions had overrun Ba Gia on the afternoon of July 5. The next day, ARVN troops,

with the *Skyhawks* thundering overhead, took the outpost back. But in the early morning hours of July 6, the VC attacked again from every direction in overwhelming strength.

What had been intermittent showers of "air-mailed" steel became a raging storm.

At 1:30 in the morning, flares popped over the hill and from this lightning, F-4B *Phantom* thunderbolts screamed earthward. The *Phantoms* came from VMFA-513 which operates from Da Nang. They were the first to hit that night, raining steel on the approaches to Ba Gia. The ARVN defenders

fought every weapon available on the small hill.

The *Skyhawks* of VMA-225, out of Chu Lai, relieved the *Phantoms* at 2:40 A.M. and the storm continued. All night long, the jets ripped out of the blackness into the eerie, manufactured light of flares, firing showers of steel on the advancing Viet Cong. And as they winged over for another pass, the voice of a ground-bound American adviser crackled over the radio as he advised the pilots of their success:

"Good! That last strike was within 50 meters of our positions. We've got 'em routed. Chase 'em!"



ARMY OF THE REPUBLIC of Vietnam troops race to take up their assault position under protective muzzle of an HMM-365 machine gun.



RIFLEMEN from the 1st Bn., Ninth Marine Regiment, set up a temporary defense perimeter and wait for second heliborne wave to come.

Chase 'em they did, all the way back to what the VC thought was the safety of their own huts. The *Skyhawks* destroyed the huts, so there was no safety there.

When it was over, the rain gauge revealed that 26,000 pounds of bombs and 1,175 rounds of 20mm cannon fire had been expended since the VC began tampering with Ba Gia.

Forty Viet Cong dead were counted by an American observer as being KBA (killed by aircraft). More than 90 VC buildings were smashed and there were nine secondary explosions, indicating stored munitions. Such was one lethal round in the battle.

But more important, the sun rose over a quiet Ba Gia.



GUTTED SHELL of a VC storage hut is all that remains after a VMFA-513 air strike.

ions were lifted into their LZ's without trouble. Later, a third battalion was brought in.

Then the copter crews flew to Ba Gia seven miles away. The devastation of two days of fighting still rent Ba Gia. The acrid stench of burned gunpowder still mingled with the heavy smell of death.

For 1½ hours, the U. S. Marine birds ferried between Ba Gia and Quang Ngai. The wounded were evacuated. Then homeless villagers. More than 150 women and children were carried out.

The men remained at Ba Gia.

'Milk Run'

Delivery aircraft are different nowadays. Once it was the DC-4; today it's the CH-340 helicopter



AS A BOMB from a Marine jet explodes among VC snipers, Marine infantry men move into position to protect crews dismantling helicopter.



A REFUELING STOP gives passengers of YP-23 a chance to stretch. Gas-up was at Vietnam Army post near a plane shot down by Viet Cong.

Vietnamese Airlift

On July 7, more than 2,000 Vietnamese Marines were airlifted to clean out the Ba Gia area.

Two Marine Medium Helicopter squadrons, HMM-261 and HMM-161, flew 24 helicopters to shuttle the three battalions of VN-Marines into two landing zones nine miles northwest of Quang Ngai.

The massive airlift began when the choppers rendezvoused at Quang Ngai, a Vietnamese military district headquarters. The Vietnam Marines were at the airfield waiting for them.

Two landing zones (LZ's), located within a mile of each other were used for troop drop-offs, and one of them had been termed at a briefing as "a bit tricky."

It was. But two assault battal-



CPL. TERENCE MO checks loading plans with pilots who will return Marines to base.

with no seats and with the mail—in your lap.

Airstrips look different, too. Milk runs used to fly from established airstrip to established airstrip. But helicopters don't need airstrips, so today's ferrying ranges from open field to mountaintop outpost.

On June 26, for example, two whirlybirds from HMM-261 made a 155-mile loop to 11 outposts.

One bird—Yankee Papa 23—carried seven ARVN soldiers, an Australian, a U. S. Army adviser and a postal clerk with two mail sacks.

For 4½ hours, the milk run popped in and out of outposts, sometimes escorted by armed aircraft which circled protectively over the landing. Mail changed hands, men got off, others got on, and the flight ended at Da Nang.

'Vampires' Check 'em Out

VX-5 HELPS GET WEAPONS TO FLEET



VARIOUS WEAPONS used by VX-5 are displayed by the Ordnance crewmen front, left to right, Carrel Simpson, R. C. East, Clenton For-
rister, David G. Murphy, Ellis Sidney, F. R. Acord, S. A. Burns, G. M. Birge, and, rear: Donald L. Clark, Ltjg. C. V. O'Brien and J. R. Cooper.

AT THE NAVAL Ordnance Test Station, China Lake, Calif., the key word of its title is *ordnance*.

And one of the key groups helping to get that ordnance to the Fleet is Air Development Squadron Five, whose pilots are called the *Vampires*.

VX-5, under the command of Commander Jack M. Manherz, runs

By *Ens. Marvin Clark, USN*

its Ordnance Branch as part of the Maintenance Department. LCdr. George E. Russell is in charge of the branch. He is assisted by Ltjg. Vince O'Brien and two Chiefs, John Cooper and Bill Clark.

Ordnance works closely with the Projects Department under Com-

mander George Myer. Project people develop techniques for use of weapons and then evaluate them. Furnishing data to accomplish the project is the responsibility of the Ordnance Branch.

When a weapon, such as *Shrike*, *Snakeye*, etc., is devised at NOTS CHINA LAKE, three big questions must be answered primarily:



LCDR. Richard J. Schulte, project pilot, and Paul Hooper, ADJ3, inspect rocket load.



F-4B PILOT, Lt. Lloyd Showman, Jr., is guided toward parking space by David G. Murphy, AO2, right after completing rocket runs over Naval Ordnance Test Station ranges.



SETTING FUZES of these Snakeye bombs are D. G. Murphy and R. T. LePage, AO's.



TWO SNAKEYE bombs are carted into position rack by F. R. Acord and J. W. Knapp.



AVIATION Ordnancemen Wm. J. Brandon and R. C. East assemble a Shrike in shop.

1. Is the weapon feasible?
2. How much will it cost?
3. Can it be mass produced?

When these questions are answered affirmatively, the weapon is then ready for delivery to Naval Air Test Center, Patuxent River, Md., to find out if it can be launched from aircraft. If so, the item then becomes a VX-5 project.

Ordnance adapts the weapon to the aircraft at China Lake, and VX-5 pilots check out various methods of delivery. When a certain tactic becomes standard in the Fleet, the ordnance must be made to conform with methods of delivery. Fusing, arming and hanging the weapon on aircraft become paramount problems.

Ordnancemen know that weapons are vulnerable to external influences, such as storage, handling and care when the weapon is not in use for some time.

When a loading procedure is devised, the procedure is described, edited and sent to the Fleet. That procedure then becomes standard throughout the Navy.

After a delivery technique and a weapon are compatible, the next problem becomes one of predicting a "kill probability" and increasing it by devising improved release mechanisms.

The mission of VX-5 is not all a landlocked activity. From time to time, VX-5 men are deployed aboard a carrier to test their newest developments for actual combat

readiness. Although the *Vampires* never operate in a combat zone, they devise test conditions, simulating combat.

Ordnance then compiles the results and brings back to China Lake data for improving the entire weapon system.

Through the Commander of the Operational Test and Development Force, Norfolk, Va., Air Development Squadron Five's Ordnance Department is authorized by the Chief of Naval Operations. Most projects evaluated by the China

Lake squadron originate in CNO.

VX-5 has a proud record of development of equipment and delivery tactics. These include design of the multiple carriage bomb rack, a method of increasing the reliability and decreasing the costs of fusing devices for practice bombs; a study of bomb impact as a function of weapons effectiveness; development of an accurate, low altitude, slow speed weapons delivery tactic utilizing jet aircraft; and development of loft, roll-ahead loop, and over-the-shoulder maneuvers.



ON THE LOAD LINE, ordnancemen wheel up carts holding Mark 81 Snakeyes which are to be installed in the bomb racks. After the plane is loaded, the test flight will be made.



THE PHANTOM II has been a VF-14 aircraft since June 1963 (note in 1927, one of their pilots inspired the insignia by his regular High Hat insignia). While the squadron was flying F2B's and F3B's liberty attire, which included a silk shirt, tails, and a top hat.

RICH IN YEARS AND HONORS

FIGHTER SQUADRON 14, the Navy's oldest aircraft squadron, celebrates its 46th anniversary this month. Based at NAS CECIL FIELD, part of Carrier Air Wing One aboard *Franklin D. Roosevelt*, the squadron traces its beginnings back to an element of a Pacific Fleet Air Detachment out of San Diego, Calif. Since 1919, the squadron has operated from 16 aircraft carriers, flown 20 different types of aircraft and has had its designation changed 12 times. Its pilots are currently flying the *Phantom II*.

The High Hat insignia was adopted in 1927 by VF-1B and has been in continuous use since then by the same squadron under a number of designations. At different times the squadron has used the name *High Hat*, *High Hatters* and *Top Hatters*.

The origins of VF-14 go back to September 1919 when an Air Detachment was established in the Pacific Fleet. On June 15, 1920,

the element of that detachment, which eventually became VF-14, was given status as Torpedo Plane Squadron Five. It was re-formed as Patrol Squadron 4-1 in September 1921 and almost immediately reorganized as Combat Squadron Four. Temporarily inactivated in December 1921, it was reactivated in May 1923. Since then, it has held 10 other designations. During its career, it has been assigned every mission performed by a carrier squadron.

During its early years, it was based at San Diego where it flew R-6L torpedo planes and MT bombers. As a fighter squadron it flew VE-7's and in 1923 received its aircraft. In the early Twenties, the squadron operated these aircraft from shore at San Diego and, at times, installed pontoons on them for operations from battleships.

Its carrier career began in the mid-'20's aboard USS *Langley* (CV-1), with exercises in the Hawaiian

area and continued with its permanent assignment to *Saratoga* (CV-3) in 1929. Its tour aboard *Saratoga* began as a fighter squadron and ended as a bomber squadron 10 years later. In that period, the squadron operated in turn: FB-5, F2B, F8C-4, F4B, F11C-2/BFC-2 and SB2U-1 aircraft.

