NAVAL AVIATION NEWS

NOVEMBER 1971

WITH STARS IN THEIR EYES

For 25 years, the members of the Navy's Blue Angels Flight Demonstration Team have consistently dramatized Naval Aviation, attracting today's youth to its challenge, adventure and freedom. Always in the public eye, they truly represent the many other intelligent, skilled and dedicated young men who are Naval Aviation.

NAVAL AVIATION NEWS

FIFTY-SECOND YEAR OF PUBLICATION

FEATURES

The Manager 8

He flies a desk so that you can fly the gear. Called a project manager at NavAirSysCom, the buck stops at his desk.

Best Possible Location 28

The Navy's modern jet air station, NAS Lemoore, home of the Pacific Fleet light attack community, is long on service.

CAMSI 35

Aircraft maintenance problems aboard a carrier are plentiful, long standing and diverse. A new project may provide some solutions.

THE STAFF

COVERS

The painting of the S-3 on the cover is the work of Ryan Aeronautical's Bob Watts. The back cover was taken aboard USS Kennedy. Lt. Ernest Christensen, Jr., did the self portrait, above. His visor reflects the fuselage of two F-4J's and the tail section of another. The camera was between his knees as he flew the slot position during a Blue Angels' demonstration.

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EDITOR'S CORNER

PLAN AHEAD has been the watchword for the naval strategist for centuries. Following that advice, your NANews staff has been gathering material for use in the March 1972 issue which will commemorate the fiftieth anniversary of the introduction of the aircraft carrier into the U.S. Navy. In order to provide appropriate observance of this milestone in naval development, it is hoped that due recognition may be given to present-day carrier operations, in addition to discussing the historical aspects of taking air power to sea.

Therefore, our readers, whether C.O., PAO, or airman, are invited to contribute feature articles and photographs concerning Naval Aviation today. We particularly desire dramatic photos of flight deck activities in addition to current views of aircraft carriers and their embarked squadrons. While we have contributors throughout the fleet — you are they. And your deadline is January 1. As Gramps would comment, "Nuf said."

One of those contributors recently sent us an item which we would not normally feel justified publication; however, we think you may enjoy knowing that a branch of the Officers Club at Naval Air Facility, Naha, has been opened recently, designed for the use of young officers at that base. The branch club, which features entertainment and an atmosphere for junior officers, has been designated the Romper Room.

Another of our contributors, Rear Admiral Jackson Tate, who has provided NANews with several historical articles in the past, recently wrote to add a few antecdotes to the zeppelin feature we ran in September. As he tells it: "When ZR-1 was delivered from Germany, the Navy announced with much fanfare that she would be named as a cruiser after some large city. After some weeks of cliff-hanging, it finally came down to a decision between Los Angeles and San Francisco. Both cities used all sorts of reasons to be selected and considerable political pressure was involved. When the Navy finally announced that Los Angeles had the honor, the San Francisco Chronicle came out with an editorial saying they thought it very appropriate that the Navy had named the biggest gas bag in the world Los Angeles."

Adm. Tate went on to relate that when NAS Moffett Field was first commissioned, it was named, as was customary, after a nearby town —in this case, Mountain View. This apparently caused some inquiries from the press concerning possible hazards to flight. Shortly thereafter, it was decided to rename the field after another nearby town, a little further down the road— Sunnyvale.

It seems that in the August issue, while mentioning the various ways in which Navy men express pride in their organization, we overlooked VT-29's contribution to this aspect of naval life. In the accompanying photograph, Commander J. W. Flight, displaying a recently won E, also displays his trusty mode of transportation, complete with tailhook and decorated in squadron colors and insignia.

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1911 1971

Three Pacific Squadrons Win Trophies

SAN DIEGO, Calif. — Three Pacific Fleet squadrons have been selected as the outstanding squadrons of FY 71 and named winners of aviation trophies by Admiral Elmo R. Zumwalt, Jr., Chief of Naval Operations.

NAS Miramar-based VF-96 was awarded the Admiral Joseph Clifton Trophy, named in memory of the Navy fighter pilot who distinguished himself in WW II. VF-96's crews had the highest operational readiness percentage of any Navy or Marine fighter or attack squadron. During FY 71, squadron personnel flew nearly 5,000 hours, 2,624 in the combat zone from the deck of USS *America*. Although hampered by severe weather conditions, including three typhoons, the squadron's pilots successfully completed over 98 percent of their carrier landings on the first pass.

The Admiral Jimmy Thach Trophy, named in honor of the WW II fighter tactician and postwar ASW group and force commander who developed many of the tactics used today by antisubmarine squadrons, went to HS-2, NAS Imperial Beach. HS-2, deployed aboard the Atlantic Fleet carrier USS *Independence*, a first for a Pacific Fleet helicopter squadron, flew more than 3,000 accident-free hours and was awarded the Meritorious Unit Commendation for operations with the Sixth Fleet from mid-September to mid-October 1970 during the Jordanian crisis.

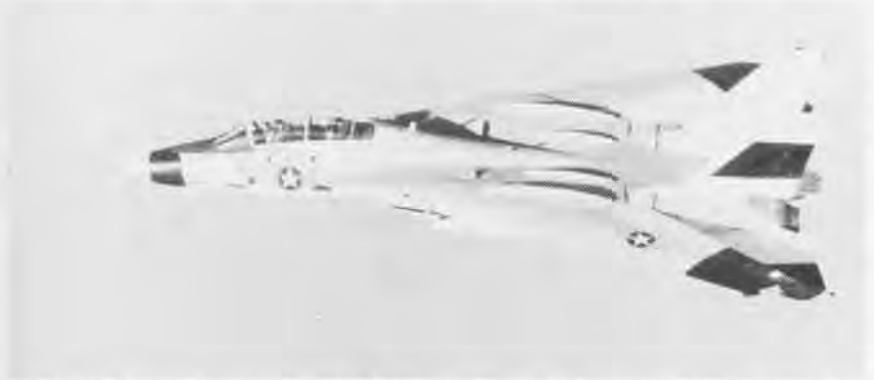
VA-113, NAS Lemoore, winner of the Admiral C. Wade McClusky Award, is the best attack squadron.

VMFA-212 Rated Tops for 1970

WASHINGTON, D.C. — Hawaii-based Marine Fighter Attack Squadron 212 has been named the Most Outstanding Marine Fighter Squadron of 1970 and winner of the Robert M. Hanson Award. The award is named in honor of the Marine captain Medal of Honor recipient and fighter ace who was killed in WW II after shooting down 25 enemy planes.

VMFA-212 was cited for furthering fighter tactics in the Marine Corps and providing crews highly trained in all aspects of air-to-air combat, for combat squadrons in the Republic of Vietnam.

Commanding officers of the F-4J *Phantom II* squadron during the award period were Lieutenant Colonels Harry H. Ziegler, Jr., and Jacob W. Moore. The present C.O. is Lieutenant Colonel Richard D. Revie.



The F-14 Tomcat, Navy's newest fighter, fully "tucked" its wings for the first time in a test flight at Grumman on September 2. Its ability to sweep its wings extends its range and permits it to operate at peak efficiency at all altitudes and at all speeds.

Pacific E's are Awarded

SAN DIEGO, Calif. — The Commander Naval Air Force, Pacific Fleet, has announced the Pacific Fleet squadrons and carriers which won Battle E's.

Judged best in the attack carrier competition was USS *Oriskany* (CVA-34), capturing the communications and weapons departmental competition. Other ship departmental awards went to USS *Hancock* (CVA-19) for engineering and USS *Ranger* (CVA-61) for air and operations.

Squadron winners are:

VA's 165, NAS Whidbey Island, and 55, 93, and 195, NAS Lemoore;

VF's 114 and 191, NAS Miramar;

VAQ-134, NAS Alameda;

VAW-113, NAS North Island;

HS's 2 and 3, NAS Imperial Beach, and 29, NAS North Island; and

VP-48, NAS Moffett Field.

The win for VA-165 was its second; it was also a winner in 1970.

FY-1971 Safety Awardees Named

WASHINGTON, D.C.—In September, Admiral Elmo R. Zumwalt, Jr., announced the winners of the fiscal year 1971 CNO Aviation Safety Awards, a year in which Naval Aviators set an all-time Navy flying safety record averaging 1.12 accidents per 10,000 flight hours to achieve the lowest accident rate in the history of Naval Aviation.

The winning squadrons are:

NavAirLant: VF-33, VA-81, VA-34, RVAH-3, VP-30, VS-30, VAW-126, HC-6, VRF-31, VC-10;

NavAirPac: VF-213, VF-126, VA-113, VA-115, VR-30, HC-3, VP 22, VC-7;

FMFLant: VMA(AW)-224, HMM-162, VMO-1, HMHT-401;

FMFPac: HMMT-302, HMM-163, VMFA-212, VMGR-152, VMA(AW)-225;

CNATra: VT's 3, 4, 21, 28;

ComNavAirResFor: VF-201, VP-91, HS-74, VR-51, VS-83; and

4th MAW/MARTC: VMAS-543, HMM-764.

Repeat winners are RVAH-3, HMMT-302, VT-28, HS-74 and HMM-764, all having won in FY 70.

In addition, Naval Air Force, Atlantic won the Readiness Through Safety Award, topping its own all-time record by achieving a 0.98 accident rate, a reduction of 42.7 percent over FY 1970.

Fighter Aces Meet

SAN DIEGO, Calif. — The American Fighter Aces Association held its tenth annual convention at NAS Miramar August 12-15, electing new officers and honoring outstanding aviators from the Navy, Marine Corps and Air Force.

Membership in the association is limited to aviators credited with the destruction of five or more airc aft in aerial combat while serving as ighter pilots in WW I, WW II, the Korean War and/or the Vietnam War.

Special guests included three officers who were presented honoree awards in recognition of their outstanding contributions to fighter aviation.

Vice Admiral Thomas J. Walker, Commander, Naval Air Force, Pacific Fleet, was honored for his actions while serving as Commander, Naval Air Systems Command.

Lieutenant Colonel J. M. Moore, USMC, C.O. of VMA-212, was recognized for his outstanding combat record and the leadership he has displayed as a commanding officer.

Capt. W. S. Gordon, USAF, was cited for his contribution to the development of new weapons and tactics.

Twenty Japanese Fighter Aces led by Mr. Hiroji Yoshihara, Secretary General, Zero Fighter Pilots Association, and Mr. Saburo Sakai attended the convention of their American counterparts.

Major von Eichel-Streiber Dieter, former Luftwaffe fighter ace, represented the German Fighter Pilots Association.

Captain Armistead B. Smith, Jr., 11-plane ace of WW II and Commander, Fleet Air Miramar, is the newly elected president. Other officers include James Howard, former Air Force pilot and Medal of Honor recipient; Commander E. A. Valencia, USN (Ret.); Colonel R. L. Garlich, USAF (Ret.); and K. H. Dahlberg, former Air Force pilot.

Latest in Sea King Series is Announced

STRATFORD, Conn. — The SH-3H, a multi-purpose aircraft, is Sikorsky's latest design in the two-turbine S-61 series. Present plans call for modification of SH-3A's and 3G's to the 3H configuration. The initial contract calls for conversion of 11 aircraft.

To NAF Cam Ranh Bay in early June came 16 white, ghost-like machines — OV-10 Broncos purchased by the Royal Thailand Air Force. They had been coated with a preservative at NAS Los Alamitos, Calif., loaded aboard USS Okinawa for a deckside ride across the Pacific, and then off-loaded for the tow up the peninsula to the NAF. In 18 days they were out of their cocoons and on their way to Kokekathiem Royal Thailand Air Force Base.

Modifications will include anti-ship-missile defense, additional ASW equipment, GE T-58-10 turbine engines and use of the SH-3G design for quick conversion from attack to utility helicopters.

The SH-3H represents a significant improvement in ASW potential with new lightweight sonar and three additional ASW sensors (sonar buoys), both active and passive; magnetic anomaly detection equipment; and radar. Radar and electronic surveillance measurement equipment will make the SH-3H an important addition to the missile defense of the fleet. Flight tests are scheduled for 1971.

The SH-3H with its additional sensors was conceived last fall when Admiral Elmo R. Zumwalt, Jr., Chief of Naval Operations, asked for an increase in fleet helicopter capability to meet "the increased threat of enemy submarines and low-flying enemy missiles." The Navy plans to organize a new helicopter squadron, HS-15, to fly the first SH-3H's. The anti-missile role is a new one for the helicopter.

Long Haul for Hawkeye E-2B

NORFOLK, Va.—In August, an aircrew from Carrier Airborne Early Warning Wing 12 flew an E-2B *Hawkeye* from Norfolk to VAW-124 aboard *America* in the Mediterranean. The 4,075-mile flight involved four stopovers: St. John's, Newfoundland; Lajes, Azores; Rota, Spain; and Naples, Italy. It was the first time that a fleet *Hawkeye* had ever been flown transatlantic for delivery to an operational attack carrier.

The journey really began at NAS North Island, where the *Hawkeye* had been converted from an E-2A to an E-2B by installing more advanced electronic equipment, including a new general purpose computer. When its modification was completed at the naval air rework facility, the E-2B was flown to Norfolk.

Commander Floyd Friesen, skipper of Carrier Airborne Early Warning Squadron 126, piloted the *Hawkeye*. He was accompanied by Lt. Bill Broadhurst, AT1 Charles Glass, AE2 Darrell McCray, all of VAW-126, and LCdr. Bob Duvall, CAEWW 12.

Departing Norfolk on the morning of August 13, the *Hawkeye* arrived at St. John's, a distance of 1,280 miles, five hours later. Other legs of the journey were: St. John's to Lajes, 1,240 miles, 4.7 hours; Lajes to Rota, 980 miles, 3.7 hours; Rota to Naples, 1,050 miles, 3.8 hours; Naples to USS *America*, 525 miles, 2.3 hours.

Nimitz Center Needs Help

FREDERICKSBURG, Texas — The Admiral Nimitz Center, responsible for establishing a museum in the old Steamboat Hotel which was built by the admiral's grandfather about 1850, needs help in finding a number of objects from periods in Adm. Nimitz's career — especially from the Pacific Theater during WW II.

Items needed include tanks (Stewart, Sherman, Allied, Japanese), landing craft (U.S., Allied, Japanese), planes (*Catalina, Dauntless, Avenger*, other U.S., Allied, Japanese), almost any part from submarines (except a fairwater), PT boats, small boats (gig, barge, etc.), artillery and/or guns (except 3"/50, 5"/38, 155 Long Tom, 75mm howitzer), unusual items such as coastwatcher gear, survival equipment, and items related to specific battles or incidents.

Contact Douglass Hubbard, Executive Director, The Admiral Nimitz Center, P.O. Box 777, Fredericksburg, Texas, 78624. The center will assume responsibility for moving any items selected and will give appropriate credit to donors.

Early A-7E Corsair II is Redesignated

DALLAS, Texas — The first 67 A-7E *Corsair II's* built for the Navy in 1967-68 have been redesignated A-7C's.

The designation change was made to identify the first E models which were powered by Pratt & Whitney TF-30 turbofan engines. Subsequent Navy A-7E's and Air Force A-7D's were powered with the Allison/Rolls-Royce TF-41. The redesignation was made to eliminate confusion.

Thus far, LTV has manufactured more than 900 *Corsair II's*, with contracts calling for a total of 1,180.

The designation A-7G has been assigned to a version being evaluated by the Swiss armed forces.

Navy Money Saved

MEMPHIS, Tenn. — Two first class petty officers collaborated to build 25 module test sets for the Advanced First Term Avionics (AFTA) Course, saving the Navy over $173,000 and earning them a near record beneficial suggestion award.

Captain Edmund W. O'Callaghan, NATTC Memphis commanding officer, presented checks totaling $1,275 to AQ1 Frank A. Ribaudo and AT1 Alton T. Kilburn.

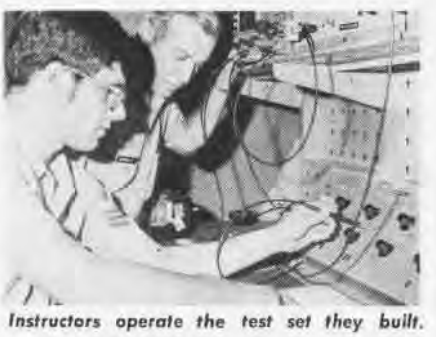
Ribaudo, advanced first term avionics instructor, and Kilburn, instructor at the Avionics Intermediate B School, initiated their suggestion when they realized AFTA students were going to the fleet with no knowledge of miniature component repair methods.

(The AFTA course was established to provide further training to the first-term men who are willing to obligate for an additional two years' service.)

To establish a 25-position lab where students could troubleshoot modules required either the purchase of 25 fire control radar training devices for "hot bench" situations or the use of modular test sets which could simulate power and signal requirements, providing a means of troubleshooting the module outside the system. The latter method was chosen because it would require less equipment, would be safer, less expensive and more closely related to present fleet methods of module troubleshooting.

The sets were not available through the supply system and it was determined that made-to-order sets would cost $7,000 each and require from 12 to 18 months to complete.

Ribaudo and Kilburn built the prototype in 10 hours at an estimated cost of $39.60. The remaining 24 sets were constructed by two PO3's at a cost of $25.70 in man-hours. Each unit, including parts, cost $57.76.



Instructors operate the test set they built.

GRAMPAW PETTIBONE

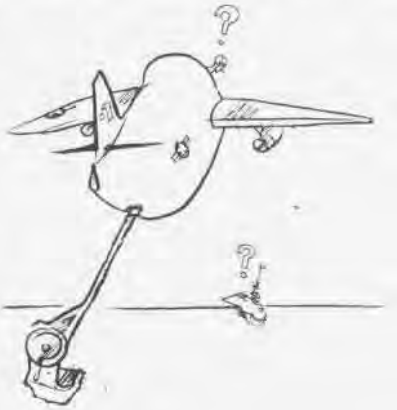
All Star Cast?

A commander with a large amount of experience in the A-3 *Skywarrior* was assigned a routine carrier tanker mission. Two NFO's were his crew, a lieutenant commander and a lieutenant; both with substantial experience in A-3's. As time to man the aircraft approached, the SDO suggested that they man their EKA-3B — even though maintenance was finishing up a previous discrepancy on the auxiliary tank dump mast. The commander concurred. A normal preflight was conducted except for the empennage which was situated over the water and couldn't be checked. Starting engines was normal and the aircraft taxied onto the starboard bow catapult. Since the crew did not have an opportunity to preflight the dash pot pressure, the plane captain visually sighted the gauge while the aircraft was taxiing up to the catapult and found it to be in the normal range. The aircraft was launched and proceeded overhead the carrier for tanker package checkout and fuel consolidation with the off-going EKA-3B tanker.

Checkout of the aircraft tanker package failed to produce fuel transfer, so the pilot retracted the fueling hose and selected wing and auxiliary tank dump, momentarily, in an attempt to reset any microswitches that might be causing a holding relay. Both functioned properly and, upon deselection, the dumping ceased. A second attempt was made to check out the tanker package but the system was still unable to transfer fuel to a receiver. After he informed tanker control of a "sour package," the pilot was instructed to climb to 20,000 feet. Reaching altitude, the commander conducted air target radar exercises for the remainder of the flight.

As the time for the next EKA-3B launch neared, the pilot terminated the exercises, switched to departure control and rendezvoused with the oncoming tanker to check out its package, which was also inoperative. Departure control was notified immediately and our aircraft was shifted to approach control. The oncoming tanker climbed to a higher altitude. Once on approach control frequency, our A-3 was given a revised ETA of 2151 and requested to manage its fuel so as to arrive at the ramp with maximum trap weight. Fuel was computed by the crewmen and they determined that 2,000 pounds of the remaining fuel would have to be dumped in order to arrive at the ramp with required fuel and maximum trap weight.

The approach from overhead the carrier commenced on time. Dumping from the auxiliary tank followed shortly. The NFO dumped the required fuel and then secured the dump switch. However, the fuel quantity gauge revealed that the auxiliary tank dump hadn't secured. Several attempts were made, by cycling the dump switch, to halt the dumping, but the effort proved futile. Approach control was advised and a fuel state of 5,200 pounds was reported at 13 nm inbound.



The pilot was switched to the final controller and an approach was flown to mirror acquisition at ¾ nm. At ball call, 4,800 pounds of fuel were reported. Shortly thereafter, a waveoff for a fouled deck was given by the LSO because a cross deck pendant was not fully retracted.

After initiating the waveoff, the pilot advised CCA of his fuel state, 4,200 pounds, and requested that he be turned downwind for his next pass. However, the CATTC officer, after consulting with the squadron's representatives, decided that the best course of action was to bingo the aircraft as there was no fuel available for tanking in the event the A-3 could not get aboard. The bingo, along with the bearing and distance to the nearest divert field, was transmitted. The pilot repudiated the bingo and asked for confirmation of his bingo fuel which was confirmed as 4,600 pounds. The pilot recommended that he be brought aboard since his fuel state was below the published bingo. Again the signal to bingo was passed but was later rescinded by the CATTC officer.

The aircraft was then vectored around for another approach but that one resulted in a hook skip bolter. Thereafter, the pilot elected a VFR pattern as fuel was becoming critical. The aircraft boltered on the following five passes and the decision was made to rig the barricade before the aircraft ran out of fuel and the crew had to bail out.

As the barricade was being rigged, the pilot retracted his gear to conserve fuel. Approximately six miles downwind with a fuel state of 2,100 pounds, the pilot turned in for the final approach. At six miles, on final, he reported he was holding his gear

ILLUSTRATED BY Osborn

and would put the wheels down at five miles. This was the first indication that either of the other two crew members had that the wheels had been retracted. The right seat NFO had completed the landing checklist after the last bolter; however, when the pilot told him the wheels were up, he made a mental note to recheck the gear down, later in the approach. (This was the last time any crew member thought about the gear position.)

As the aircraft reached five and one-half miles, the pilot concentrated on the approach. At five miles, the crew was informed that the barricade was ready, and they began final preparations for landing. At one-half mile, the LSO took over for the final phase of the landing, and the A-3 completed a wheels-up barricade arrestment. The craft suffered substantial damage; the crew was uninjured.

Grampaw Pettibone says:

Dad blasted! This is unbelievable! After this fellow dug himself a hole, the only assistance he received was other people digging the hole deeper. Amongst other things, no one, particularly the LSO, suspected a "hook problem." Appears to me that when a fellow makes a number of O.K. passes with continuous hook skips that it's time to become a "suspicious cuss"! And no one bothered to inform the CATTC officer that an additional tanker was ready to launch. Would you believe that there were seven other people on the LSO platform during that approach—and none noticed the lack of approach lights. This does not include the three people in the cockpit of the aircraft! With the number of people involved, there is not one solitary excuse that can be offered for this fiasco. If I were the coach of this team I would have a lot of substitutes in the next game. Yes, sir, looks like "while puttin' out the fire in the barn, the house burnt down." Nuff said.

Meanwhile, Back in the Passenger Compartment

After a three and one-half hour flight from another inland airfield, a C-118B *Liftmaster* made an uneventful night landing at NAS Midwest. The pilot in command had considerable experience, with over 2,000 hours in type. During landing rollout, a stack fire developed in number 4 engine and, as the aircraft cleared the duty, the rpm decayed and number 4 quit. The pilot brought the transport to a stop while the flight mechanic cranked number 4 in an attempt to blow out the fire. Meanwhile, the passengers became somewhat alarmed by the flaming engine. The flight attendant, an airman with limited experience, for lack of other instruction, tried to prepare the cabin for emergency ground evacuation. He attempted to rig the escape chute but encountered difficulty opening the cabin door against the propeller blast from engines 1 and 2. A Marine sergeant passenger attempted to help him open the door.

The pilot, at the same time, secured engines 1 and 2, and the prop blast force on the cabin door stopped. The attendant lost his balance and fell out of the aircraft, head first. The sergeant fell out of the aircraft, too; however, he put his arms around the escape chute and slid down, burning his hands and arms. The young flight attendant was not so fortunate. He sustained major injuries to his right arm and both wrists as he attempted to break his fall with outstretched hands.

With all engines secured and the fire out, the passengers and crew exited the aircraft by the boarding ladder. Investigation revealed no damage to the aircraft and the probable cause of the stack fire as poor pilot technique in transitioning from forward to reverse thrust during reversing procedures. Additionally, the aircraft public address system was inoperative and the emergency escape chute was not pre-rigged as specified in NATOPS.

Grampaw Pettibone says:

Great balls of fire! That young fella was extremely lucky that he didn't sustain major or even fatal head injuries. I can't blame this lad for attempting to do something in view of the circumstances and the lack of direction from the "drivers." Appears like we have a little "supervision problem" here—why wasn't the escape chute rigged to the deck as prescribed in NATOPS? Seems to me, once the aircraft was stopped, that the aircraft commander could'a sent the flight mechanic or the copilot aft to assist this young fella. The maintenance people were no help on the public address system either, and additionally, the flight attendant interphone circuit was inoperative. All in all, this was an extremely poor example of crew control —namely, the complete lack of communication from the cockpit to the passenger compartment.

THE MANAGER

"You're the one out on a limb if anything goes wrong; you're the one who speaks for the project."