In 1939, the squadron, then designated VB-3 and soon to become VB-4, reported for duty on board *Ranger* (CV-4), transferring from the Pacific to the Atlantic. On *Ranger*, the squadron participated in the Neutrality Patrol until the United States became a participant in WW II. During the war, the *High Hat* squadron was one of the few to fight the war in two oceans. From *Ranger* in November 1942, it supported the landings in North Africa and flew patrols over the convoy routes to Russia in 1943. In October of that year, the *High Hatters* launched two strikes on German shipping in harbor areas



FLYING TS-1's (without floats), VF-1 set record of 127 carrier landings in one day.



TOP SPEED of the squadron's first airplane, the Martin MT bomber, was 105 miles per hr.



IN THE NATIONAL Air Races at Cleveland in 1927, the FB-5 was flown by the unit.

around the town of Bodo, Norway.

In 1944, the squadron transferred to the Pacific Fleet and went into action in November in support of the Leyte Campaign from *Bunker Hill*. In the next month, it transferred to *Essex* for operations in the South China Sea and against Formosa in January 1945. The unit supported the assault on Iwo Jima in February, participated in the first carrier strikes on Tokyo, and followed up with strikes on Okinawa in early March.

After completion of its first Pa-

East and ports in southwest Asia and India, it went through the Suez Canal, visited ports in the Mediterranean and then, by way of Gibraltar, returned to Norfolk on February 20, 1949.

For a few months, the squadron was shore-based at Cecil Field and Quonset Point. Late in 1949, the squadron acquired its present designation, VF-14. During the next three years, VF-14 operated at sea for brief periods on several carriers, including *Saipan*, *Wright* and *Franklin D. Roosevelt*. In 1952, the

unprecedented feat of a three-year hold on the CNO Aviation Safety Award and the ComNavAirLant Battle Efficiency "E," 1959 to 1961. Squadron honors include two Presidential Unit Citations for service aboard *Bunker Hill* and *Essex* in 1944. The squadron has also won five Battle Stars for participation in the North African landings, Norway raids, the Luzon attacks, the Mindoro landings, and the occupation of Iwo Jima.

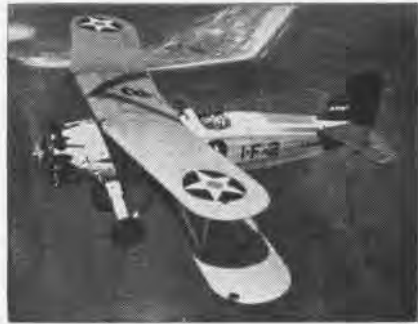
As a part of Carrier Air Wing One, the outfit became the first to



THE BFC-2 was flown from 1933 to 1937. It was previously designated as the FIIC-2.



THESE F4B'S are not to be confused with the present F-4B's. F4B's flew in 1932-35.



FROM 1930-32 the two-seat F8C-4 Helldivers were flown. Top speed was 137 mph.



THE VINDICATOR (SB2U-1) provided the squadron its first taste of combat in WW II.



NAVY'S F4U-4 Corsair could fly more than 450 mph and maintain altitudes of 41,500 ft.



THE F3D-2 Skyknight brought an all-weather capability and the jet age to the squadron.

cific combat tour, the squadron returned to the Atlantic Fleet, reforming at NAS Wildwood, N. J., in May 1945. It was still on the East Coast in training when the war ended.

After the war, the squadron was assigned to *Tarawa*. While aboard, it was transferred to the Pacific Fleet in July 1946, and completed a tour of duty in the Far East in the late fall. For the next two years, it based alternately in *Tarawa* and ashore at West Coast stations. On September 28, 1948, it sailed from San Diego on board *Tarawa* for a round-the-world cruise. After visiting the Far

squadron was assigned to *Wasp* for a tour of duty with Sixth Fleet in the Mediterranean. In 1953, it had a brief tour on *Lake Champlain* and then reported on board *Franklin D. Roosevelt* for a permanent assignment. The squadron is now deployed with *FDR* in the Med.

The *Top Hatters* became a jet squadron in January 1954 when the first F3D Skyknights were received. Two years later these were exchanged for F3H-28 Demons. In June 1963, the squadron received the *Phantom II*'s it flies today.

Among the awards to and accomplishments of the squadron is the

fly the *Phantom II* from the *Franklin D. Roosevelt* and the first F-4B squadron based at NAS Cecil Field. The present Commanding Officer is Commander L. E. Ames.

Other *Top Hats* of VF-14 include the first Commanding Officer, Captain H. C. Mustin; Vice Admiral G. F. Bogan, Commander Naval Air Force, Atlantic Fleet, 1946 to 1948; Admiral Arthur W. Radford, who was Commander-in-Chief Pacific Fleet and later Chairman of the Joint Chiefs of Staff, and Admiral Forrest P. Sherman, Fleet Admiral Nimitz' top planner during WW II and later CNO.



THIS VERSATILE twin-engine turboprop aircraft made its first flight at Columbus July 16. While it is expected to see tri-service use, the immediate military requirement is to meet the U.S. Marine Corps' need for an aircraft to provide close air support for ground forces.

'COIN' AIRCRAFT MAKES FIRST FLIGHT

ON JULY 16, the first flight of the OV-10A counter-insurgency aircraft was performed successfully at North American Aviation's Columbus Division.

At the controls was a North American Test Pilot, Edward Gillespie. The versatile twin-engine turbo-prop aircraft lifted from the runway at Port Columbus at 7 A.M. and completed its maiden flight with touchdown approximately one hour later.

The first flight, pronounced a success by North American Aviation officials, came nearly two

months ahead of contract schedule and only nine days after formal rollout ceremonies held at the Columbus division.

Dr. Robert W. Morse, Assistant Secretary of the Navy (Research and Development), was the keynote speaker at the rollout ceremony. Dr. Morse congratulated North American for producing the aircraft ahead of schedule and predicted a brilliant future for the rugged little airplane.

"The requirement for the OV-10A has, in a real sense, been demonstrated in actual combat," Dr.

Morse said. "For the war in Vietnam is exactly the sort of situation in which the capabilities of this aircraft could be utilized.

"Perhaps the most remarkable thing about this aircraft is the variety of missions which it will perform. Speaking for the Marine Corps, we plan to use it for both visual and photographic reconnaissance, for escorting and protecting our helicopters, for limited close air support, for liaison work and for light cargo and personnel transport.

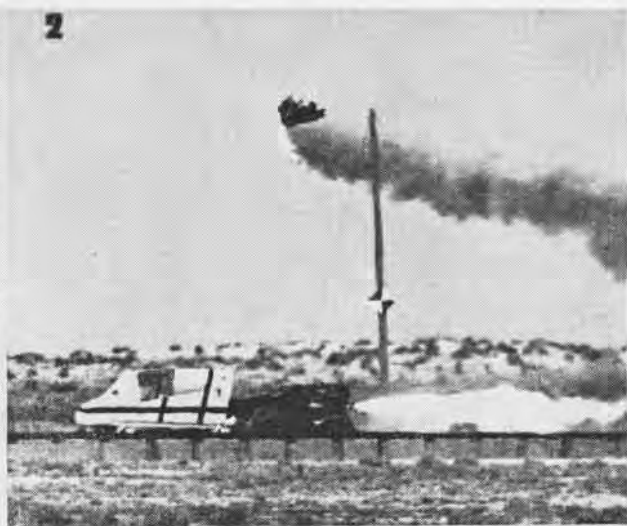
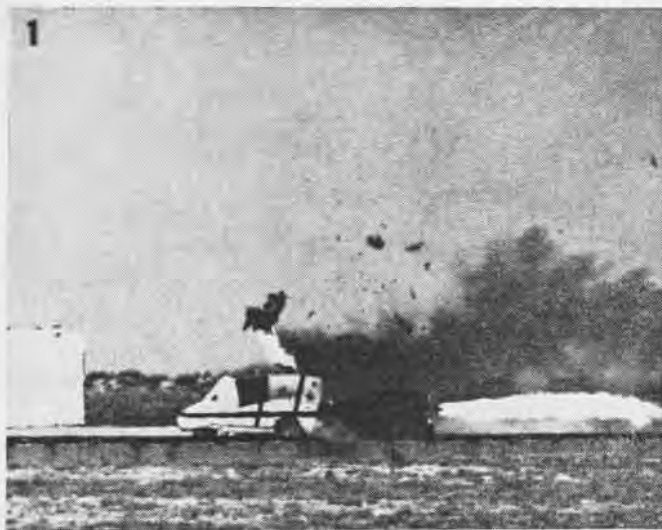
"We expect, in short, that it will



A 111-CUBIC-FOOT cargo compartment in the fuselage can carry either cargo or personnel. Access is through a door at rear of fuselage.



SEVEN PROTOTYPES are powered by twin 660-hp turboprop engines manufactured by the AiResearch Division of the Garrett Corporation.



SUCCESSFUL FIRING of the new LW-38 escape seat system was accomplished at Holloman AF Base, New Mexico, in June. Developed by

North American Aviation's Columbus Division for the OV-10A aircraft, the seat with a 210-pound dummy was ejected at 410 knots.

become an all-around workhorse for our Marine forces in the sort of combat environment which they now face in Southeast Asia."

The OV-10A features twin engines and twin booms with horizontal tail mounted high between twin vertical tails. The fuselage is mounted under the wing and provides for pilot and observer seated in tandem well ahead of the propellers for unobstructed visibility.

After an extensive flight test program at the Columbus Division, seven OV-10A prototypes will be evaluated for the Armed Forces by a special tri-service group comprised of Navy, Marine, Air Force and Army test pilots.

Under a Navy contract for the Department of Defense, the Columbus Division has developed a spe-

cial lightweight escape system called the LW-38. It is to be installed in the seven prototypes of the new COIN aircraft and will be used in the event of emergency. It will allow pilots to escape during any phase of the OV-10A's flight, including take-off and landing.

A "zero-zero" escape capability has been designed into the system. In case of trouble at zero altitude and zero speed, safe ejection can be achieved.