Thus, Captain Fred H. Baughman describes his life and the lives of 24 others like him at Naval Air Systems Command headquarters. Capt. Baughman and his contemporaries are project managers and project coordinates for the development of Navy and Marine Corps air weapons systems such as the A-6, A-7, F-4, E-2, F-14/*Phoenix*, AV-8A and S-3.

A project manager's job differs only in magnitude from that of a project coordinator. A project manager is assigned to major projects by the Chief of Naval Material, and reports directly to the Commander, Naval Air Systems Command; on smaller projects, a project coordinator is assigned by the NavAirSysCom commander and works directly for the deputy commander for Plans & Programs and Comptroller.

"The project manager's office is the focal point for the entire project he is assigned to," says the captain. "He has a charter signed by the Chief of Naval Material designating him by name; the charter says, in effect, that this person is the single executive authority within the Navy for this certain project.

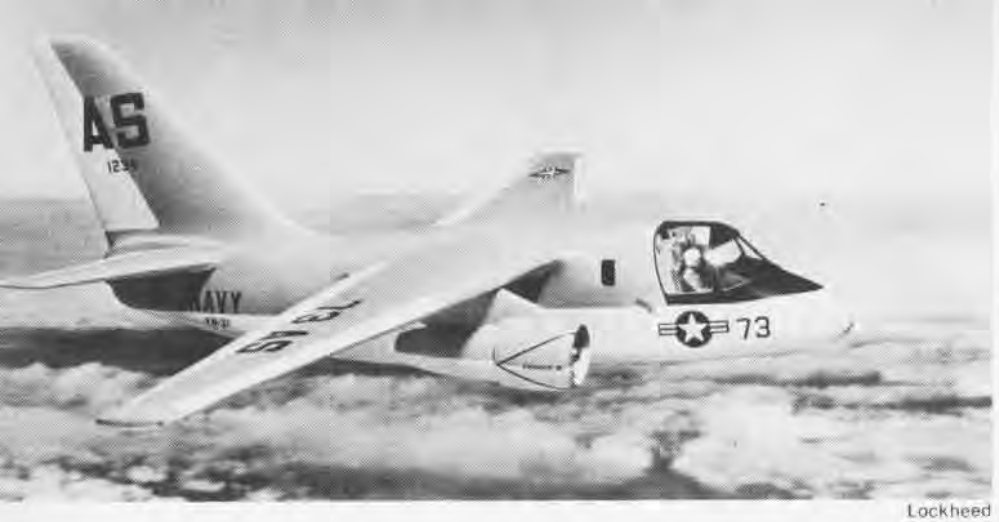
"He is responsible for it in a personal way, and is the one who usually must speak for the program, whether called by the head of NavAir, CNM, CNO, SecDef or Congress. It's the project manager who's really in charge —and the one in the hot seat."

Baughman is project manager for the S-3A which is scheduled for first flight in January. His office and staff are small compared to some of the others, but the functions are basically the same.

"An established project office may have 20-25 people assigned," explains Baughman. "I have four military and

Story and photos by JOC Dick Benjamin


CAPT F. H. BAUGHMAN, USN



Lockheed

Drawing of S-3A, left. Capt. Baughman studies S-3 data, at left, below, and talks with Lockheed officials, opposite top, during an inspection of the aircraft's mock-up. Opposite bottom, Capt. Baughman confers (from left) with Robert Francis, deputy project manager; Capt. John Thomas, deputy for weapons system; and Cdr. James Funck, class desk officer.

ten civilians, including a secretary. When we went to contract over two years ago, there were less than half a dozen of us. This is an example of how small the nucleus is and how heavily dependent you are on the rest of the organization."

Baughman points out that the size of a project manager's office is determined by the number of variations, modifications and versions of the basic airframe. There were eventually nine Navy versions of the F-4 *Phantom II;* no others are currently being considered at this early stage in the life of the S-3. Consequently, the various project offices are staffed accordingly, and increase as the development progresses.

The life span of a project office depends on the life span of its air weapons system.

"During the life cycle of an air weapons system," Baughman continues, "things gradually transition from one phase to another. At some point in time, the project office is dissolved and the whole job is taken over by Air 04 [Assistant Commander for Logistics/Fleet Support]. The airplane is in the fleet, the production line is shut down and now it's a matter of logistics support; Air 04 oversees this job while the Aviation Supply Office ensures that the flow of spares needed to keep it flying reaches the fleet."

The S-3A began in much the same way as every air weapons system—with a tentative specific operational requirement from CNO to CNM (see *NANews,* July 1971, page 8). After the specific operational requirement is established, the many options open for the development of a system must be looked at with an eye towards selecting the one that best fulfills the requirements the system must meet.

Lockheed

In the case of the S-3A, a series of trade-off studies considered updating the S-2, modifying the E-2 or building other variances of existing airframes. Then new designs were considered including V/STOL, STOL, tilt wing, rotary wing and fixed wing.

"The final design evolved into a fixed-wing, twin-engine, multi-place, conventional airplane," Baughman states. "It still wasn't known if it would have a single or triple tail, or a low or high wing, but the basics were down on paper."

Before the Navy can go beyond this point, permission must be gotten from SecDef to proceed with the project, and a development concept paper is drawn up. This amounts to an agreement between OSD and the Navy to continue, and outlines the basic characteristics of the system and the capabilities it will have.

The final design is still a long way off, and in almost every case is provided by private industry.

It happens this way:

Once a development concept paper is signed, the Navy goes to various aeronautical manufacturers with a request for proposals based on the details developed thus far and the specific operational requirement. This begins what is known as concept formulation, with the potential contractors preparing their proposals for submission.

When the proposals are received, the grueling task of selecting the best design begins. Hundreds of people at NavAirSysCom headquarters and various field activities evaluate every aspect of each proposal: avionics, integrated logistics support, structures, flying qualities and the like.

"It took several months for the source selection evaluation board to

sort out the five proposals submitted, evaluate them and decide which design to go with," says Baughman. "In the case of the S-3A, we selected two of the five contractors to proceed with a funded contract definition."

Until now the prospective contractors had been using company money to design their version of the system, with each spending several million dollars: a typical proposal contains 20-30 volumes of technical information and fills three file drawers. From this point on the selectees get paid for their efforts.

Once the finalists are selected, permission must again be gotten from OSD before the project can proceed into the contract definition phase. The finalists are briefed as to the Navy's opinion concerning the good and bad features of their proposals, and the next several months are spent refining them.

Next is another round of very intense effort in evaluating the final proposals, with essentially the same people involved as in the previous evaluations. More time was taken for the selection board to pore through the volumes of technical information on the S-3A (then VSX) and finally declare Lockheed Aircraft Corporation the formal contract winner.

Within the Navy, concurrence on the selection must be received from CNM, CNO and SecNav. Elements of OSD must be briefed, including the Director of Defense Research and Engineering and the various assistant secretaries. Finally, the Deputy Secretary of Defense must give his approval—and only then is a contract signed, moving the air weapons system into development.

"The development concept paper is updated and any adjustments are made," the captain continues, "because now you're dealing in the real world. You have real dollars in hand for the contractor, real schedules to meet and an airplane detailed to the point where the empty weight is defined to the nearest pound."

Engineering development — the stage the S-3A is presently in—is by no means a slack period for a project manager's office. In fact, the work has really just begun. The office must keep in close, daily contact with the prime contractor, and all of the subsystems and support equipment the government is to provide for the aircraft must be developed and brought together. When development begins, first flight is still several years away and there is much to be done.

Lockheed

NavAirSysCom field activities (see *NANews*, September 1971, page 30) begin to take on a lot of responsibilities for the government-provided equipment. Such places as the Naval Air Propulsion Test Center, Trenton, N.J.; Naval Avionics Facility, Indianapolis, Ind.; Naval Air Test Center, Patuxent River, Md., and Naval Air Engineering Center, Philadelphia, Pa., are tasked with developing and/or testing all the related equipment that will go into the plane. Their efforts may range from qualifying a new explosive charge for an ejection seat, to developing ground support equipment or monitoring contractor efforts in a certain area.

The completion and test of each piece of equipment must be timed so everything will fit together at the proper moment. This means that each job farmed out to a field activity must be well planned ahead of time.

There are also many tasks to be completed within NavAirSysCom headquarters, and although each is important, many of them are not very glamorous. Seats, fire extinguishers, first-aid kits, flight suits, oxygen hoses and hundreds of other items which every air weapons system needs must be ordered, paid for and delivered to the right place at the right time so everything will be available when it is time to deliver the airplane to the fleet.

Many people think of a jet engine as a fairly simple thing: air goes in the front and is compressed, fuel is added and flame squirts out the back. It takes 14,000 components working together, however, to ultimately get that flame, and with that in mind one can easily imagine how many are involved in putting together an entire air weapons system.

The nominal number of people that staff a project manager's office could not hope to stay on top of so many things. For this reason, individuals from the principal groups within

Lockheed

General Electric

NavAirSysCom are assigned as assistants to the project manager for their particular specialties. Some of them are involved with the project on a daily basis while others only infrequently.

The Research and Technology group is involved early in a project. People from this group are heavily involved in the trade-off studies, with their part slowly diminishing as the aircraft enters the development stage.

Material Acquisition participates in this phase and as the project moves into contract definition, many of the people in this group evaluate the proposals. During engineering development, they are the principal interface between the project manager and various component suppliers. They are the ones who have the technical knowledge about such things as radars, sonobuoy receivers and structures.

Logistics/Fleet Support plays an equally important role. The designated assistant in this group looks after the entire world of integrated logistics support which is needed by every air weapons system.

There are also many people in NavAirSysCom who spend considerable time worrying about budgetary matters—including the project manager. With the possible exception of the salaries of those assigned to headquarters, every facet of a project must be paid for from the project budget. Consequently, there are numerous "budget pots" for the various research, development, test and production tasks.

"Any given project may be involved with three or four budgets at any one time," explains the S-3A project manager. "As soon as you're finished with one, there are several others waiting to take its place. S-3A money was channeled into more than 60 places during FY 1971."

Almost every hour's worth of effort and every dollar's worth of material related to a project are paid for by the project manager's office. If the project manager tasks a field activity with certain work, the money paid to that activity has to cover salaries, travel, material and everything else involved with the project.

The project manager is accountable for the cost of the project to the government and the taxpayer—right down to the penny. And he can pinpoint exactly where every penny is spent through a continual review of the budget cycle.

"You're always doing something about the budget," the captain states, "always trying to see that last year's money is really spent for something needed. Or if there is any around in various little places, it is swept up and put to work again before it gets lost. There is always somebody following you around, ready to take the money back. They say 'If you haven't spent it by now, you don't need it!' "

If the budget and the money are not "watched like a hawk" a sizable chunk could be lost over several years.

"The important thing is not to put it where it isn't required yet," he continues, "so that you lose the use of it and have it expire. It isn't like putting dollar bills under your mattress where you can get at them any time. Fiscal year funds run out and for all practical purposes just disappear on July 1."

Besides being concerned about whether last year's money is being used properly, a project manager is worried on a day-to-day basis about using the current year's money to the best advantage, and how much will be needed the next year. The S-3A project office put together and maintains a detailed and up-to-date budget for the aircraft's entire development and production programs, extending through 1975.

Assistants in the various groups are constantly "keeping their hand in" to ensure that work at the various activities is being accomplished on time. They also keep a continuous check to determine if it will run

under or over the budget, and try to avoid "nasty surprises."

"If they detect something like an over-cost, they let the project manager know about it right away so it can be worked out before it becomes a drop-dead situation," points out Capt. Baughman. "The worst thing is to have somebody come in with a problem with a short fuse. You don't generally do as good a job if you have to resolve a problem in five minutes.

"We try to keep the ugly surprises to a minimum. It's very upsetting to have some one pop up and say he needs another $100,000 for a certain item."

If there is an overrun on a piece of equipment, it still has to be paid. In order to find the money, the project manager may have to shortchange somebody else, or postpone another item temporarily—if it can be accommodated the following year. And each year, the budget has to be justified, not only within the Navy, but in OSD and the various committees of Congress.

"You sometimes have to argue, fight, scream and claw to get the amount of money you think you need," he continues. "There is always somebody saying that you don't need that much because there are overall budget constraints and everyone has to fit into them. You don't even come close to fitting everything in the first time around."

A project manager has lots of help with his budget, but in the final analysis, his office is where the perspective is found to balance out an air

weapons system's requirements.

Capt. Baughman points out that modifications, improvements or variations on the basic aircraft are talked about from the very beginning. A project manager has to exercise fairly severe configuration control in order to keep from having everything dissolve, because "if you keep trying to improve it, you never get there.

"You can always find someone who would like to delay a little longer because he can do his part a little better," he says. "Fairly early in any program you have to freeze a design and say 'all your good ideas are fine; we'll remember them for the B or C version, or for the S-4.'"