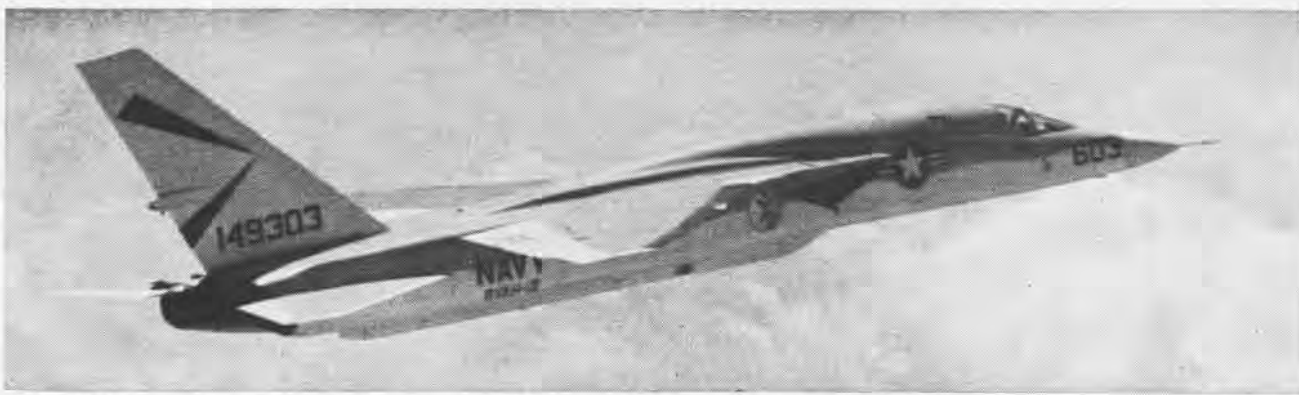
The system is fully automatic after the pilot pulls the ejection control handle. With this action, the shoulder harness pulls the pilot snug against the seat automatically.

In the pictures shown above (employing an anthropomorphic dummy), the seat firing has been initiated at a speed of 410 knots. A

ballistic charge catapults the seat and pilot through the canopy (1), then pushes the pilot up and away from the aircraft (2). As the parachute deploys (3), the seat separates from the pilot who (4) makes a safe descent.

The speed of the aircraft determines the deployment of the parachute. At speeds in excess of 200 knots, the opening of the chute is delayed two seconds to prevent injury to the pilot.

At lower altitudes and speeds below 200 knots, the parachute is opened immediately to assure quick and safe recovery of the pilot. The system can be operated in the wide range of temperatures found throughout the world, from Arctic's 65 degrees below zero to the desert's 160 degrees above zero.



RECOGNIZED as a versatile, sophisticated reconnaissance aircraft, the RA-5C Vigilante is capable of all-weather, high and low recon-

naissance missions. With its motto "We point the way," RVAH-12's normal complement will be 250 officers and men and six aircraft.

FROM THEORY TO REALITY: RVAH-12



DURING CEREMONIES at NAS Sanford on July 1, 1965, Commander C. L. Chute reads the orders that made him the first C.O.

COMMANDER Charles L. Chute became the first Commanding Officer of Reconnaissance Attack Squadron 12 (RVAH-12) during commissioning ceremonies July 1 at NAS SANFORD.

Made up of six aircraft and more than 250 officers and men, it is the first squadron ever originally commissioned for a reconnaissance attack mission. RVAH-12 flies the RA-5C *Vigilante* and is tentatively scheduled for assignment aboard the *Saratoga*.

Because of the complex weapons systems, many of the squadron's complement of men spent six months in intensive training in the Naval Maintenance Training Division and taking part in RVAH-3's maintenance training. Radar technicians received 1,160 hours of formal instruction and two months of on-the-job training to become qualified. Flight crew training required from six to seven months of careful thorough instruction in the new aircraft.

Thus RVAH-12 was ready at commissioning to fly one of the Navy's most sophisticated aircraft, the RA-5C.



C. M. JOHNSON, AMS2, removes the masking after painting side numbers on first Vigilante. The squadron will deploy aboard Sara.



ONE PROBLEM encountered by any new squadron is the assignment of men. Here L. J. Boor, PNC, verifies service record of P. M. Low, SN.



KEARSARGE SIGNALMAN Ray Kidd operates a flashing light aboard the antisubmarine aircraft carrier. The number of signalmen aboard a CV varies with ship type and current manning level, but it usually averages 20. Signalmen are the carrier's visual communicators.

The Modern Aircraft Carrier

DELIVERING THE MESSAGE TO GARCIA

In 1900, Elbert Hubbard published an essay called "A Message to Garcia." In it, he emphasized the importance of individual initiative (or, as he put it, "independent action"), hard work, and courage in the face of danger. He told of the time President McKinley gave "the fellow by the name of Rowan" a message to deliver to insurgent leader General Garcia during the Spanish-American War. With instant, unquestioning obedience, Rowan took the message, sailed to Cuba, traversed a hostile country on foot, found Garcia, and delivered the message. There is seldom such drama in modern communications, but aboard an aircraft carrier urgency exists.

THE "ROWANS" of today's Navy—the carrier and its embarked flag communicators—must be able to transmit and receive intelligence from the Fleet and the shore establishment, and they must do it in a rapid, reliable, secure manner.

By way of example, one of the crucial tests undertaken by the *Enterprise* during Operation *Sea Orbit* was the testing of the carrier's capability to rove the ocean undetected and unobserved, still retaining the ability to copy communications traffic—without breaking radio silence. She had to receive weather and operational informa-

By Scot MacDonald

tion and, at the same time, keep abreast of world and local conditions.

To do this job, *Enterprise* came equipped with some of the Navy's most modern communications equipment. A report issued before the ship was commissioned said: "[*Enterprise's*] communications equipment is believed to be the largest assortment ever assembled on any ship. Besides more than 1,800 telephones, there is a complexity of numerous radio circuits, teletypes, a pneumatic tube ar-

rangement to carry messages from one station to another, and numerous announcing systems. . . .

"As modern and involved as this equipment has become, the . . . ship still has the two early naval communications systems, yardarm blinker lights . . . and voice tubes for internal communications."

Generally, CVAN-65 reported, communications during *Sea Orbit* were reliable and served the command effectively. Nuclear Task Force One did find communications in areas south of the equator less reliable than areas to the north, but this was hardly news to those

aboard. There are fewer transmitters and relay stations in the southern part of the world.

While the *Big E* found several marginal areas for receiving Fleet broadcasts, completion of the new U. S. Naval Communication Station at Northwest Cape, Australia, and improvements to existing facilities are expected to improve the quality of communications in the problem areas.

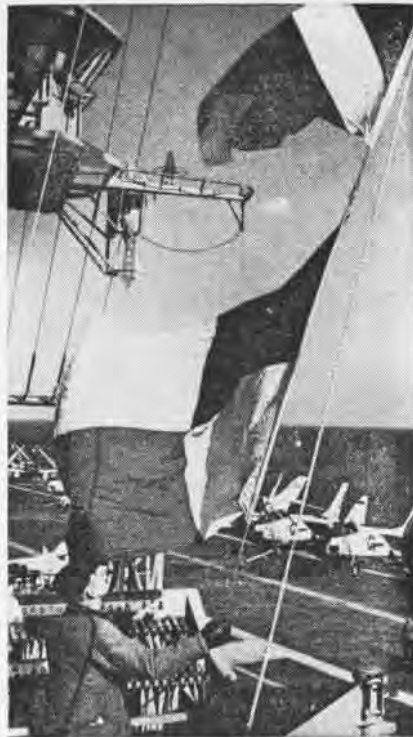
"If there is a single word that best describes naval communications as we know it today, that word would be 'pressure.'" That is the opinion of Commander Eugene H. Bouslog, former *Wasp* Communications Officer, now assigned to the Office of Naval Communications in Washington.

"A typical volume of traffic monitored by an aircraft carrier each month may average 30,000 messages," according to Cdr. Bouslog. "Of these 30,000, it is not unreasonable to expect 3,000 will be processed for both further routing within the carrier and relaying to other ships in the task group or task force."

The number of men who must do the processing may vary from 45 to 100, depending on the mission and operational status of the ship. At the upper end of this spectrum would be a carrier such as *Enterprise* when she is deployed. She carries some 100 enlisted men working in her radio communications spaces on a 24-hour basis.

The basic organization of a typical aircraft carrier's Communications Department calls for a Communications Officer, six to eight junior officer assistants, about 55 radiomen (RM's) and communications yeomen (CYN's), and about 20 signalmen (SM's).

The Communications Officer is usually a Naval Aviator of the rank of lieutenant commander. His top assistant in most carriers is a lieutenant junior grade. Other officers in the department are assigned both watch bill and collateral duty responsibilities. In addition to watchstanding, junior officers handle Crypto security and are assigned as the ship's Radio Division (CR) Officer and his junior division officer, the Signals Division (CS) officer and his junior divi-

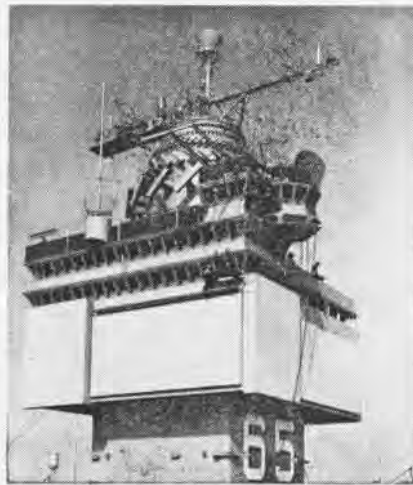


FLAG HOIST is run up by signalman aboard a carrier. Entire force can be signaled.

sion officer, the Registered Publications Custodian and his alternate.

"If there are any other officers available," Cdr. Bouslog added, "there is more than enough extra work to be done, particularly in training other officers and enlisted men assigned."

The manpower strength of an aircraft carrier's Communications Department does not increase when an Air Wing is embarked, as is the



SOME COMM GEAR used in Operation Sea Orbit is housed in island of *Enterprise*.

case with some other departments. "The squadron's communicators, as a general rule, have a completely different problem from the ship's communications personnel," Cdr. Bouslog said. "There are no RM's assigned. Aviation electronics technicians (AT's) and aviation electrician's mates (AE's) are assigned to squadrons instead of RM's because of the difference in requirement."

That difference is found "because squadron aircraft are generally required to be able to communicate only with the ship, an air traffic control facility, or another plane," Cdr. Bouslog explained. "A pilot is capable of handling this himself."

A squadron's Communications Officer more frequently fills an administrative billet in his unit. He is required to keep the squadron's pilots and personnel informed of communications policy, procedures, and voice discipline, to insure compliance with existing communications directives as they affect voice procedures or use of frequencies, and to see that the appropriate sections of Registered Publications are used.

Cdr. Bouslog went further than simply saying the task of being a naval communicator is a tough one. "I doubt that any individual unfamiliar with communications procedures can appreciate the terrific strain a carrier's message traffic places on the communicators who must see that every message gets where it is supposed to go," he said.

The traffic load is noticeably lighter during routine operations off both U. S. coasts, the communicator said. Volume increases tremendously, however, during exercises, when a ship is deployed, and certainly during the tempo of operations the Seventh Fleet is now experiencing.

Traffic volume means Fleet broadcast traffic passed through U. S. naval communications stations to the ships in a given broadcast area. In addition to this traffic, there are a number of special privacy circuits for the exclusive use of commanders. Traffic passed on these circuits is made available only to those who are on the "need to know" list, and is not included

in routine traffic accounting totals.

In a recent cruise report, *Intrepid* noted that messages fall into two basic types, operational and administrative.

Operational messages deal with the ship's operating schedule and other related Fleet evolutions.

Administrative messages generally concern personnel transactions, supply requisitions, corrections to publications or directives, and press information that permits the ship's crew to keep informed of current events.

A large part of administrative traffic concerns supply. If a destroyer in the task force requests a spare part and the carrier cannot supply

It allows CIC, CATCC, and bridge personnel to speak directly to another ship, or to a pilot, or to an independent command. An air controlman uses it to give a pilot final landing instructions. The ship's C.O. or the carrier division commander use it to talk to another command thousands of miles away.

The difference between radio-telephone and radio-teletype (RATT) is the mode of emission used to transmit a message. An RATT message is typed for transmission on a keyboard that punches holes on a paper tape. Run through a transmitter/distributor (TD), the tape automatically keys the proper character for transmission on a per-

circuits, but an RM has an additional requirement for proficiency in CW as well. CR Division personnel also perform minor maintenance to equipment, but "the Communications Department is vitally dependent on the Electronics Material Officer (EMO) in the Operations Department for communications maintenance support," Cdr. Bouslog pointed out. Electronics technicians (ET's) who work for the EMO are charged with major maintenance problems and the sophisticated repair of communications gear.

Repair can be a problem, because communications equipment seldom gets a break. About the



RADIOMAN aboard *USS Ticonderoga* tunes a receiver. The number varies from ship to ship, but CV's usually have about 55 radiomen.



WORKING in Main Comm aboard *Bon Homme Richard*, L. E. Gunderson (L) operates ship's radio-teletype gear as L. A. Lawson types.

it from its own bins, for instance, the carrier's supply officer has to get the replacement elsewhere.

"It really doesn't matter to the man who needs the part whether it comes from a bin in the carrier or a bin in Bayonne," Cdr. Bouslog said. "He has to have it, and the carrier has to get it. Communications is often a vital step in the process."

Intrepid noted that there are three general means of radio communications its personnel use to meet operational and administrative requirements, including radio-telephone, radio-teletype, and radio-telegraph.

The radio-telephone is actually a "family" of equipment designed to permit voice transmissions from ship to ship and from ship to shore.

selected radio frequency. Incoming messages pass through the radio receiver and are printed on a roll of paper set into the teletypewriter.

RATT is the most common means of recorded communications used today. It is convenient, readable, and becoming more reliable every day.

The third mode of emission a carrier uses is radio-telegraph, using Morse Code. Also called the interrupted continuous wave (CW), the radio-telegraph is the backbone of today's communications. "Through its use," Cdr. Bouslog noted, "the Navy can communicate to and from any place in the world."

CYN's assigned to the Communications Department are expected to operate both the voice and RATT

only time requirements lessen is in port in the continental U. S., when most carriers enjoy the luxury of a landline cable that takes the place of transmitters and receivers. Use of the cable permits some in-port maintenance to prepare for the ship's next at-sea period.

A carrier's CR Division is one of two in the Communications Department. Its CS Division has the signalmen who provide external communications conducted visually by semaphore, flashing light, yard-arm blinker, and flag hoist.

CS Division's most colorful communications are performed by flag hoist. A manual, ATP 1(A), Volume II, standardizes flag meanings so directions can be sent to maneuver an entire task group without radio transmissions being required.

Blinker lights permit ship-to-ship communications in both daylight and darkness with a minimum of worry about interception.

Semaphore is still used by SM's, especially during underway replenishment. It takes on greatest importance when AvGas or ammunition are being transferred, Cdr. Bouslog said. "The commanding officer wants a minimum of electrical current in use."

The number of spaces occupied by a Communications Department varies from carrier to carrier. Aboard the *Intrepid*, for instance, the department has 12, the standard number for an *Essex*-class carrier. A *Forrestal*-class carrier's Communications Department occupies a greater number of spaces.

Regardless of number, however, the CR Division's spaces are as diversely located as physically possible within the ship, primarily to minimize any possible effects of battle damage. There is another logic behind this separation. In the Navy's shore establishment and among other communications agencies, transmitting and receiving sites are usually located more than 20 or 30 miles apart. This is done in order to overcome problems caused by the tendency of transmitter radiation to interfere with the ability of receivers to pick up incoming signals. In an aircraft carrier's limited area, separation of the two units is equally advantageous. Equipment is tucked away in every corner of the ship that will provide reasonable access to an antenna.

Every carrier department has its headaches, and Communications is no exception. "The lack of trained career personnel is a carrier Communications Department's greatest single problem," Cdr. Bouslog said. "I recognize that this is by no means a problem limited to communications, but there are simply not enough RM's to operate the equipment or enough ET's to maintain it because the Navy, like all the services, has difficulty keeping these people on active duty.

"Working conditions are such that a typical shipboard RM or ET stands an eight-hour watch, then has only eight hours off before he goes back to work. Not only does



SEMAPHORE message is sent by R.S. Reddish from signal bridge of *Bon Homme Richard*.

he have to sleep during his off time, but he must attend to his personal necessities—such as standing in a chow line to eat—as well. When you boil it down to the basics, he is lucky if he can get more than five hours of sleep a day while the ship is underway.

"A man who is not getting enough sleep tends to make more mistakes than might be normally expected—and mistakes in this business can be deadly. The lack of trained personnel on board is a condition that is aggravated by the sophisticated equipment we've developed. One of the things the staffs of CNO and the Bureau of Ships are trying to do is to insure that a graduate electronics engineer isn't required to maintain and operate the equipment we buy."

This brings up the question of training. Policies vary from coast to coast. A communicator reporting to a Pacific Fleet command is now required to attend all necessary schools before he checks aboard the ship. The Atlantic Fleet, not having the same logistics problem, has no such requirement.

"The general rule aboard the *Wasp* was to send men to every possible school we could while we

were in port," Cdr. Bouslog said. "The limit is not on the number who are available for school, nor, surprisingly enough, on the number of seats available at the schools. The limit is actually determined by the length of a man's remaining obligated service."

A sophisticated course will seldom be offered, he added, unless the prospective student agrees to remain on active duty for at least a year after he completes it.

"The number of men possessing the educational and technical background and the requisite GCT to attend the more demanding schools is extremely limited," Cdr. Bouslog said. "Generally, a seaman fresh out of boot camp or Class 'A' School is in no position to undertake a course of instruction in the operation of a highly sophisticated transmitter. He should have some working experience before he goes to school—but by the time he gets the experience, there isn't enough time left in his enlistment to make it worthwhile for the Navy to educate him."

Another headache for those who run shipboard Communications Departments is that of establishing an equitable leave policy for assigned personnel.

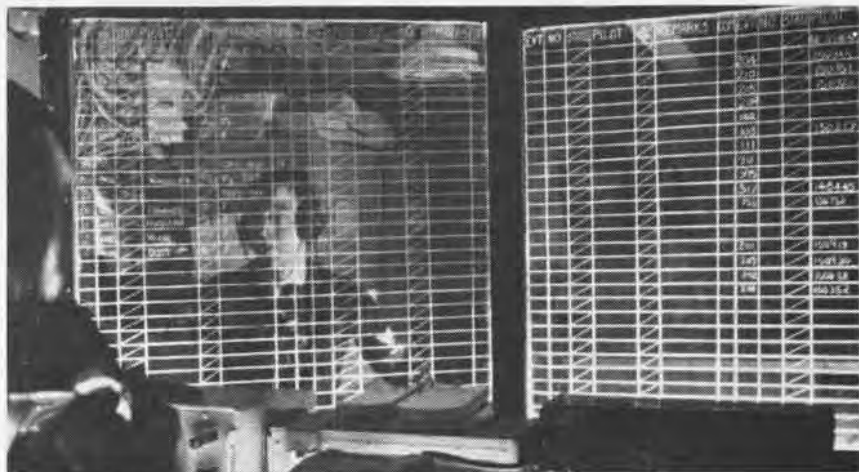
A carrier's Communications Department operates 24 hours a day whether the ship is in port or at sea. Because of operational requirements, seldom are more than 10 per cent of the department's personnel able to take leave at one time—even in port. "It becomes a real challenge for the carrier people to try to give everybody a decent shake on leave over, say, a two-year deployment cycle," Cdr. Bouslog said.

"It is true that the lot of the men assigned to a carrier's Communications Department is in many ways no harder than that of men in other departments of the ship," Cdr. Bouslog said. "It has been my experience, though, that shipboard communicators often make their jobs more difficult by trying to maintain a standard of excellence nearly impossible under their working conditions. The word I like to use to describe them is one that has been used too often, but in their case it seems appropriate.

"It's 'dedication.'"



IN CCA, Allen, ACCS, instructs Garris, AC2, as he controls aircraft in approach.



IMPORTANT FUNCTION performed by personnel in Air Operations is keeping the flight status board up to date. L. K. Williams, AC3, posts information for watch officer.

CATCC: PART OF THE PILOT'S EYES

USS SHANGRI LA'S Carrier Air Traffic Control Center (CATCC) handles more flights than most civilian airports. As many as 350 takeoffs and landings have been logged in a single day by the Air Operations Office.

Manned by "OC" Division of the Operations Department, CATCC is subdivided into three areas of responsibility and activity: Air Operations, Carrier Control Approach, and the Air Transfer Officer.

Air Operations schedules and coordinates all flights to and from the ship. The work done by this section is largely planning, man-

agement and administration. Additionally, Air Ops maintains pilot flight logs, publications and charts concerning air navigation, and current weather reports on airfields where the carrier aircraft might be diverted for emergency landings.

Carrier Control Approach (CCA) controls the arrival and departure of all aircraft within 50 miles of the ship. Monitoring the flights with radar, air controlmen guide the pilots by means of radio voice communications and electronic aids.

CCA is closely coordinated with other carrier activities involved in flight operations. For instance, CCA

will bring a plane in from 50 miles out and then the Landing Signal Officer (LSO) will take over the final 1½ miles of approach. Primary Fly launches daytime flights but CCA controls the plane as soon as it is airborne.

The Air Transfer Officer (ATO) arranges for the transfer of personnel and cargo on and off the ship by a variety of means, which includes highlines and ship's vehicles as well as aircraft. He schedules transportation for personnel going on emergency leave and for getting mail aboard ship, to mention two much-appreciated ATO services.



DEPARTING AIRCRAFT is monitored on the radar scope by R. T. Weeks, AC3, while G. L. Temple, ABH3, receives instructions by telephone from the CATCC watch officer.