As soon as an air weapons system's design begins to solidify, various possible derivative applications become obvious. If a basic design is good, it might make a good tanker, COD or reconnaissance aircraft.

"Whether the Navy needs it or can afford it is another question," the captain notes.

The climax of the development phase of an aircraft program is the BIS trials. As development ends and the aircraft goes into production, the emphasis shifts and there is somewhat less involvement by the field activities. Still, the project manager's job is not finished.

As fleet deliveries are made, the work becomes more oriented towards logistics and fleet support—and working out the bugs as the aircraft makes its first deployment with the fleet. These bugs might include a rash of landing gear or engine troubles, or a particular piece of avionics gear might turn out to be unreliable and require changes.

"These are fleet introduction problems," says Baughman, "and are the type of thing the *Corsair II* project manager, for example, has been going through with the A-7E. It has been in the fleet over a year, and has been deployed to WestPac."

The next step is a more mature situation, like that with the F-4 which is essentially out of production, although there are still lots of them in the Navy. The *Phantom II* project office has a different kind of day-to-day routine, keeping up with the various versions and modifications. Still further down the line is another situation, such as with the F-8 *Crusader*.

So it goes with project managers. Sooner or later—and this happens to all of them—it all goes away. That's it. Nobody is interested in that particular airplane anymore because there is a new, better one coming along. The once proud system goes to the desert where, sooner or later, someone breaks it up for scrap.

Who's interested in the F9F-2 now?

Inside view of S-3A, opposite left. General Electric representative works on the aircraft's TF-34 high-bypass, 9,000-pound thrust turbofan engine, opposite right. Capt. Baughman talks with James Dahl, Navy comptroller's office, top. Cdr. Funck reads S-3A data, right.

ON PATROL

with the Fleet Air Wings

South American Exercises

Two Barbers Point VP-17 *Orions* are taking part in *Unitas XII*, a combined naval training exercise involving U.S. and South American ships and aircraft. VP-17 is the first Pacific Fleet squadron to participate in a *Unitas* exercise.

Unitas XII is commanded by Rear Admiral Robert E. Adamson, Jr., Commander of the Atlantic Fleet's South Atlantic Force. U.S. Navy participants include a guided missile frigate, a destroyer, destroyer escort, submarine, patrol and logistics support aircraft and a target drone detachment.

Alpha Crew

NAS Brunswick's VP-23 recently completed an intensive training cycle climaxed by the first operational readiness exercise involving a P-3B squadron equipped with directional low frequency analyzer and operating against a nuclear submarine. The squadron also completed a successful NATOPS evaluation.

Less than five months after VP-23 received its first retrofit aircraft, its Crew Three, led by LCdr. Charles H. Munch and Lt. Bill R. Preece, attained Alpha status. The squadron has been preparing for a fall deployment to the Med.

Looking Back

Back at home base in Patuxent River, VP-24 crewmen are remembering the highlights of their NS Keflavik, Iceland, deployment: joint operations, flying P-3C's with the Norwegian 333 Squadron, in which the Norwegians participated in operations at Keflavik, while several crews of VP-24 visited the Norwegian base high above the Arctic Circle; ice patrols in support of Naval Oceanographic Office research efforts; and a full flight demonstration by VP-24's LCdr. Fred Masciangeo in a squadron aircraft at the Edinburgh Air Show in Scotland. Over 3,300 hours were flown in submarine surveillance using the Tactical Support Center's computerized mission replay capabilities.

Iceland Deployment

While serving his second tour of duty with VP-49 at NS Keflavik, ADJ1 Robert Stanley reached his 5,000th flight hour while aboard a P-3C. About halfway through its five-month deployment, the squadron designated its fourth Alpha crew.

Monthly Record

A monthly record of 191 sorties totaling 1,375 hours was set by VP-47 flying P-3C's, while deployed to Adak, Alaska. The hours represented ASW surveillance operations and flights for medical evacuation, ice reconnaissance, training and logistics.

Cdr. F. P. Gigliotti, VP-44, talks with Capt. Ryczko, Canadian Patrol Squadron 415, who flew the Argus from Summerside, Prince Edward Island, to NAS Brunswick to take part in joint ASW operations.

Relocation

VP-8 has joined five other VP squadrons at NAS Brunswick, all under the command of Rear Admiral Mayo A. Hadden, Jr., Commander Fleet Air Wing Five. The squadron departed NAS Patuxent River for its new home base with tons of equipment, nine P-3A's and 300 men and their families.

Exchange Program

In August, a crew of Canadian officers and enlisted men from Patrol Squadron 415, Summerside, Prince Edward Island, Canada, were hosted by VP-44, NAS Brunswick, in an ASW exchange program. The Canadians and Americans flew both the *Argus* and the *Orion* in the joint ASW operations, each group becoming familiar with the other's aircraft. VP-44 is looking forward to participating in Canadian ASW exercises.

Milestone

Patrol Squadron Four, which recently completed a deployment to MCAS Iwakuni, Japan, closed out FY 71 with a total of 10,500 hours flown, which equates to one aircraft airborne continuously for 437½ days. The squadron credits its achievement to the work and dedicated effort of its maintenance department. While flying a record number of hours, the squadron also completed FY 71 accident free. Commander James A. Barnes recently relieved Commander Evan J. Vaughan, Jr., as commanding officer.

The Rainmakers of VP-40

Lt. Ron Yesley of VP-40, deployed to NAF Naha, is learning to be a rainmaker — which is not what he expected when he joined the Navy to become a pilot. However, neither did he expect to be caught in a parching drought.

Rain has been sparse on Okinawa this year. Local reservoirs are dry; farmers are losing their crops; water rationing is routine; servicemen and their dependents are trying to cope with a water system that operates only 12 hours every two days.

As a result, two Navy weather modification experts from the Michelson Laboratory, China Lake, Calif., have been teaching VP-40 crewmen the art of rainmaking. Cloud seeding is a first for the squadron, which was chosen because its P-3 *Orions* can be fitted with a special ejection system that handles the cartridges of chemicals needed to carry out cloud seeding. The instructors, Dr. Pierre St. Amand, chief of the Earth and Planetary Sciences Division at the laboratory, and LCdr. Donald Carver, the lab's technical liaison officer, have been teaching the crewmen how to identify the proper clouds for seeding, how to approach the clouds and when to eject the silver iodide cartridges. VP-40's commanding officer, Commander Jack T. Weir, and all 68 officers and 275 enlisted men are involved in the project in some way.

Lt. Yesley says, "It isn't too difficult. When you are in the air, the experts point out clouds that are likely to produce rain . . . clouds that have not reached maturity and are still growing." Clouds likely to produce rain if seeded look puffy and hard.

The nearness of the cloud is important as the aircraft must reach it before it ceases to grow and loses its rainmaking potential. Since the aircraft must penetrate the cloud at a certain temperature level—at about 17,000 feet around Okinawa—the cloud must be at least that high. If it stops growing and the top begins to dissipate before the plane reaches it, it will not produce rain when seeded.

LCdr. Carver said that clouds were actually producing rain over Okinawa but, because of the temperature and humidity of the clouds, the raindrops were not reaching earth. Silver iodide crystals stimulate the freezing of water in the clouds where water exists below the freezing point. Since the structure of silver iodide resembles ice crystals, it gives the water in the cloud a "seed" to collect around, as ice. With the formation of ice, latent heat is released, which in turn causes greater cloud growth and increased buoyancy of ice and water droplets. In this environment, the droplets grow larger and have a better chance of surviving the fall to earth.

Yesley explained that a cloud is like a cylinder with updrafts in the middle, spilling over at the top and causing downdrafts around the edges. Although the P-3 is a stable aircraft, it is buffeted downward as it enters the cloud and is then tossed up. After penetration, at the instant the plane begins to feel the upward drafts, the cartridges are fired. Photoflash ejection units, which normally eject flares for nighttime aerial photography, eject the rain-producing cylinders.

So far, VP-40's cloud seeding has met with limited success but the people involved are not discouraged and feel that they have been responsible for at least some of the precipitation over Okinawa.

VP-40, home based at Moffett Field, is continuing the seeding operations in addition to its regular ASW and shipping surveillance mission.

Rain-producing silver iodide cartridges are inserted into a special ejection system beneath the tail of a P-3, below. Plane is being prepared to seed clouds similar to those in formation seen from a VP-40 Orion, right below.

TAILHOOK '71

Tailhookers gather at Sahara Hotel in Las Vegas for 15th annual convention. VAdm. Weisner, right, presents McClusky Award to Cdr. Byng, VA-113. BGen. James, below, conducts POW/MIA symposium to full house.

Cdr. Buchanan, HS-2, receives Thach Award for outstanding ASW unit from VAdm. Weisner.

By PHCS R. L. Lawson

Combining a weekend of fun and relaxation with serious business, more than 2,800 Naval Aviation Tailhookers attended the 15th Annual Tailhook Reunion held September 10-12 at the Sahara Hotel in Las Vegas.

For the second year in succession, the reunion was dedicated to "our shipmates who in support of Southeast Asia operations have taken the last cut, and are missing in action or are prisoners of war."

Starting off the business sessions with a symposium on "The Attack Carrier," Vice Admiral James L. Holloway III, DCinCLant, gave a slide presentation on the role of the attack carrier, followed by a question and answer period.

On Saturday afternoon, Brigadier General "Chappy" James (USAF), Deputy Assistant Secretary of Defense for Public Affairs, held a symposium on POW/MIA affairs for a standing-room-only crowd, informing them of Washington's efforts on behalf of these men. Lt. Bob Frishman, ex-POW and president of *Concern for POW's, Inc.*, who spent 683 days as a prisoner in Vietnam, told it "like it was" — the conditions of the prisoners and the camps.

However, it wasn't all work and no play at the desert resort city. Besides the obvious attractions, Grumman Aerospace Corporation hosted its first annual "Top Cat" golf tournament at the Tropicana Country Club and LTV hosted a tennis tournament. Both events attracted heavy participation from the sporting set.

Climax of the 1971 reunion was the annual awards banquet held Saturday night at the Sahara's Space Center convention hall. Admirals and ensigns rubbed elbows in an informal atmosphere to exchange ideas and promote better understanding of all facets of carrier aviation.

Amidst rousing cheers from their squadron mates, VF-96, VA-113, VMFA-212 and HS-2 walked off with trophies presented to the oustanding squadrons in their fields. Most carrier landings awards included Rear Admiral E. L. Feightner, Naval Air Systems Command (736), Captain George Watkins, Naval Air Test Center (1,342), Commander R. G. Moore, VF-96, (1,075), LCdr. N. D. Langston, VT-5 (857), and Ens. Louis H. Calish, VC-8 (12).

Tailhooker of the Year award went to Vice Admiral Maurice F. Weisner, DCNO(Air Warfare). Vice Admiral R. B. Pirie, USN (Ret.), and VAdm. Holloway received special Tailhooker plaques. Admiral Bernard Clarey, CinCPacFlt, received an Honorary Tailhooker award from VAdm. Weisner. Admiral John J. Hyland was presented the Permanent Tailhooker of the Year 1970 award by Captain Bill Doak, president of the association.

Highlight of the awards banquet was Vice Admiral Thomas F. Connolly's moving farewell speech to his Tailhook comrades.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That's you, landing more than a million dollars worth of jet aircraft at 150 miles per hour, within 3 seconds and 200 feet.
That's you after an invaluable education, the finest there is, compliments of the Navy.
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THE NAVY

Ground Controlled

Clockwise: Mobile unit houses GCA. At daily training session, Ltjg. Burwell and ACC W. E. Schultz teach proper landing and talk-down procedures. On station, crew can handle three approaches, landing aircraft three minutes apart. AC2 John Heienickle phones weather report to coordinator for relay to pilot. Some games are never finished, such as this one between AC2's Joe Mikitka, left, and Ken Sharpe. ETR3 George Busch makes coffee. Photographs are the work of PH3 Mike Mauch.

By Laura Oesterle

How about that . . . there it is. I see it. Thanks fellas."

The excited words coming full volume from his headset told the smiling Point Mugu GCA controller that the pilot had finally sighted the fog-shrouded landing field.

The grateful pilot, a civilian, had been lost. GCA and radar helped him land his little *Piper Cub*. Approximately 7,000 instrument landing approaches are made each year at Point Mugu by aircraft ranging from helicopter to C-5A. The unit has brought in 84,778 aircraft since it began operation in 1955.

GCA stands for ground controlled approach. That's what you need when you're landing and there's very little forward visibility and even less ceiling.

The GCA unit's radar tracks primary targets up to 60 miles and secondary targets as far as 200 miles. GCA controllers provide accurate direction and elevation information for pilots approaching NAS Point Mugu and monitor instrument takeoffs.