TAPE RECORDER, adjusted by Bakker, AC2, monitors CCA transmissions with pilots.

ATLANTIC AIR WINGS ON PATROL

PATROL SQUADRON TEN, based at NAS BRUNSWICK, Maine, will be the first FAW-3 squadron to receive the P-3 *Orion*. The squadron expects to spend the remainder of the year in transition. Recently designated plane commanders in the present SP-2E *Neptune* are: Lt. Richard J. Petrucci, Harold W. Adams, Gary J. Seraly, John R. Nichols and Ltjg. John H. Crouch.

Patrol Squadron Five returned to home base at Jacksonville, Fla., in late June upon completing a five-month deployment to the Mediterranean. While based at Sigonella, VP-5 participated in six major NATO and Sixth Fleet exercises. With a total of 3,924 hours flown, the squadron chalked up a total of eight submarine kills in the closely-simulated wartime ASW exercises. Low-level maritime photographic reconnaissance and extensive shipping surveillance in the Mediterranean account for the hours not flown on ASW missions.

Despite heavy operational commitments, the squadron was able to generate a considerable amount of good will with its people-to-people program. Five separate groups of school children were hosted by the squadron, the largest being a group of 300 grade school students from Adrano.

The squadron's major project was the adoption of a boys' orphanage located in Paterno, Sicily. A total of \$510.67, collected within the squadron, was used to equip the orphanage with dishes, gym equipment and furniture. A three-month supply of fresh milk also was arranged for the 90 boys residing at the home. Squadron working parties performed yard work, cleared a playground and repaired furniture.

The "Orphan Annie Drop" is a specialty for VP-8 sailors operating with the USS *Amberjack* during ASW exercises. The squadron packs an empty sonobuoy case with current newspapers and magazines and provides air mail special delivery service to the submariners. The water-tight container has been spe-

cially rigged to be fished out of the sea by a grappling hook.

* * *

On June 15, VP-23 claimed to be the only Atlantic Fleet Patrol Squadron to fly 10,000 hours during fiscal year 1965. This achievement came in the midst of a round-the-clock exercise known as *Polestar*. Lt. R. L. Klein and Combat

Aircrew Four were returning from an operational flight, during which the 10,000th hour was recorded, when they were met at VP-23's hangar by Captain T. R. McClellan, Commander Fleet Air Wing Three, and Commander C. L. Wyman, Commanding Officer of the squadron. A 10,000-hour cake was presented to Lt. Klein to commemorate the occasion.

These ten-thousand hours were flown accident-free. This brings the VP-23 accident-free total to 45,000 hours. Operating the SP-2H, the squadron compiled these figures during operations in the Mediterranean, the North Atlantic, the Caribbean and from their home base in Brunswick, Maine.

* * *

Late in June, Patrol Squadron 24 began a five-month deployment in the Eastern Mediterranean. Because of a closed runway at Sigonella, the squadron was faced with the immediate task of redeploying to Soudha Bay, Crete. Operating from the Royal Hellenic Air Force Base at Soudha Bay, the squadron was supported by the USS *Tallahatchie County* (AVB-2). Because of limited space aboard the ship, many



VP-8'S HERRING, ADJ3, and Deeley, AN, inspect the "Orphan Annie Drop" container.



PICTURED WITH coach, Mike Stevens, AN, and Captain J. R. Ward, Chief Staff Officer, Fleet Air Wing 11, is the Navy Jacksonville Swim Team holding distance swim certificates.



CAPTAIN A. C. Cason, ComFAirWing Eleven, commends Captains J. R. Ward, K. E. Snyder, Cdr. C. E. Rodgers for their performance.



COMMANDER I. J. Johnson, X.O., VP-30, welcomes Squadron Leader Nelson, X.O., RCAF Number Two Maritime Training Unit, Canada.

squadron personnel live in tents adjacent to the airfield. Despite the inconvenience of an occasional rainstorm, morale continues to be high. Commander Dick Amme, Commanding Officer, although grounded with a broken ankle, is in constant contact with his squadron.

* * *

The first contingent of Midshipmen from the Naval Academy and 22 collegiate NROTC's arrived on board Patrol Squadron 30's Detachment Alfa at Jacksonville on June 10 for a one-week indoctrination in the operation and organization of maritime ASW.

While aboard, the Midshipmen were given intensive ground training in ASW tactics employed in the P-3A *Orion*. This was followed by demonstration flights. The Midshipmen received instruction in officers' duties.

* * *

In recent years, growing demands for the services of airborne communicators have led to a shortage in personnel. Men whose rates do not require any knowledge or training in CW or radio procedures may be assigned to "sit the circuit" in patrol aircraft on missions.

Commander Fleet Air Wing Three, recognizing the problem, has taken steps to ensure that the squadrons under him do not run into "extremis" with airborne communications. He has established an ASW Airborne Communicators School which offers three courses: *basic*, for men who have never

heard a dit or a dah; *refresher*, for men who have qualified but, for varying reasons, have dropped in proficiency; and *advanced*, which gives the finishing touches to the qualified communicator.

The basic course lasts nine weeks. To earn a graduate certificate, a man must be able to send and receive at least 16 words per minute with 95 per cent accuracy and demonstrate a knowledge of basic radio procedures.

* * *

Lt. Bob Rohr of "Heckle, Jeckle, and Hyde" fame aboard VP-21, was piped over the side on July 2 by some of the men he helped re-enlist in the past two years. The nickname was given to the squadron's Career Information Team comprised of Lt. Rohr, O. S. Hellman, ATCA, and J. V. Aquilino, AMSCA.

During his two years as re-enlistment officer, VP-21 shipped over 72 people with a first cruise re-enlistment rate of 52.4% and a career re-enlistment rate of 87%.

* * *

A Royal Canadian Air Force Maritime Command Crew of seven officers and four enlisted men was hosted by Patrol Squadron 30 at NAS JACKSONVILLE during the week of June 14, 1965. The officers are attached to the Number Two Maritime Operational Training Unit, home-based at RCAF Station, Summerside, Prince Edward Island.

The Operational Training Unit is assigned the mission of training pilots, navigators, and radio officers

in the Lockheed SP-2 *Neptune*. Upon completion of their training, the officers are assigned further to the Canadian Maritime Air Command's patrol squadrons. Patrol Squadron 30 reflects the mission of our Canadian neighbor. The visits between the RCAF squadron and VP-30 date back to March 1962 and have become an annual event.

* * *

J. M. Cassady, ATCS, attached to the *Black Falcons* of VP-7, was recently selected for the Warrant Officer Program. Chief Cassady joined the Navy in 1942 and served during WW II, earning several medals and ribbons including three Air Medals, a Presidential Unit Citation and the American, Afro-Europe, Pacific and Philippine Area Ribbons. After his discharge in 1945, he served in the Merchant Marine service until 1949 when he came back into the Navy.

Combining more talents than the fabled one-armed paperhanger, Chief Cassady has attended service schools and, to date, has earned three years of college credit. He speaks German fluently and holds a private pilot's license and an A&P rating. An avid ham radio enthusiast, he still finds time for golf.

Cassady joined the squadron in August 1964 and is now awaiting orders to Pensacola.

During the months of June and July, the squadron played host to 280 USNA and NROTC midshipmen. They arrived during an extensive round-the-clock exercise, and many were able to observe operations in the air.

SELECTED AIR RESERVE



HS-812 CREWMEN, NAS Twin Cities, are briefed as TV men record interview with local residents in area where a missing girl was lost.



KNEE-DEEP, sometimes waist-deep in swamp waters, recruits from the air station probe 23,000-acre game preserve in suburban Minneapolis.

Search without Success

Like a Navy expeditionary force in action, nearly 100 Navy recruits, trainees in the Reserve 85-day Accelerated Rate Program at NAS TWIN CITIES, assaulted the jungle-like wilderness of Carlos Avery Game Preserve in suburban Minneapolis.

Above, Navy helicopters, flown by Naval Reservists of HS-812 who had taken off from their civilian occupations to volunteer their services, cooperated in the search.

Object of the operation was to find a 14-year-old girl, Barbara Iversen, of Shoreview, Minn., who had disappeared under mysterious circumstances and without a trace from a neighbor's home where she had been baby-sitting.

Nine days after Barbara disappeared, the Navy was called in when ground searchers uncovered articles of her clothing on a 23,000-acre wild game preserve.

For five days from morning to night, the recruits poked and probed, foot by foot, through the insect-ridden swampland. The recruits, almost to a man, had voiced a desire to remain with the search throughout the entire day, each day, rather than split up in morning and afternoon shifts, as the search had been originally planned,

Tired, wet and hungry, mosquito bites covering nearly every inch of exposed flesh, the men returned to their barracks at night to peel off soggy, muddy clothing, pick wood-ticks from their bodies, shower and fall into their bunks, yet the following morning they were ready to go again.

The Reservists turned in a highly commendable performance, but did not succeed in finding the girl. A month later and almost six weeks



COMMANDER CHAS. CIBULA, JR., (right) and LCdr. R. R. Padgett, members of HS-742, attached to NARTU Jacksonville, unload a 25½-lb lobster. It was presented to Captain Charles W. Pittman, Jr., C.O. of the Jax unit, upon HS-742's return from two weeks active duty training at Quonset Point.

after her disappearance, Barbara's body was found in a shallow grave 40 miles from her home just outside Cambridge, Minn. There were no clues to indicate how she was killed.

Combat-Ready

In the world of the Selected Naval Air Reservist, the key word is "readiness." Four men, assigned to VS-872 at NARTU ALAMEDA, have achieved the ultimate goal in that respect: They have been adjudged 100% combat-ready.

Flying the twin-engine s-2 *Tracker*, LCdr. Robert G. Howard, Lt. Max G. Gossman, Herbert D. Biggs, AO1, and James L. Weitzig, AT2, have garnered a distinction rarely accorded to plane crews. They have qualified in every phase of the operation of their aircraft to a maximum degree and indicated a broad understanding of ASW.

The s-2E is designed primarily to detect and destroy enemy submarines through the utilization of radar, listening buoys, and other electronic gear.

To earn the signal honor of being rated 100% combat-ready, the crew, functioning both individually and as a team, had to attain high passing scores in 14 separate, and extremely difficult, graded exercises,

authorized by CNAREsTra. These included advanced tactical training, coordinated Fleet ASW exercises and plenty of technical preparation.

LCdr. Howard praised the crew's "dogged" determination to be the very best." He went on to say that the individual crew member's willingness to devote long hours of arduous study to the principles of the qualifying exercises had "paid off handsomely."