The radar equipment is housed in a large yellow trailer, part of a mobile unit parked alongside the main runway. At least two controllers dash up the short ladder and into the pitch-dark trailer when there is a call for GCA assistance. In the darkness, a controller reads the search and precision approach radar displays as he guides the pilot to a safe landing by frequent directional and rate of descent instructions.

"We get him to an altitude of 1,500 feet and then put him on the glide path, telling him when he's too high, too low or drifting to right or left," explains Ltjg. Rob Burwell, radar officer.

There are prescribed approach patterns for different aircraft and different situations. For the talk-down, the controller and pilot have their own phraseology. Controllers receive at least five months of training, mastering both flight patterns and idioms of the business and learning discipline and self control.

A young air controller describes the staff's daily training sessions. "We learn to speak with authority, with confidence. A pilot trusts us and we have to know how to think and act quickly. Using the correct jargon is vital — to avoid error in communications with the pilot." The earnest young sailor searches your face to see if you understand the scope of GCA activ-

Approach

ities, the importance of the tasks he describes, his pride in his work.

Alongside the radar antenna and trailer unit are a white frame office building and a quonset hut with a low fence neatly protecting a handkerchief-size lawn. Here is where the men eat, sleep and relax. Three personnel sections work in rotation shifts of 24 hours on, 48 hours off.

This year, Point Mugu's GCA unit is scheduled to become a radar approach facility. Its offices will be relocated in the field's control tower; the antenna will stay in its present location; there will be an IFR room manned by personnel working three eight-hour shifts; and the radar display will be channeled to scopes in the IFR room.

And through it all, Point Mugu's GCA men will stay "tuned in."

NAVAL AIRCRAFT

HE

The C-130 *Hercules* first entered naval service in 1960 when four LC-130F's were obtained for Antarctic support missions. These ski-equipped *Hercules* were soon followed by 46 KC-130F models procured by the Marine Corps in 1962 for the dual role of assault transport and aerial tanker for fighter and attack aircraft. That same year the Navy obtained seven C-130F's without inflight refueling equipment to serve its transport requirements. The *Hercules*, initially designed to specifications laid down by the USAF Tactical Air Command, first flew as the YC-130 in August 1954. The KC-130F made its first test flight in January 1960 as the GV-1 under the old designation system. The tanker version can refuel two aircraft simultaneously from the 3,600 gallons in its cargo compartment. The fuel is routed to two detachable pylon pods located below the outer wing, containing refueling gear.

The C-130F, identical to the tanker, less refueling equipment, can transport cargo or personnel and deliver its load by either the normal method or by airdrop. An integral cargo ramp/door and removable roller tracks facilitate the handling of palletized loads. In its passenger-carrying role the *Hercules* can accommodate 92 combat troops or 64 paratroops with equipment. For medical evacuation, 74 litters may be rigged in the cargo area.

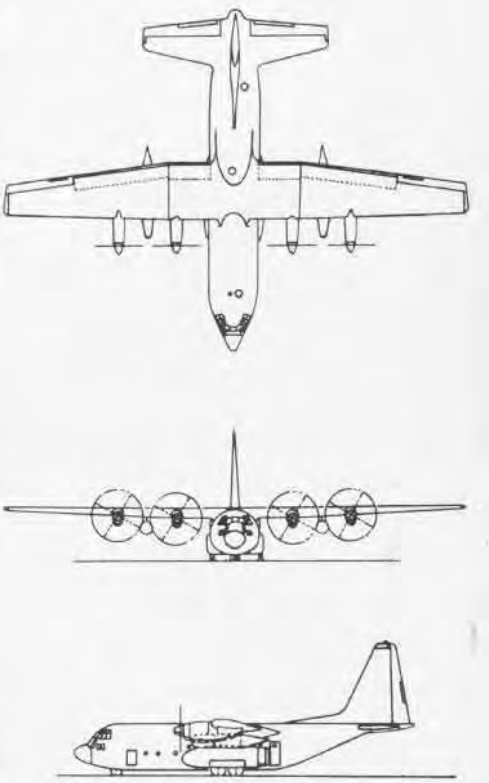
In 1965 the Navy procured a number of C-130G's to provide support to *Polaris* submarines and the exchange of their crews. Essentially the same as the F model, these aircraft have increased structural strength, allowing higher gross weight operation. All models feature crew and cargo compartment pressurization, single-point refueling and a Doppler navigation system.

One other model, the EC-130Q, serves in two VQ squadrons. This version has a permanently installed VLF radio transmitter system used to supplement shore-based communications facilities.

The *Hercules* also flies with the Coast Guard as the HC-130B, performing air-sea rescue. In addition, C-130's are used by the military forces of 16 foreign countries.

CULES

Length	97'9"
Height	38'6"
Wing span	132'6"
Engine:	
C-130F	T-56-A-7 eshp 4,050 at T.O.
KC-130F, C-130G, EC-130Q	T-56-A-16 eshp 4,910 at T.O.
Maximum speed	315 kts.
Cruise speed	293 kts.
Maximum T.O. weight	
C-130F, KC-130F	135,000 lbs.
C-130G, EC-130Q	155,000 lbs.
Ceiling	34,000 feet
Range	4,512 nm



CTF 77
Photo Intelligencemen

By JO3 J. E. McDuell

"I can't tell the difference between a Nikon and an Instamatic," jokes PT2 Larry Fox as he talks about his rate and the confusion surrounding the job of Navy's photographic intelligencemen. "We don't take photographs, we look at them!"

Whatever tasks you associate with photographic intelligencemen, except for the aircrews, the PT's are probably "closer" to the war than anyone else serving with the fleet on Yankee Station. And the six PT's on the staff of Commander, Task Force 77, Rear Admiral D. W. Cooper, are right in the middle of Navy's air effort.

"We help plan air strikes for the whole force," says Fox.

In order to gather intelligence information for air strike planning, photo intelligencemen look at hundreds, and sometimes thousands, of feet of aerial reconnaissance photographs. In the pre-strike planning, they look for potential targets; after a strike, they look for bomb damage and determine its extent. (Although they don't use cameras, they must know how the aerial cameras work and the basics of photography.)

Fox pulls out an 8x10 aerial which seemingly shows nothing but treetops. "A good PT can pick out tire tracks in this photo. He learns to see the keys and interpret them. Take an aerial shot of several supply shacks as an example. If there are no tracks or paths leading up to them, you know they're abandoned."

Experience is still the best teacher, and only after spending many hours looking at photos does the PT learn to make accurate interpretations. Satisfaction comes in finding an air field, supply bunkers, trucks. The biggest prize is an enemy antiaircraft site.

But more time is spent gathering intelligence information than looking at photographs. PT3 Darrow Mallmann and PT2 John Chauvin spend much of their day reading messages from all over SEAsia. They look for troop and vehicle movements, political situations, unfriendly vessels—anything that will affect the planning of an air strike. "We take this information and combine it with what we learn from the recon photos. This gives us the foundation for planning a strike," says Chauvin.

PTAN Don Patterson also screens message traffic, gathering bomb damage assessments which are used to brief the task force commander and to judge the effectiveness of Navy's air strikes.

And it takes one man, PT3 Henry Estrada, just to file and keep records of all the intelligence information collected.

So, the fact that the PT's aren't expert photographers seems unimportant. Who's got time to take pictures?

PT2 Fox picks out bomb damage on an aerial while PTAN Patterson records the findings, left. Above, PT3 Mallmann gathers information from a map while PT3 Jack Smith, a newcomer to the TF 77 staff, makes notes.

Doppler Evaluation

SAN DIEGO, Calif. — Teledyne Ryan's AN/APN-200 Doppler velocity sensor is undergoing evaluation by Lockheed for integration into the S-3A weapon system. The APN-200 will be used, in combination with the carrier-based S-3A's inertial system and onboard computer, in accurate point-to-point navigation and in pinpointing enemy submarines beneath the ocean's surface. It features a solid state transmitter; new techniques for automatic terrain bias compensation for transiting from land to sea and for cross-correlating frequency trackers to increase reliability; and one-box construction. The latter, with electronic signal processing and power supply module mounted on the back of the fixed beam planar array antenna, decreases cable requirements and reduces structural weight.

Flight Training Interrupted for Vietnam Tour

CAM RANH BAY, Republic of Vietnam—Some American sailors stationed in Vietnam may seem like ducks out of water, but Ltjg. Donald C. Hoge is more like a grounded bird.

The 23-year-old naval officer, who says he has been interested in flying as long as he can remember, was halfway through Navy flight training at Pensacola, Fla., when, late last year, he found himself with orders to the naval support facility here.

"I wasn't dropped because of poor grades or anything like that," he says. "About 500 student pilots, some within days of getting their wings, suddenly got letters saying that because of austere funding the Navy was dropping us from the flight program. Half of those, reserve officers like myself, were actually released from active service.

"I made a few contacts, wrote a few letters and finally got permission to remain on active duty."

Unfortunately, there were no aviation billets open for him at the time, but he was offered duty with the U.S. Naval Advisory Group in Vietnam. Before he could report, that was changed to duty at Cam Ranh Bay where he now coordinates on-the-job training for Vietnamese sailors.

Actually, the lieutenant's interest in

flying began at Purdue University where he took 35 hours of flight indoctrination with his NROTC unit.

"I also got interested in jumping there," he says, "and asked my NROTC instructor to put me in for the Army's airborne school after I graduated." After graduation, he began training at the Fort Benning, Ga., Army jump school.

Later, at Pensacola, Fla., he managed to find time between classes and training hops to become free-fall qualified up to 20,000 feet.

Since then he has qualified as a Navy jumper and has traded his silver airborne wings for the Navy's gold parachutist insignia. "Goes better with the gold buttons on my uniform," he explains.

Hoge's tour in Vietnam hasn't kept him completely out of the air. An Army aviation unit takes him up occasionally as observer on aerial reconnaissance flights up and down the coast.

"I don't get any stick time, but it at least gets me in the air," he says.

All's well that ends well, though, and Lt. Hoge's tour in Vietnam will end next January with a return to Pensacola to resume flight training.

Argentina Orders Sea King

STRATFORD, Conn. – The Argentine Navy has ordered four Sikorsky S-61D-4 helicopters for antisubmarine warfare and rescue duty for delivery next year. The S-61D-4 is a twin-turbine aircraft similar to the SH-3D.

LCdr. Wilfredo Amuso of the Argentine Navy is monitoring S-61D-4 production at Sikorsky's Stratford plant.

Navy versions of Sikorsky's S-61 series currently are serving with – or have been ordered by – the Brazilian, Spanish, Italian, German and Indian Navies, the Canadian Armed Forces (Navy) and the Japanese Maritime Self Defense Force.

S-61 models also are flown by the U.S. Coast Guard and U.S., Danish and Malaysian Air Forces. The Marine Corps and Army fly VH-3A's, an executive version, on missions in support of the White House. Commercial models of the S-61 are used on scheduled passenger flights, in support of the petroleum and construction industries, and in such varied tasks as power line emplacement, and harbor pilot delivery.

The KA-6D On Station

By LCdr. Gary F. Wheatley

The KA-6D is making its Yankee Station debut with VA-115 aboard USS *Midway* and, at the same time, writing a new chapter in tanker utilization.

When the KA-6D was introduced to the West Coast in January, the initial enthusiasm was dampened when a three-G acceleration limit was assigned. The limit is administrative, set to extend the wing life ten years. (The KA-6D's are modified A-6A's which already have accumulated an average of 1,500 flight hours each.)

With its all-weather system removed, the tankers' uses were limited to instrument training, cross-country and tanking. VA-115 soon found that the tanking capability was superb and the training syllabus was modified accordingly. Training missions were lengthened; a rendezvous with the KA-6D provided more training each flight, accelerating the training syllabus.

It is at sea, however, where the KA-6D is really proving itself. Its large giveaway capability, fast fuel transfer rate, dual UHF communications and relatively small size make it the best carrier-based tanker.

The large giveaway capacity permits delivery of 12,000 pounds of fuel on a normal 1+45 deck cycle. Using the YoYo Tanker tactic, the tanker is the first aircraft launched, climbing to the tanking station, 15,000 feet over the carrier. Returning low-fuel fighters get first crack at its supply: each is automatically given 2,000 pounds—unless more is required. Then fighters on the same launch as the tanker are topped off before they proceed on their mission.

Any remaining giveaway fuel is transferred to a second tanker which remains airborne, and the KA-6D returns to the carrier. Total flight time: 20 to 25 minutes.

The YoYo procedure has several advantages: it puts maximum fuel in the air when it is needed; most of the fuel is delivered, not consumed while remaining on station; the same tanker can be used on every cycle except the first and last, reducing availability and handling problems.

Aside from the added reliability of the dual UHF communication, the extra radio allows the pilot to monitor the tanker control frequency and the B/N to listen on the combat air patrol or attack frequency at the same time, receiving advance notification of emergency tanking requirements and saving precious minutes when fuel is needed. In addition, the plane's relatively small size makes it easy to handle on deck.