Three Generations of Service

Larry R. Williams, 18, son of Orville R. Williams, Chief Storekeeper assigned to NARTU JACKSONVILLE, was sworn in as his father and grandfather looked on.

Larry's grandfather, Orville C. Williams, a Navy veteran, entered the Navy in January 1918, during WW I and served aboard the mine-layer USS *Quinnabog*. His father, Orville R., served aboard the minesweeper USS *Ideal* (AMG-85) during WW II.

Young Williams enlisted in the Naval Air Reserve's Six-Month Program and was sworn in by Commander R. B. Newman, the unit's Recruiting Officer. He began his active duty at NAS MEMPHIS, Tenn., in August, at the accelerated recruit training school. Further training will include a course at the photo-interpretation school at Lowry Air Force Base in Denver, Colo.

As a Selected Air Reservist, Williams will be assigned to a local squadron upon completion of his six months active duty training.



CAPTAIN J. B. BOCK, C. O. of NARTU Alameda, gives Miss Becky Wilmoth, 15 years old, a brand new portable typewriter. She won over 35 other student journalist contestants in the Weekend Warriors' essay contest on the subject of "The Advantages of the Selected Naval Air Reserve Program."

ASW Training, Barber's Point

This past summer 80 Naval Reservists underwent two weeks active training duty at NAS BARBER'S POINT with VP-6 as host.

The group, designated CNAREsTra Detachment Bravo, consisted of four flight crews flying the SP-2 *Neptune*, and 30 ground support personnel to maintain the planes. The Reservists were from Memphis, Seattle, Olathe and Los Alamitos.

The Reservists conducted anti-submarine "war games" with submarines operating in the area. Detachment OinC was Commander J. J. Schiesser, Los Alamitos.

Commended for Vietnam Service

Weekend Warrior Ross N. Calvert was awarded the Navy Unit Commendation ribbon earned while

serving aboard the USS *Constellation* off the coast of Vietnam. Commander Patterson, C. O. of VP-875, presented the award to Calvert at NARTU ALAMEDA.

A structural mechanic, third class, with Task Group 77.6, Calvert helped patch up aircraft while serving on the carrier.

Wives to the Rescue

A knotty problem was solved at the Dependents' Clinic, NAS Los Alamitos, when 22 officer and enlisted men's wives received their Red Cross Gray Lady Caps in formal ceremonies.

The problem developed when the Medical Officer learned that his Wave hospital Corpsmen were being transferred and there would be no replacements. Since there is no nurse's billet at the dispensary, it would have been virtually impossible to maintain a dependents' clinic at the air station.

The Red Cross offered to conduct a Gray Lady training course if some of the women would volunteer to work in the clinic. Twenty-two responded. They are working an average of 20 hours per month in the clinic.

Lockheed Trophy Winner

Rear Admiral George P. Koch, CNAREsTra, has announced that NAS NEW YORK is the winner of the Lockheed Recruiting and Retention Trophy for FY '65. Runner-up was NARTU NORFOLK, and NAS OLATHE took third place.



JAMES R. LAMBERT, 17 (L), is welcomed into NARTU Alameda by his father, J. E. Lambert, AEC, and LCdr. Conrad, who swore him in.



CDR. R. A. SAVAGE, Air Operations Officer, USS *F. D. Roosevelt*, signs son's enlistment contract after swearing him in at NARTU Jax.

AT SEA WITH THE CARRIERS



A SKYRAIDER carrying millionth pound of ordnance to be dropped on Vietnam targets by VA-196 is launched from Bon Homme Richard.



'SPAD' PILOTS of VA-152 aboard Oriskany also have dropped a million pounds of ordnance. Squadron A-1 is readied for launch.

PACIFIC FLEET

BON HOMME RICHARD (CVA-31)

VA-196 pilots aboard *Bon Homme Richard*, flying A-1H Skyraiders, have dropped more than a million pounds of ordnance on designated targets in Vietnam. The A-1H's carried torpedoes, rockets, bombs, and napalm.

Commander Ernest E. Tissot, VA-192 skipper, made his 700th carrier landing aboard CVA-31 in an A-4 Skyhawk. Commander J. C. Dixon, Jr., relieved Commander J. L. Gammill as C.O. of VF-191 in at-sea ceremonies.

CONSTELLATION (CVA-64)

Work on *Constellation* at the Puget Sound Naval Shipyard, Bremerton, Wash., was reported progressing rapidly. LCdr. J. K. Berger, ship's supervisor, said yard workers were 6,500 man-hours ahead of the pace set for Bremerton's last big carrier overhaul. Work on CVA-64 began April 1; it is scheduled to end in December.

Constellation crew members played host to 75 Washington state mayors and their wives during a visit to the ship. The city officials

were attending the Puget Sound Governmental Conference in Seattle.

HANCOCK (CVA-19)

Forty Sea Cadets from the San Francisco Bay area boarded *Hancock* for a week-long cruise off the California coast. Best described as "working guests," they worked alongside *Hancock* sailors during the indoctrination cruise. Most of the boys are members of the *Hancock* Chapter of the Sea Cadets; some belong to the USS *Cockrell* chapter.

INDEPENDENCE (CVA-62)

A VA-75 A-6A Intruder made *Independence's* 72,000th landing. Its crew included Lt. David Gilbreath, pilot, and Lt. Douglas Bibler, bombardier navigator. Normally homeported in Norfolk, Va., *Independence* was operating in the South China Sea as a unit of the Seventh Fleet when the landing was made.

KEARSARGE (CVS-33)

Kearsarge has rejoined the Fleet after a five-month overhaul at the Long Beach Naval Shipyard. The \$4-million yard period began in January. CVS-33 was scheduled to

undergo Fleet readiness and training exercises off San Diego under command of Capt. M. M. Hershey.

KITTY HAWK (CVA-63)

A pair of "firsts" has been claimed by *Kitty Hawk*: the new E-2A Hawkeye's first operational carrier landing one day and its first steam catapult launch the next. Lt. George Koppmann, of VAW-11's Det. Charlie, was pilot on both occasions.

Flying another E-2A, Lt. Harry Lavigne was credited with *Kitty Hawk's* 33,000th landing a few days later. There were cries of "foul play" from the general direction of the carrier's other ready rooms, but they were ignored.

The E-2A is manned by a crew of five, including the pilot, co-pilot, air control officer, CIC officer, and a radar operator. While its primary mission is early warning, the *Hawkeye* can also be used in intercept and strike control and for search and rescue operations.

A unit of CVW-11, Det. Charlie is commanded by Commander William Brook. The detachment is scheduled to accompany *Kitty Hawk* on this ship's next WestPac cruise.

An essay on the subject "My Vote—Freedom's Privilege" won a Freedom's Foundation Award for *Kitty*



SOON DUE to fly another responsive strike against North Vietnam, VA-196 pilots make their preparations as, at upper left, Lt. Joe Baldwin (L), Ltjg. Chuck Frederick, and Ltjg. Don Dill check over

the flight schedule for their next mission. At upper right, Ltjg. Frederick awaits the signal from Flight Deck Control to start his Skyraider's engine, and, above he's launched in a cloud of steam.

Hawk crew member David A. Wilbur, FT3. The award was presented by Captain Martin D. Carmody, *Kitty Hawk's* Commanding Officer.

RANGER (CVA-61)

Captain Leo B. McCuddin logged

his first two miles of underway command since he became *Ranger's* skipper in May when the CVA "cruised" to an anchorage about two miles from the San Francisco Naval Shipyard's Hunter's Point Division, where crew members spent three days offloading 1,100 tons of

bombs, fuses, rockets, missiles, and warheads.

Ranger's officer and enlisted radio communications personnel presented a ship's plaque to Pacific Telephone and Telegraph Co. overseas operators in Oakland, Calif. The plaque was given for



AN E-2A HAWKEYE, the Navy's newest early warning aircraft, settles down on *Kitty Hawk's* deck for its first operational landing.



MAKING HIS 700TH arrested landing, Commander Ernest E. Iisot, C.O. of VA-192, flies his Skyhawk aboard *Bonnie Dick* off Vietnam.

services CVA-61 received when crew members made more than 450 ship-to-shore calls to their families during the last 2,000-mile lap of the ship's return trip to the United States in May.

MIDWAY (CVA-41)

Command of Task Force 77 changed hands aboard *Midway* when Rear Admiral Marshall W. White relieved Rear Admiral William F. Bringle. Admiral White assumed command of CarDiv 7 at the same time. Admiral White was formerly ComCarDiv Five in *Independence*. Admiral Bringle's orders take him to CinCPacFlt's staff.

TICONDEROGA (CVA-14)

Tico returned early this summer to home port, San Diego, after an overhaul at the San Francisco Naval Shipyard, Hunter's Point Division. Captain J. W. Dolan, Jr., is the ship's Commanding Officer.

CORAL SEA (CVA-43)

CBS news correspondent Walter Cronkite boarded *Coral Sea* to gather information and film material for the television documentary series "The Twentieth Century." The TV newsman and a filming crew were touring Southeast Asia, working on a feature concerning SAR operations.

ORISKANY (CVA-34)

Marine Capt. Morris W. Lutes, VMFA-212, piloted an F-8 *Crusader* that made the 94,000th landing on *Oriskany*, now with the 7th Fleet.

ATLANTIC FLEET

INTREPID (CVS-11)

Intrepid is tackling the retention problem with a vengeance.

In one program started aboard CVS-11, crew members have been invited to put their gripes—and suggested solutions—on paper for review by the C.O. and the Exec. "Suggestion Boxes" have been placed in the crew's lounge and near the career counselor's office so crew members can drop off their signed suggestions.

A report from *Intrepid* says each week's best suggestion will win its owner a "handsome gratuity."

Speaking of gratuities, a three-month pilot program of awarding savings bonds to *Intrepid* sailors "exerting a positive effect" on first-term retentions is underway.

"A \$50 bond will be awarded to personnel in pay grades E-9 and below serving in capacities of career counselor, departmental career counselor, or division career interviewer whose leadership is a contributing factor in retaining well-qualified first-cruise Navy men," the carrier reported.

LAKE CHAMPLAIN (CVS-39)

Naval Academy and university midshipmen—320 of them—board-



1,000 COMBAT HOURS in a month's time is the mark established by these pilots of VA-195 aboard *Bon Hamme Richard*. They flew A-4 Skyhawks against North Vietnam targets.



PILOTED by a VT-5 instructor, a T-28 makes a "touch-and-go" landing aboard *Lexington* during a midshipman flight orientation cruise.