The KA-6D is proving to be a reliable and superior tanker that can live on the flight deck and keep the giveaway fuel where it is needed—in the air.

THE SELECTED AIR RESERVE

Reserve Wave Flies Over Arctic

PO1 Felicia A. Susick recently became the first Wave to accompany a patrol flight from NS Keflavik, Iceland, and fly over the Arctic Circle, thus becoming a bona fide "Blue Nose," an honorary title given to anyone who has crossed that imaginary line at 66 degrees and 30 minutes north latitude.

RM1 Susick was also the first enlisted Wave to participate in an operational mission aboard a Keflavik patrol aircraft.

She made this record flight in a P-3 *Orion* while attached to the naval unit at Keflavik for her annual two weeks of active duty for training as a member of the Naval Air Reserve. Her squadron, Antisubmarine Warfare Augmentation Group 3Y2, drills at NAF Detroit.

Reserves Train in Spain

Patrol Squadron 67 returned to NAS Memphis recently after four weeks of annual cruising at Rota, Spain. The concentrated shipping traffic in the Strait of Gibraltar and the Mediterranean Sea provided an ideal training situation for the squadron.

The long days for the crew of VP-67 included aircraft maintenance and preparation, intelligence briefings, inspection of equipment and many patrol missions.

Commander Donald Shumate, commanding officer, gave this summary of the training cruise. "We came here to operate and function independently. The difficulties we encounter, on the ground and in the air, are tests of our professionalism. I am happy and proud that our squadron has met and passed the test."

CVWR-20 Deployment

Attack Carrier Air Wing Reserve 20 (CVWR-20), with headquarters at NAS Jacksonville, recently completed two weeks of tactical operations aboard USS *John F. Kennedy* (CVA-67) as she cruised in the Caribbean near Guantanamo Bay, Cuba.

During the deployment, officers and men of CVWR-20 were involved in an intensive training program aimed at honing to a fine edge the combat readiness of the Reservists.

The pilots, after completing refresher carquals, flew over 750 sorties, accumulating more than 1,400 hours of flight time and 727 accident-free carrier landings. In support of these simulated combat missions, ground support personnel obtained invaluable practical experience in aircraft maintenance, ordnance loading, shipboard operations and other related activities.

The cruise was dramatically climaxed by the launch of wing-strength air strike missions.

Attesting to the importance placed on the deployment, Commander Naval Air Reserve Force, Rear Admiral Howard E. Greer, came aboard *Kennedy* during the latter part of the cruise to view the operation and obtain an assessment of the success of Reserve attack air wing activity.

In a shipboard address to the members of Air Wing 20, the admiral noted that he was "very pleased with their performance." In addition, he declared their deployment was a "giant step forward in building readiness in the Reserve command."

The commander of Attack Air Wing 20, Commander Edmund M. Feeks, also expressed his pleasure with the wing's accomplishment and emphasized the importance of the cruise, "It proved a Reserve air wing could embark as an air wing with minimal immediate preparation."

VF's 201 and 202, Dallas, Texas, flew their F-8H *Crusaders* in sorties providing air cover against enemy aircraft. VF-201 is commanded by Commander John P. Lamers, while VF-202 is skippered by Commander Sam Jones.

Ordnance delivery capabilities were amply provided by VA's 203, 204 and 205, based at Jacksonville, Fla., Memphis, Tenn., and Atlanta, Ga., respectively. Flying A-4L *Skyhawks*, the attack squadrons practiced bombing and close air support at bombing ranges in the Atlantic and Florida. VA-203 is commanded by Commander Walter N. Vance, while Commander A. R. Scharff skippers VA-204 and Commander John B. Barnes leads VA-205.

Light Photographic Squadron 206 based at NARTU Washington, D.C., and led by Commander Frank Dunne, provided photographic intelligence support and obtained valuable pre- and post-strike photographs of target areas while flying specially equipped, camera-laden RF-8G *Crusaders*.

Providing airborne early warning capabilities, as well as airborne air traffic control support, was the job of Airborne Early Warning Squadron 207 from NAS Norfolk. The squadron, skippered by Commander Jimmy R. Flowers, flew radome-equipped, twin-prop E-1B *Tracers*.

Airborne refueling operations were conducted by Tactical Electronic Warfare Squadron 208 flying KA-3B *Skywarriors* and commanded by Commander Tom Frey. VAQ-208 drills at NAS Alameda, Calif.

VP-68 at Bermuda

Within the second month after beginning transitional training from SP-2H's to P-3 *Orions*, VP-68 distinguished itself during its first two-week active duty for training performed at the squadron's home station, NAS Patuxent River. During the cruise, eight VP-68 flight crews amassed 350 flight hours and completed 105 ASW crew qualification readiness exercises.

Each flight crew spent three days at NAS Bermuda flying operational ASW missions. The dedication and proficiency with which each mission was accomplished were reflected in a message to the squadron from Vice Admiral F. G. Bennett, Commander, ASW Forces, Atlantic: "I have mon-

itored your operations . . . over the last few days and am impressed with the performance of the entire squadron. The readiness and professional competence demonstrated thus far are particularly encouraging in war planning involving our Reserve forces. Well done!"

Change of Command

The first squadron change of command at sea in the Naval Air Reserve Force occurred aboard *Ticonderoga* off the California coast during the active duty cruise of CVSGR-80.

Relieving Commander T. R. Kloves as commanding officer of VSF-86 was Commander T. H. Etheridge.

Commander Kloves has joined VSF-76 at NAS New Orleans.

48.5-Mile Bicycle Ride

The distance from suburban Los Angeles to Point Mugu is 3,072,960 inches.

"That's an exact figure, not counting the bumps," says AN Robert Deutsch who peddled every inch of it on a 10-speed racing bicycle to avoid being listed AWOL by his squadron, Point Mugu's VP-65, where he is assigned as a parachute rigger.

One morning, Deutsch climbed into his sparkling new van to report for duty at Point Mugu. He twisted the ignition key and, to his grief, nothing happened. He began stuffing a backpack with carrots, avocados, fruit, Navy uniforms and enough camping gear to last him overnight.

He started peddling for Point Mugu on the Pacific Coast Highway at one the next morning. The 50-mile bike ride looked easy. Deutsch had gone through worse things, such as escaping from Hungary during that country's revolution 15 years ago. The Deutsch family migrated to Los Angeles where Robert earned his citizenship in 1967, entered the Naval Air Reserve and was assigned to his present squadron.

"This was to be my first active duty cruise with VP-65, so I didn't want to miss it," said Deutsch.

Active Duty at Rota

During their two-weeks' active duty at Rota, Spain, more than 140 Naval Air Reservists of Transport Squadron 51-3 provided transport services to other Reserve units and helped to support Regular Navy needs in Mediterranean Fleet operations. At the same time the men of the squadron were qualifying for advancements in rating. The annual training cruise provided intensive on-the-job training not readily available during stateside drills.

While off duty, the men enjoyed sightseeing in Spain. Flight crew members and special support personnel visited a number of European cities.

On completion of the cruise, the squadron returned to Glenview, Ill., with a new sense of involvement in the needs of Naval Aviation.

This was the scene on the VT-22 flight line when Ltjg. P. D. Gravitt, who had received his wings only hours before, took his father, Captain T. O. Gravitt, a 16-year USNR veteran, for a ride in a TA-4J. Capt. Gravitt, with more than 5,000 flight hours to his credit, mostly in P-2's, was a little uncomfortable in the relatively smaller confines of the Skyhawk's cockpit.

MARTD El Toro Change of Command

Colonel Albert C. Pommerenk has assumed command of the largest Marine Air Reserve training detachment in the country at MCAS El Toro.

Selectee for brigadier general, the colonel brings 29 years of Marine Corps service to lead eight organized Marine Corps Reserve units, three volunteer training units and MARTD El Toro with a combined strength of nearly 1,400 Marine Regulars and Reservists.

The detachment, the only Marine Air Reserve command on a regular Marine installation, operates both from El Toro and the neighboring helicopter air station at Santa Ana.

The Marine Air Reserve unit presently utilizes A-4C *Skyhawks*, OV-10A *Broncos* and CH-46A *Sea Knights*. MARTD El Toro recently became the first Marine Air Reserve unit with the AH-1G *HueyCobras*.

The first of four *HueyCobras*, designed expressly for the purpose of delivering ordnance, was delivered in August. They will be flown by newly-formed Marine Helicopter Attack Squadron 773 (HMA-773).

Record

The standard time to complete all training required to become an aircrewman is 18 months. AW2 William Lundelius, a drilling ASW operator at NARTU Alameda, did it in less than four. Between February 7 and June 2, the dedicated sailor logged a total of 66 flight hours, accumulated during weekend drills, a two-week active duty for training period and plenty of voluntary extra duty time.

In 1970, Lundelius was released from the floating Navy after five years of active duty as a radar operator. He was a young man who wanted to fly with the Naval Air Reserve and joined NARTU Alameda when he learned of a program that would enable him to do so. His training completed, on June 9 he re-enlisted in the Naval Air Reserve for six more years, sworn in by Captain H. A. Hoy, commanding officer of the NARTU.

Night Scene

Photo officer LCdr. Calvin L. Larsen took this time exposure of a Reserve P-2 on a photo flare drop over the port area at NS Rota.

ASW – American Style

Lockheed's P-3 patrol plane was a center of attraction at the 1971 Paris Air Show where planes from many countries were exhibited.

Record Bombs

Commander W. J. M. O'Conner of Oriskany-based VA-153 straddles one of two record bombs he delivered — the 10,000th of Oriskany's 1971 WestPac cruise and the 100,000th during underway replenishment by USS Sacramento.

Memorial

Just before relinquishing command of Chase Field, Captain Hale B. Stewart dedicated a memorial — a pedestaled Skyhawk—"to the men who lost their lives at NAS Chase Field, training the world's best aviators." A-4B represents a joint local community/Navy project.

Familiar sights at NAS Lemoore—the main gate and Reeves Field as they appear today.

BEST POSSIBLE LOCATION

By Ens. Timothy Pinkney

July 8, 1971, marked the tenth anniversary of the Navy's newest jet air station, NAS Lemoore, located 35 miles southwest of Fresno in the San Joaquin Valley of central California. Lemoore was commissioned a decade ago by Under Secretary of the Navy Paul B. Fay, Jr., before a crowd of 130,000.

The base became operational on November 20, 1961, when Chief of Naval Operations Admiral George W. Anderson, Jr., dedicated Reeves Field in memory of Admiral Joseph M. Reeves, Commander in Chief, U.S. Pacific Fleet during the 1930's and known as the Father of the Carrier Task Force.

The home of the Pacific Fleet light attack community, NAS Lemoore supports fleet carrier squadrons and provides operational training for their personnel. It is the home base of four attack carrier air wing staffs, three replacement air groups and 18 fleet squadrons which fly the A-4 *Skyhawk* and A-7A/B/E *Corsair II's*.

When it became apparent in 1959 that NAS Moffett Field could not be expanded, the Chief of Naval Operations requested a survey be made to find the best possible location in the northern California/Nevada area for a new naval jet air station. In December 1954, Lemoore was chosen. The project was approved by Congress and $10,089,000 was appropriated for the acquisition of approximately 20,000 acres of land and navigation assessment of an additional 12,000 acres. The land was made available in 1958 and construction work began on May 26, 1958.

Local planning commissions, in cooperation with the base, established a two to three mile "green belt," adjacent to and extending around the air station to prevent problems arising from jet noise and population buildup around the station.

NAS Lemoore consists of three functional areas: operations, administration and housing. Operations and administration are six miles apart in order to keep the noise factor reasonably low for personnel not directly concerned with aircraft operations.

The operations area consists of two 13,500-foot concrete runways; adjacent parking aprons; five aircraft hangars; a maintenance hangar with apron and jet engine test facilities; communications facilities and navigational aids; an operations building with control tower, photographic laboratory and air traffic control facilities; a branch galley; exchange store and coffee shop; fuel storage and distribution facilities; a crash/fire station; a utilities plant; sewage treatment plant; and various ordnance facilities.

The administration area is made up

of facilities which support the military and civilian personnel assigned to the station: administration building, enlisted barracks, BOQ's, main galley, storage building and area, public works facilities, utilities building, sewage plant, enlisted, CPO and officers' clubs and various other community facilities.

Consisting of two, three and four-bedroom single units, the housing area provides 1,590 units for married personnel.

To assist in the training of the carrier-based squadrons, NAS Lemoore provides services and material support to aviation activities and units of operational forces. Twenty-two activities are located aboard the station, including a naval hospital, a naval aviation engineering service unit, naval air maintenance training detachments, fleet air intelligence support center, naval weather service detachment and a fleet airborne electronics training unit detachment.