BOUND FOR 16th deployment in 20 years, *USS Franklin D. Roosevelt* leaves Mayport, Fla., for the Mediterranean and Sixth Fleet duty.

ed *Lake Champlain* for their summer indoctrination cruise.

SARATOGA (CVA-60)

After 7½ months in the Caribbean and the Mediterranean, *Saratoga* has returned home to Mayport, Fla.

The CVA left Mayport November 28th. She steamed 45,000 miles, visited eight ports, and logged 12,000 arrested landings before she returned. Pilots of embarked CVW-3 flew 11,000 missions for a combined total of 21,000 hours of flight time. Some 19 million gallons of black oil were consumed; 15 million gallons of fresh water were distilled.

Saratoga crew members played host to more than 22,000 visitors during port calls, were paid about \$9 million, and drank 3½ million cups of coffee. They also ate 223,000 loaves of bread and went on tours to Rome, Paris, Munich, Madrid, and the French and Spanish Alps.

The carrier's Sixth Fleet exercises included operations with NATO countries that ranged from full-scale defensive exercises to cooperative efforts with the Italians, French, Spanish, and Dutch.

ESSEX (CVS-9)

Operations involving *Essex* that were designed to test concepts of a multi-nation force operating over an extended period have been called successful by Admiral Thomas A. Moorer, NATO's Naval Commander and Supreme Allied Commander, Atlantic. The admiral indicated during a news conference in New

York City that more such exercises employing more ships may be held, *Essex* reported.

Some 145 midshipmen from the Naval Academy and from universities throughout the U. S. were aboard *Essex* for indoctrination while the carrier operated with four NATO ships as part of Exercise *Match Maker*. Formed February 19 in Rosyth, Scotland, as a squadron, the ships were identified as America's *USS Hammerberg*, Britain's *HMS Leander*, Canada's *HMCS Columbia*, and the Netherlands' *H.N.L.M.S. Overijssel*.

Among more than 30,000 guests to visit *Essex* during a three-day open house while the CVS visited New York was a man who rated special attention: Richard W. Konter, a member of the crew of the frigate *Essex* in 1897.

FRANKLIN D. ROOSEVELT (CVA-42)

For the 16th time, *FDR* has deployed to the Mediterranean—and the ship says this is a record.

A report from the carrier said the 10 years she has spent on station in the Med is "a record no other ship in the Navy can claim." *FDR*, the report said, "set the Navy-wide mark for the most Mediterranean deployments in 1963 when she completed her 14th such tour."

FDR also claims records as the first carrier to operate jet aircraft (in 1946), for the most arrested landings (over 142,000 at last report), and for winning the Admiral Flatley Aviation Safety Award twice (something the ship says no other carrier has done).

(*FDR's* claim to the most arrested

landings may come under fire—especially from crew members of the Pacific Fleet's *USS Coral Sea*. A news release reported that a VAH-2 A-3B *Skywarrior* made that carrier's 145,000th landing. The A-3B's crew included LCDr. Charles J. Cellar, pilot; Ltjg. David G. Cohick, bombardier/navigator; and William D. Hansard, AQB2.)

ENTERPRISE (CVAN-65)

Captain James L. Holloway III relieved Captain Frederick H. Michaelis as *Enterprise's* Commanding Officer during a change of command ceremony in Norfolk. A Rear Admiral selectee, Captain Michaelis was CVAN-65's skipper when the carrier operated with Task Force One during Operation *Sea Orbit*.

WASP (CVS-18)

This ASW carrier's 60,000th arrested landing was made by Ltjg. R. D. Chapman in a VS-28 S-2H co-piloted by Lt. B. H. Hallowell.

LEXINGTON (CVS-16)

The first carquals of the new A-6A *Intruder* aboard *Lexington* were conducted when five crews from VA-42 were qualified during one of the carrier's "Fleet Weeks." VA-42 is a replacement air wing squadron based at NAS OCEANA.

An A-6A made *Lexington's* 122,000th arrested landing. Its crew included Lt. R. C. Allen, pilot, and Lt. J. T. Been, bombardier/navigator. A little more than a week later, the 123,000th was made by Lt. Jack E. Thetford in a TF-9J.



ARMED WITH practice bombs, a VA-66 Skyhawk roars down catapult track aboard USS America during shakedown training off Cuba.



EMBARKED in USS Okinawa, HMM-265, first operational Marine CH-46A squadron, conducts flight operations on Caribbean deployment.

AMERICA (CVA-66)

Relatives and friends of *America* crew members boarded the carrier for a dependents' day cruise less than a week after the ship returned from a two-month Caribbean cruise.

Some 2,500 guests boarded the Navy's newest CVA at the Norfolk Naval Station for the eight-hour tour. They watched launches, landings, and an aerial firepower demonstration by CVW-6 aircraft.

America's first deployment from home port was spent with the Fleet Training Group for operational readiness training and an ORI. The ship's over-all mark of "Excellent" was called the highest given in three years and the third highest given to a ship in the his-

tory of the Fleet Training Group.

CVA-66 is scheduled to make its first Mediterranean cruise in October. The ship will become a unit of the Sixth Fleet.

Edward H. Alderman, Jr., AB2, may have set a different kind of record when he joined the commissioning crew of *America*. It was his fourth such venture.

Alderman has been a "plank owner" of the carriers *Lexington*, *Franklin D. Roosevelt*, and *Independence*—and, if he has anything to say about it, the end is not yet in sight. The 19-year Navy veteran has his name in for the commissioning crew of the carrier *John F. Kennedy*, now under construction.

Explaining his penchant for volunteering for such duty, Alderman

says he likes to make sure personally that ships he serves on are built properly. "When you know from experience that something is wrong, you tell them and they change it," he says. "That way you get the kind of ship you want." There was no report of how far his tongue was in cheek when he made the statement.

Someone has volunteered the opinion, however, that there may be an ulterior motive involved. The logic goes that, since "plank owners" were originally entitled to one plank from their ships when they were scrapped, Alderman has something like 110 tons of steel "plank" coming.

That's more than enough to build a good-sized ship of his own.



BACK IN MAYPORT after 7½ months, CVA-60 crew stands captain's inspection.



WHILE GUESTS from the Guantanamo Bay Naval Station look on, F-4B Phantoms and A-4C Skyhawks fly over USS America. The new CVA is back from its first Caribbean cruise.



HELICOPTER PLACES RADOME ON MT. FUJI WEATHER RADAR SITE



POWERFUL 1500 KW RADAR IS PART OF JAPAN'S WEATHER SYSTEM

JAPANESE WEATHER NETWORK OPENS NEW UNIT

THE U. S. NAVY'S Seventh Fleet, the Fleet Weather Facility at Yokosuka and NAS ATSUGI now have additional meteorological support which comes from the Japanese Meteorological Agency (JMA)—a weather radar station atop famed Fujiyama. It was commissioned March 10, 1965.

The highest weather radar site in the world (12,397 feet), the Mount Fuji station took two years to build. The 500-mile-range radar station is operated by remote control from the JMA headquarters in downtown Tokyo. Weather observations obtained at the station are placed on the Japanese Weather Communications teletype network and made available to the Seventh Fleet, Fleet Weather Facility, Yokosuka; and NAS ATSUGI.

The Meteorological service in Japan dates from the establishment of the Tokyo Meteorological Observatory in 1875. This institution began issuing

By Lt. Neil F. O'Connor, USN

daily weather forecasts and typhoon warnings in 1884. Improved communications accelerated the development of Japan's weather service, and by 1909 the Tokyo Observatory was making routine collection of weather reports from ships at sea.

The earthquake in September 1923, which devastated Tokyo and the port of Yokohama, spared the Observatory. What the earthquake did not do, lightning did when the observatory was struck in 1940 and started the fire that destroyed it.

Since the end of WW II, when the Tokyo Meteorological Observatory became the Japanese Meteorological Agency, progress has been marked by various events: the establishment of a computer center for numerical weather analysis and prediction; radio transmission of weather maps; and partici-

pation in the International Geophysical Year.

The Agency employs 9,000 people, operates 45 observatories, 97 weather stations and seven aviation weather stations.

One of JMA's services, especially valuable in the light of Japan's precarious geological position, is the seismological network composed of 110 observation sites. These stations measure earth tremors and report them to JMA headquarters in Tokyo where the data is analyzed.

The Japanese Meteorological Agency accepts increasing responsibilities and obligations to the scientific community through the World Meteorological Organization. Four years ago, JMA established a center for the exchange of northern hemisphere data. At the present time, JMA is conducting high altitude observations as part of the International Quiet Sun Year program.

JET STREAM WX

JET STREAMS PASS OVER DESERT REGIONS OF THE NO HEMISPHERE WHERE SKIES ARE CLOUD FREE.



THEY ALSO LIE ABOVE INTENSE CYCLONES WHICH HAVE EXTENSIVE CLOUD COVER AND PRECIPITATION.



IN THE WINTER, OFTEN, LOW PRESSURE SYSTEMS AND AREAS OF WIDE-SPREAD PRECIP TEND TO BE ASSOCIATED WITH THE JET STREAM. HOWEVER, THE EXISTENCE OF A JET IN AN AREA DOES NOT OF ITSELF IMPLY BAD WEATHER.



CLIMATOLOGICAL STUDIES INDICATE THAT USUALLY THE HIGHEST INCIDENCE OF PRECIPITATION ALMOST STRADDLES THE JET AXIS. THERE APPEARS TO BE A SLIGHT BIAS FOR THE PRECIP TO OCCUR ON THE POLEWARD SIDE.



USING B47'S, A USAF RESEARCH PROJECT FOUND THAT ALMOST NO CLOUDS WERE ENCOUNTERED ABOVE THE LEVEL OF STRONGEST WINDS.

IN GENERAL, THE MAJORITY OF FLIGHTS THROUGH THE JET STREAM WILL NOT BE THROUGH CLOUDS.



'STORMFURY' PROJECTS UNDER WAY

PROJECT STORMFURY, the joint U. S. Navy-U. S. Department of Commerce (Weather Bureau) experimental program in hurricane modification, has entered its fourth hurricane season. In 1964, no hurricane seeding operations were conducted; instead, the year was devoted to data analysis. The inter-departmental agreement originally signed in July 1962 has been extended in order to include the 1965 hurricane season.

Three different experiments are being carried out this year:

Experiment No. 1—Cumulus Seeding. During a two-week period beginning July 28, a repeat of the 1963 cumulus experiment was conducted in the Atlantic Fleet Weapons Range, Bravo area. It is planned to determine the causal relationship between silver iodide seeding and the subsequent growth of tropical cumulus clouds.