Naval Hospital Lemoore was officially commissioned on July 1, 1968. Originally a station medical department, the hospital is now a separate command under the Bureau of Medicine and Surgery.

It would take a man more than four years to complete every course offered by the three naval air maintenance training detachments. The courses run from one to six weeks. Det 1015 is responsible for training maintenance personnel in the A-4 weapons system. Its average output is 200 trained maintenance men a month. Det 1033 averages 875 students a month and provides a continuous supply of well trained A-7 maintenance personnel for the fleet and shore activities. Det 3034 is responsible for training all maintenance personnel in proper management and administrative techniques used to promote a sound maintenance program for both intermediate and organizational maintenance activities.

Fleet Air Intelligence Support Center Lemoore, the newest and largest facility of its type, provides intelligence materials, spaces and equipment for use by the fleet and training squadrons and a workshop for air wing and squadron air intelligence officers.

Originally under the administrative and operational control of Commander, Fleet Air Alameda, in August 1969, Lemoore established its own fleet air billet. Today, ComFAirLemoore is the subordinate representative of Commander, Naval Air Forces, Pacific Fleet, in the functional areas of light attack aviation and attack carrier air wings. He is responsible for the training, readiness and logistic support of the on-board light attack community. Also located aboard are the staffs of CVW's 5, 9, 19 and 21.

NAS Lemoore

In the beginning, there were two types of aircraft at Reeves Field: A-1 *Skyraiders* and A-4 *Skyhawks*. NAS Lemoore was the last station to provide training of officers and men in the A-1 with VA-122 the RAG responsible for training the pilots and maintenance personnel for the last *Spads*.

The A-7 *Corsair II* came to Lemoore in 1966. The new instructor pilots had scarcely checked out in the new single-seat jet when the first group of replacement pilots arrived. The familiar Spad School sign and large propeller were removed and the Corsair College sign went up. Two years and two months from the date of the first flight of the A-7, July 1967, the first fleet A-7 squadron, VA-147, graduated.

At any given time, Corsair College has between 55 and 65 replacement pilots and 500 to 600 maintenance trainees on board for training. Flight and ground training includes instrument flying, navigation, tactics, weapons delivery and carrier qualification. Maintenance trainees receive formal classroom and on-the-job training in the operation of the complex electronic, hydraulic and mechanical equipment of the A-7.

Another squadron home-based at NAS Lemoore is VA-125 which functioned as the Navy's West Coast A-4 RAG from 1961 to 1969. It trained all Pacific Fleet light attack jet pilots and enlisted maintenance personnel in the operation and maintenance of all models of the *Skyhawk*. Since the squadron began operations, it has trained over 2,100 pilots and nearly 13,000 enlisted men.

In 1969, VA-125 began the transition to A-7's, but retained its training mission. The training syllabus is designed to introduce fleet replacement pilots, the majority of whom are newly designated aviators on their way to their first squadron, to the light attack jet concept.

The flight training phase is designed to familiarize the new pilots with the aircraft, its systems, capabilities and limitations. It is broken down into four major categories: familiarization, tactics, weapons and carrier qualification.

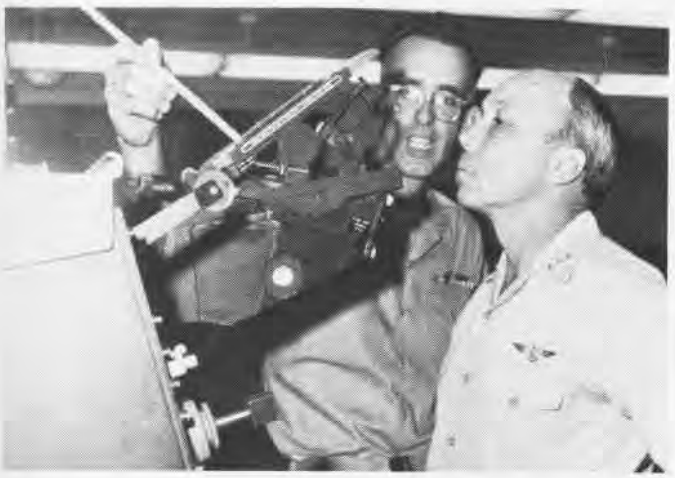
VA-125, as well as all other squadrons aboard Lemoore, deploys weapons detachments to NAAS Fallon, Nev., where each class of replacement pilots gets the major portion of its weapons training, using practice bombs and rockets. For air-to-air ordnance, the Pacific Missile Range is used; air-to-ground ordnance delivery is practiced at the Naval Weapons Center, China Lake, Calif.

In addition to its pilot training program, VA-125 has an extensive Fleet Replacement Aviation Maintenance Training Program for enlisted personnel. This program provides two to sixteen weeks of formal classroom training in the use of ground support equipment, driver training and fire fighting. On-the-job training, plane captain training and various other essential courses of instruction are also furnished by the squadron.

On May 1, 1970, VA-127 became the Navy's sole A-4 RAG. Its primary mission is to provide fleet replacement pilot training, basic and refresher all-weather instrument training, and replacement enlisted training in TA-4 and A-4 *Skyhawks*.

Home-based at NAS Lemoore are 18 squadrons in addition to the three RAG's: Attack Squadrons 22, 25, 27, 55, 56, 93, 94, 97, 113, 146, 147, 153, 155, 164, 192, 195, 212 and 215.

This is NAS Lemoore, Calif., the Pacific Fleet's light attack community.



At left, a view of the operations area. From the top, an instructor briefs a student on A-7 turn-up procedures; VA-125's former TA-4 and A-4 Skyhawks are now being used by VA-127 for training replacement pilots; VAdm Maurice F. Weisner is briefed on the A-7's heads-up display.

NAS Lemoore's Reeves Field was named in honor of Admiral Joseph M. Reeves, Navy Cross holder and Commander, Aircraft Squadrons, Battle Fleet, during Naval Aviation's formative years. He was born on November 20, 1872, in Tampico, Ill. A member of the Naval Academy's class of 1894, he was first assigned to a two-year tour aboard the cruiser *San Francisco*, followed in 1896 by service aboard the battleship *Oregon*.

In 1901, he reported to the Naval Torpedo Station, Newport, R.I., for instruction, and in 1902, began a period of sea duty that terminated in 1906 when he reported as a Naval Academy instructor.

The year 1908 began a period of service aboard several ships, interrupted briefly by a tour ashore as a member of the Board of Inspection and Survey and in command of the Naval Coal Depot, Tiburon, Calif.

During WW I, Captain Reeves commanded the battleship *Maine* and was awarded the Navy Cross "for exceptionally meritorious service in a duty of great responsibility."

From 1919 to 1921, he served as naval attache at the American Embassy, Rome, Italy. Then, the captain reported for duty as the commanding officer of USS *Pittsburgh* and later as C.O. of the Mare Island Navy Yard. In 1922, Reeves commanded *North Dakota* until he was ordered to the Naval War College as a student and, subsequently, as an instructor. In 1925, he attended the Naval Aviation observer course at NAS Pensacola, Fla., and began, at age 53, his close relationship with Naval Aviation. Assuming command of Aircraft Squadrons, Battle Fleet, the same year, Reeves developed fleet aviation tactics and helped prove the then speculative value of the Navy's first aircraft carriers.

He reported for duty as senior member of the Pacific Coast Board of Inspection and Survey in 1931 and became Commandant of the Navy Yard, Mare Island, in 1932. He assumed command of the Battle Force, with the accompanying rank of Admiral in 1933 and, one year later, hoisted his flag aboard *Pennsylvania* as Commander in Chief, United States Fleet.

After two years in command, the Admiral was transferred to the Navy Department for duty with the General Board and became board head in 1936.

In 1938, he was retired but was called back to active duty with the Office of the Secretary of the Navy in 1940. He was advanced to the rank of Admiral on the retired list and awarded the Distinguished Service Medal for exceptionally meritorious service throughout WW II.

Adm. Reeves was ordered relieved from active duty in 1946, ending more than 52 years of service, and on March 25, 1948, he died at Bethesda, Md.

at Sea with the Carriers

ATLANTIC FLEET

America (CVA-66)

America's 76,000th arrested landing was logged by Ltjg. John C. Patton of VF-101 Det 66. Flying an F-4J, Ltjg. Patton also logged the carrier's 30,000th waist catapult shot.

The engineering department aboard CVA-66 has been awarded its third consecutive Red E for being the most outstanding among attack carriers in the Atlantic Fleet.

Ready Room Five aboard the carrier is unique in at least one aspect—the *Intruders* will always be there. During *America's* last two cruises, A-6 squadrons VA's 35, 85 and 165 laid tile plaques of their insignia in the ready room.

Independence (CVA-62)

VA-66, embarked aboard *Independence*, considers itself a prime example of the opportunities open to enlisted personnel in Naval Aviation. The "Mod Squad" has 20 officers, 11 of whom began their service in the enlisted ranks. Its commanding officer, LCdr. J. J. Fleming, in a billet formerly filled by a commander, served three years as a radarman before entering Aviation Cadet Officer School. VA-66, home-based at NAS Cecil Field, Fla., flies *Corsair II's*.

Intrepid (CVS-11)

The German Army boarded *Intrepid* in the form of three West German UH-1D helicopters from an army base near Frankfurt. They landed on the carrier recently while she was moored in Hamburg. Major Peck of the *Huey* squadron requested the landing as part of the tour to be taken by his men. The 25 visitors toured the ship with officers of HS-11 who briefed them on the SH-3D.

A ceremony in *Intrepid's* ready room celebrated VS-24's 30,000 accident-free flight hours, spanning 69 consecutive months of operations on and off several carriers in the Atlantic Fleet. The *Tracker* crew which counted the 30,000-hour mark included Commander William H. Reed, ComCVSG-56, Lieutenants Harry Murray and George Samara, AWC Garner Morgan and AWAN Warren Smith.

Saratoga (CVA-60)

Command of *Sara* passed to Captain James R. Sanderson during an August change-of-command ceremony aboard the carrier while she was anchored off Athens, Greece.

Captain Sanderson, who came aboard from the staff of Commander, U.S. Sixth Fleet, is *Sara's* 16th commanding officer. He relieved Captain Dewitt L. Freeman, who has been assigned duty as Deputy Commander, Naval Striking and Support Forces, Southern Europe. *Sara's* C.O. since August 1970, Capt. Freeman was advanced to the rank of rear admiral upon relinquishing command of the carrier.

While *Sara* was cruising off the coast of Greece, a medical team was called to a nearby island to aid a woman who was suffering internal hemorrhaging.

In response to a radio call for help from the Royal Hellenic Navy, a helicopter carried the two-man team to the island of Andikithira, about 25 miles northwest of Crete and 90 miles from the carrier.

Without visual aid, the helo made a night landing in a field which island residents had marked with bed sheets. Then the townspeople led the medical team by lantern light up a primitive hillside trail to the stricken woman's home.

LCdr. David G. Kemp, CVW-3 flight surgeon, treated the woman for shock and bleeding and the villagers carried her down the trail to the waiting helicopter. She was flown to the Royal Hellenic naval base hospital at Souda Bay, Crete, for further treatment.

"I've never made a house call like it," stated the flight surgeon.

HM3 Thomas Hanchruck assisted LCdr. Kemp during the medevac. The HS-7 helicopter crew members were Lt. Robert A. Kammer, pilot; Ltjg. John C. Roake, copilot; AWC Thomas C. Dotson; and AWAN Daniel J. Rogack.

Later, ten *Sara* crewmen were cited for meritorious achievement in connection with a recent flooding in one of the ship's engine spaces. The crewmen's quick action stopped the flooding and soon restored the flooded area to normal conditions. Their citations state, "Their outstanding leadership, technical competence and disregard of personal safety were instrumental in preventing greater damage to the ship."

Awarded Navy Commendation Medals were Lt. Kenneth D. Bryant and CWO-2's Wallace R. Lueck and Buford E. Latham of the engineering department, and CWO-2 Donald R. Reeves and BMC Dudley Hartman of the explosive ordnance disposal team.

Navy Achievement Medals were awarded to MM2 Richard A. Stanton and FN Rodney C. Woods of M division; and BT1's Phillip W. Chambers and Guy O. Roberts, and FN David J. Peris of B division.

Vice Admiral Isaac C. Kidd, ComSixthFlt, presented the medals.

Picking locks and cracking safes aboard *Sara* is old stuff for DC2 Howard T. Ashby and SF3 Robert J. Brault.

The lock-picking pair have not been brought to justice, though. The reason: they are the ship's locksmiths and their burglarizing is legitimate.

For Ashby and Brault, drilling into jammed safes, springing desk drawers and rushing to the aid of officers who are locked in (or out of) their staterooms are all in a day's work. They also duplicate keys and maintain the myriad of locks found throughout the ship.