Experiment No. 2—Eyewall Seed-

ing. Seeding and monitoring of the changes in the structure and circulation of a well developed hurricane are to be determined if nature provides the proper storm at the right time and place.

Experiment No. 3—Rainband Seeding. U. S. Naval Weather Research Facility, Norfolk, suggested the experiment. Its object is to determine if the basic character of the rainband can be changed by seeding, study the role the rainband plays in the total storm structure and investigate how its modification might affect the storm.

Participating again this year is the Navy's Hurricane Hunter Squadron, Airborne Early Warning Squadron Four with its WC-121N *Super Constellations*. The squadron is based at NAS JACKSONVILLE. Another Jacksonville-based squadron, Heavy Photo Reconnaissance Squadron 62, whose pilots fly the RA-3B's, is dropping the silver iodide canisters for most experiments. The squadron will also assist in the evaluation of the operations by photo reconnaissance.

Also involved in the seeding and monitoring is one A-3B from NOTS CHINA LAKE. The Weather Bureau's Research Flight Facility, flying two C-118's, one C-54 and one WB-57, all based at Miami, are also playing a part in monitoring the operations by recording numerous meteorological observations from 1,500 feet to 35,000 feet. The Air Force will participate by providing high-level aircraft for additional wind (out-flow) observations and high level photography.

Dr. Robert M. White, Administrator of the Environmental Science Services Administration, and Captain E. T. Harding, USN, Director of the U.S. Naval Weather Service, have over-all responsibility for the joint *Stormfury* project.

HT-8 Claims Helo Record 60,000 Safe Hours Flown in H-34

Helicopter Training Squadron Eight, Ellyson Field, Pensacola, has claimed a new record with the H-34 helicopter. According to its figures, the 60,000th accident-free hour was logged during a training flight on June 18 with 1st Lt. K. H. Mackie, 2nd Lt. R. W. Rensch, and W. L. Stimmel, PR-1, aboard.

Editor's Corner

YORKTOWN'S BEST. The USS *Yorktown* and the Beverly Hills, Calif., Navy League Council have a joint program recognizing the Man of the Month aboard the Pacific Fleet ASW carrier. Last December, while the *Fighting Lady* was in the Western Pacific, Seaman Marvin Best was chosen as the outstanding sailor on board. This summer, following the carrier's return to home port, Best collected his reward. For daytime diversion, Best elected to go to Hollywood Park for the races and also engage in some deep sea fishing. For evening, he chose to make the rounds of several night spots, using a chauffeur and limousine placed at his disposal. Other winners of the monthly contest were waiting in line for their turns.

Control Those Garage Doors! The Federal Aviation Agency has issued a warning to homeowners that certain electronic garage door devices are hazardous to air navigation. In one Los Angeles area, FAA reports, 58 garage openers were tracked down in one week and taken "off the air" for interfering with communications signals. Principal offenders among the door openers are those in the Ultra High Frequency (UHF) band, 230 to 290 megacycles. Because some of the door signals carry up to 16 miles, it is possible for airliners (or

other aircraft) to home in on a garage signal with great accuracy "but with conceivably disastrous results," according to FAA.

FLYING FELINE. When the Memphis Navy transport aircraft was ready for departure from Dallas Municipal Airport, a Navy crewman, John Moore, discovered a stowaway, a smallish kitten. He escorted the interloper outside and settled down for the trip home. At Memphis, the kitten emerged again, having hitched a ride in the tail wheel compartment without permission. Moore adopted the animal as a playmate for his daughter.

Which is Longer? Carrying on the perennial argument between the *Constellation* and the *Kitty Hawk* as to which is longer, it was decided to put the question to seven members of the Bremerton (Washington) Chamber of Commerce. As sister ships built from the same blueprints, official figures show the *Constellation* to be 1,072 feet long and the *Kitty Hawk*, 1,069.

Wearing warbonnets in their roles as "chiefs" of the Kitsap (county) Tribal Council, each man used his own measuring device: a transit, a fish line, metal tape rule, garden hose, clicking

wheel, and a ruler made of 10 one-dollar bills pasted end to end. The results were inconclusive. Each man came up with a different figure. The most provocative measurement came from the City Finance Commissioner, who used the \$10 measuring tape. He found it would take \$2,078.92 to measure the length of *Kitty Hawk*, but \$14.90 more to measure the length of the *Constellation's* flight deck.

UNIVERSITY OF THE ANTARCTIC. Men at the Antarctic have opened a new course of instruction, a five-week course in basic arc and gas welding. Other courses are language courses, including a Russian class taught by a Russian scientist. Another popular course is concerned with financial management on the family and individual level.

Those Friendly Virginia Cows. When an HC-4 helicopter had to make an unscheduled precautionary stop in a soybean field in Virginia recently, plane crewman James Searfoss was assigned to guard duty until a Patuxent River crew could arrive to flatbed the aircraft homeward. Local area farmers, who at first thought the helicopter was the Gemini spacecraft making a short landing, treated the crewman to food and coffee, including a breakfast of fried fish and scrambled eggs. HC-4's Space Scooter reported: "The cows kept him company and the farmer's food from their generous homes was well received. His girl friend never believed the story."



TWISTED TAIL. During LTV plant rework, Navy F-8's tail was installed on a Marine aircraft, resulting in very strange markings.



FLIGHT DECK SUPERMAN? Midway's Karl Hedberg caught a crewman in seeming "romp with a pull toy," but A-4 supplies power.

LETTERS

Records Fall

Sirs: As usual, it proves to be a mistake to claim a record in Naval Aviation. An item in the July 1965 issue is a case in point. "VA-94 personnel think their C.O. has a record to claim"—two consecutive thousandth landings—which the squadron says has never been done before.

This claim caused me to break out my 1953 cruise book for the *Lake Champlain* Korean cruise, in which I found a picture of Ltjg. T. A. Francis, VF-22, receiving a cake and being congratulated by me. The caption of the photo stated, "Francis stumped Ripley with 3,000, 4,000 and 5,000th landing." Note: no record was claimed.

JOHN J. LYNCH
Rear Admiral, USN

Vietnam Appreciation

Sirs: Here is a picture showing the wings and medal which were presented to the A-1H pilots of VA-25 by General Ky (now Premier) for shooting down the MiG in the flight which had two MiG's against four "Spads."

Those honored were LCdr. E. A. Greathouse, Ltjg. J. S. Lynne, Lt. C. B. Johnson, and Ltjg. C. W. Hartman. The latter were the ones credited with the actual downing of the MiG. They were made South Vietnamese Air Force pilots numbers 459 through 462, and given wings and certificates.

KEITH D. BOYER, LCDR.

Attack Carrier Air Wing Two
San Francisco 96601



VIETNAM HONORS FOR NAVY PILOTS

CHU LAI CREDITS

The following Navy and Marine personnel contributed to NANews' coverage of the construction of the expeditionary airfield at Chu Lai, Vietnam. Their efforts are gratefully acknowledged:

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F-4 Color Information Sought

Sirs: I have in preparation an article for the American Aviation Historical Society Journal on the markings and color schemes of Navy and Marine squadrons as applied to the F-4 Phantom aircraft.

I am in need of photos of F-4 aircraft showing their squadron markings and color schemes as follows:

Information and photos needed for article on markings and color schemes of all Navy and Marine squadrons equipped with the F-4 Phantom II.

I am particularly interested in tail markings and squadron color design used on the F-4. I would appreciate hearing from all squadrons now flying the F-4.

I especially need photos and information from VF-31, VF-33, VF-84, VF-103, VMFA-115, VMFA-323.

GEORGE J. LETZTER

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Carl Norden Dead at 85 Designed Navy Mk. XI Bombsight

Carl Lucas Norden, founder of the famous bombsight company which eventually became the Norden Division of United Aircraft Corporation, died this summer in his home in Zurich, Switzerland. He was 85 years old.

He devoted 30 years of his life to designing devices for the U. S. Navy. His best-known system, the Norden bombsight, automatically pinpointed a ground target from a bombing plane. The system was built into WW II B-17's and other American bombers.

The bombsight, used during the massive bombing raids on Germany and later in the atomic attacks on

Japan during WW II, was one of this country's most secret war weapons.

Mr. Norden came to this country in 1904 as a Dutch immigrant. He had received a degree in mechanical engineering from Federal Polytechnical School in Zurich.

After working with Brooklyn manufacturers, he set up his own establishment as a consulting engineer in 1915. He designed a radio-controlled target airplane, arresting gear for aircraft carriers and the first hydraulically controlled aircraft landing gear.

The Navy's Bureau of Ordnance assigned Mr. Norden in 1921 to study precision bombing problems and, in 1927 with his partner, he turned out their first bombsight. He then organized Carl L. Norden, Inc., which developed the Navy Mark XI bombsight which remained essentially unchanged during WW II. At the peak of its operation during the war, the Norden Company employed 18,000 people.

Hydrofoil Ship is Launched Will Evaluate Tactical Capability

The hydrofoil research ship, *Plainview*, AG(EH-1), was launched at the Lockheed Shipbuilding and Construction Company, Seattle, on the 28th of June.

The principal speaker was Vice Admiral John T. Hayward, USN, Commander of the Antisubmarine Warfare Force, Pacific Fleet. Mrs. Hayward sponsored the ship.

The research ship is named for the cities of Plainview in Texas and New York. It has an over-all hull length of 212 feet and is 40 feet, five inches wide. She has a displacement of 310 tons. For foilborne operations, she is powered by two 14,000-hp turbines. For conventional operation, she is powered by two 500-hp diesel engines.

Authorized in FY 1962 Shipbuilding Program, *Plainview* has been designed to evaluate the principles of hydrofoils and to demonstrate and evaluate tactical capability, particularly in antisubmarine warfare. The ship is an experimental, ocean-going hydrofoil capable of maintaining high speed while foilborne in sea conditions which would reduce the speed of conventional ships.



SILHOUETTED BY MIST AND HANGAR LIGHTS, VP-21'S NEPTUNES STAND A LONELY VIGIL ON CHRISTMAS EVE



SQUADRON INSIGNIA

Patrol Squadron Twenty-One, a unit of Fleet Air Wing Three, is home-based at NAS Brunswick, Maine. It is assigned as an all-weather Maritime Patrol Squadron. The "Blackjacks" are currently flying the SP-2H Neptune and have accumulated a safety record that stretches for seven years and covers a total of 74,000 flight hours. Known as the 'Ready Squadron,' VP-21 is commanded by Cdr. Wm. W. McCue.



MAINTAINING CONSTANT WATCH ON ATLANTIC WATERS, BLACKJACKS PATROL FROM ICELAND TO AZORES



SNAPSHOT OF THE FRONT LINE



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