Ashby has been *Sara's* locksmith for two and one-half years. Like Houdini, he carries the tools of his trade secretly — strapped to his leg is a leather case which he opens to reveal an array of about 70 gleaming lock picks. "In the beginning I made my own picks," he explains. "I puchased this set from a locksmith in Jacksonville."

Brault is Ashby's relief and he's learning the locksmith trade before Ashby leaves. He's a good student. "I can pick the easy locks, change combinations and crack the safes," he says.

Guam (LPH-9)

LPH-9 logged her 28,000th accident-free landing while operating off the southern coast of Sardinia, Italy, when Marine Capt. Vincent J. Plick of HMM-162 landed his CH-46 *Sea Knight* during an amphibious exercise.

Lexington (CVT-16)

Captain Jack E. Davis, C.O. of *Lexington*, and Captain James Homyak, C.O. of NAS Pensacola, carqualed in the T-2C *Buckeye*, acquainting themselves with the problems of student Naval Aviators. "I was also looking for procedures for improving the safety and efficiency on our flight deck," says Capt. Davis.

"Bloody awful in the groove, mate." The Aussie accent of Lt. Gary W. Northern, Royal Australian Navy, has become familiar to those aboard *Lexington*. Lt. Northern reported to VT–22 from Royal Australian Fighter Squadron 805, RANAS Nowra, New South Wales. He has completed the landing signal officer training syllabus and carrier qualified in the TA–4J *Skyhawk*.

Lexington, now 28 years old and the oldest operational carrier in the Navy, marked her 280,000th arrested landing when LCdr. R. L. Hogue of VT–31 flew aboard in a TS–2.

John F. Kennedy (CVA-67)

In August, *JFK* hosted about 5,600 guests during the annual dependents' day cruise. *Kennedy* families began boarding the carrier at 7 a.m. and the flood of visitors continued until 8:30. At 9:30 the ship was underway.

Large crowds filled the hangar bay. Many who had never been on a ship before were amazed at the size and complexity of operations. A mother seemed shocked that her son, who could not be relied on to pick up his clothes at home, was now responsible for the lives of pilots and multimillion dollar aircraft landing on the rolling deck.

Queries of "Do you really do this?" were often answered only with sheepish grins that slowly broke into broad smiles. "Sure, there's nothing to it."

On board for the cruise were Rear Admiral D. D. Engen, ComCarDiv-4, and Rear Admiral W. D. Houser, ComCarDiv-2.

The main event of the daylong cruise was flight operations. CVW-1 gave a good performance but, unfortunately, low haze reduced visibility and many of the scheduled air demonstrations had to be confined to simulations.

The visitors, perched high atop catwalks surrounding the island and at various places on the flight deck, had an inside view complete with noise and jet blast. For those who had never witnessed flight ops before, it was quite a shock to see the sleek fighters hurled off the deck by one of the ship's four steam catapults. There were more than a few doubtful looks as the big jets roared back in for a landing. Many seemed to wonder if such a small cable would stop the screaming aircraft in time.

During these flight operations, with the number three wire boresighted, the pilot grips the stick with a sweaty hand. His craft is throttled at 80 percent, wheels down, hook down. In seconds his aircraft will hit the moving carrier deck. Naval Aviators do it every day, but it never becomes commonplace. But for a first-timer, it's unforgettable.

"I was scared as hell," is how one lieutenant described his first arrested landing in an F-4 aboard *JFK*.

Ltjg. Mark Bradley of Oceana's VF-101 wasn't mincing his words in the ready room after completing his carquals. As a novice pilot, Bradley is one of 60 to 65 pilots a year from Oceana who make their ten carrier landings to qualify for full-time carrier duty. (Ten landings—seven day arrestments and three night landings—are needed to qualify.)

These pilots have already landed the T-2 on the training aircraft carrier *Lexington* in the Gulf of Mexico, but the *Buckeye* is slow and easy to handle compared to the F-4.

Catching the hook aboard *Kennedy* with a more than 1,500-mph *Phantom* "is a far cry," they say, "from driving a sawed-off T-2 aboard *Lady Lex*."

Was your second landing any easier? "Nope," Ltjg. Bradley smiled.

The squadron ready rooms aboard *Kennedy* are full of Bradley types as well as many older pilots. These old-timers have qualified many times and are merely updating their proficiency.

After debriefing, the novices gather in the transient quarters. They are all in agreement on several aspects of their recent qualifications: they are all amazed at how quickly an empty flight deck swarms with busy people within seconds of touchdown.

Wasp (CVS-18)

Approximately 500 children participating in the Rhode Island "Summerthing 71" program for underprivileged children visited *Wasp* for a week during August.

The visits, which averaged 100 children daily from Monday through Friday, included tours of the ship's hangar bays and flight deck and a milk and cookie snack in the galley.

The groups visited the ship as part of a tour of NAS Quonset Point. Prior to boarding the ship, the children toured the base airstrip and viewed the aircraft which operate from *Wasp* when she is at sea.

Wasp is commanded by Captain Kenneth H. Lyons.

PACIFIC FLEET

March marks the 50th anniversary of the aircraft carrier in the U.S. Navy. NANews needs your assistance to properly commemorate this occasion. Feature articles and dramatic photographs are needed by January 1. See Editor's Corner for more details.

Ticonderoga (CVS-14)

Life aboard an aircraft carrier is no big picnic—but for the 2,450 men of CVS-14 it does include a lot of little ones.

The "*Tico* cabanas," as the picnics are called, are held every afternoon the ship is in port. Crewmen migrate to the nearest naval station recreation field to indulge in as much free food and drink as they want. The menu consists of anything from steak and potatoes to hamburgers and french fries.

Strictly a self-help project, the cabanas are supported by the crew and the general mess. Perhaps the nicest thing about the picnics is that they go everywhere *Ticonderoga* and her crew go, be it San Diego, Calif., or Sasebo, Japan.

An Alameda-based Reserve Naval Aviator has a knack for making historic landings at sea. LCdr. Ralph E. Goodson, OinC of VS-82, made CVS-14's 140,000th landing in an S-2 *Tracker* during recent active-duty carquals.

His first brush with this type of fame came aboard the carrier *Antietam* in 1962, shortly after he received his wings—it was all a mistake. *Antietam's* C.O. was to have made the ship's 112,000th landing, but one of the aircraft in the formation took a waveoff. This forced the skipper's plane out of the landing order necessary for the honor and Goodson made the touchdown that counted.

Enterprise (CVAN-65)

It was quite a night: a combination underway and vertical replenishment involving *Enterprise* and four other ships.

On the carrier's port side, *Sacramento* was in the process of pumping 718,000 gallons of fuel for CVAN-65's aircraft while refueling two other ships from the port side of the fleet oiler; and on the carrier's starboard side was *Niagara Falls*. Four helicopters of HC-3 Detachments 196 and 106 from the supply ship transferred 475 pallets of stores and ordnance to *Enterprise*. Expert planning and coordination between the five ships were the decisive factors in accomplishing the two and one-half hour maneuver.

Lt. Thomas E. Hart of VAW-113 logged *Enterprise's* 113,000th arrested landing, and the ship's printing department also made a good impression—2,370,307 impressions, that is. The work was done in a month's time by five-man day and three-man night shifts of 12 hours each. It may not be a record, but the *Enterprise* is proud of her printing department.

Oriskany (CVA-34)

The 1970-71 Battle E for Pacific Fleet attack carriers has been won by CVA-34. The award was presented by message from Vice Admiral Thomas J. Walker, ComNavAirPac, as *Oriskany* steamed toward the Gulf of Tonkin. Individual pennants were also won by the carrier's communications and weapons departments, while VF-191 captured a fighter squadron E.

Ranger (CVA-61)

A formal change-of-command ceremony was held early in September aboard CVA-61 while she was in dry dock at Hunters Point Naval Shipyard in San Francisco. Captain Joseph L. Coleman, who commanded the ship during her recent combat support deployment in Southeast Asia, was relieved by Captain Henry P. Glindeman, Jr.

Constellation (CVA-64)

Could you run a university of five thousand? Offer both academic and vocational training? With a daily turnover of students? Without a board of directors, coeds, or football team?

These tasks face Lt. Bud Statton, educational services officer (ESO) aboard *Constellation*. The primary mission of the ESO is to help Navy men advance. The office checks on the man's progress in course study, arranges for testing, and verifies the changes for his pay record. It's a big job, with a big reward. Office supervisor PN1 Renevitz describes the feeling: "It takes a lot of work to process a man for testing. But when he passes the test and is advanced, it all seems worth it."

But that's only half the job of ESO. The office also runs a complete curriculum of high school and college courses.

Helping a man "to get ahead of the game" is the measure of success for ESO. But the success is not always easy. First the man must be reached and, on an 81,000-ton warship, this can be difficult. Lt. Statton remarks, "With 5,000 men aboard and new people arriving every day, it's hard to show everyone what we have to offer."

Once a man has begun a course, he must have motivation to continue.

"It can be discouraging," says Statton. "A guy studies for three months and doesn't seem to be getting anywhere. We can have only limited personal contact with each man and it's difficult to keep them motivated. But if you put in a little extra time talking with a man and he sees that you're interested and realizes that you believe what you're telling him, he'll work."

It's that extra time, the personal interest, that makes for a successful ESO. Where does Lt. Statton find the extra time? It is difficult because, in addition to his duties in ESO, he is special services officer, stands bridge watches and flies to maintain his qualification. But his eight-man staff—the ESO team—is ready to spend time with anyone. The investment of time largely determines the success of the student. If he needs an off-ship school, PN2 Ulrich processes the application, secures the quota and cuts the orders. PNSN Benzinger, librarian, supplies him with course study materials, and PN1 Renevitz ensures that the man completes all prerequisites.

Tripoli (LPH-10)

This San Diego-based amphibious assault ship received her sixth commanding officer when Captain James M. Gammon relieved Captain Paul J. Hartley, Jr. Capt. Gammon previously commanded USS *Vancouver* (LPD-2). Capt. Hartley's next assignment will be in the Office of the Chief of Naval Operations as Deputy to the Director of ASW Programs.

CAMSI

Text and Photos by LCdr. Aaron C. James

More and more the final arbiter of life's situations—be they individual or corporate—is economics. Certainly this is a most significant factor in the field of national defense and one that must be carefully gauged in the operation of expensive, high performance aircraft from the deck of an aircraft carrier. Neither the Navy, nor the nation, can afford to conduct air warfare at anything less than peak efficiency.

By their ever growing complexity, naval aircraft continually demand more support in the way of maintenance personnel, servicing facilities, test and repair equipment, and spare parts. As huge as our new carriers are, there never seems to be enough room on board to accommodate the increasing aircraft support requirements. In fact, the very size of the carrier tends to compound the support prob-

A maintenance man's difficulties are frequently added to by tight working spaces.

Communications on noisy flight decks and improving effectiveness of quality assurance are also CAMSI-related areas of concern.

lem. The needed spare part may be in any one of several dozen storerooms. Once located, its size, weight and shape may make it susceptible to damage en route to the aircraft or repair bench as it is taken through a maze of narrow passageways and up several sets of steep ladders; and after all that, if it is undamaged, installing it may prove extremely difficult in the dimly lit corner of a hangar bay. While aviation maintenance men labor heroically to overcome these difficulties, the reduced aircraft readiness trend continues because of the total support problem.

Aware of the scope of the problem, the Chief of Naval Operations concluded that a special effort was needed to achieve significant improvements. Accordingly, the Carrier Aircraft Maintenance Support Improvement Project (CAMSI) was established by CNO to "identify priority actions required to improve and sustain improved carrier aircraft readiness." CNO also required "a complete package of recommendations together with a milestone plan for implementation. . . ." The project was assigned to the Naval Air Systems Command with specific responsibility delegated to the officer for Carrier Aircraft Support (CAS).

Why CAMSI? Most of our problems are well known and of long standing; why do we need some outfit in Washington to tell us what we already know?

Most maintenance managers have at one time or other complained of a lack of the big "three M's": men, material and money. Many shout, "Give us the parts and we will do the job!" It isn't that simple. The Military Airplane Systems Division of Boeing recently released an in-depth study of material support requirements in three large-deck CVA's with nearly identical deck loading factors. It reported that less than 25 percent of aviation 3M items were listed on the carrier Aviation Consolidated Allowance List (AVCAL). For off-ship aviation not operationally ready (supply) requisitions, about 10 percent were listed on AVCAL's. Obviously, we need only make the proper adjustments to the AVCAL to ensure parts' availability. Obviously?

Back to the Boeing study. Of all requisitions (68,000 against 38,000 different supply line items), there was only 20 percent commonality among the three carriers. Although each carrier used only 25 percent of its AVCAL, in 80 percent of the cases that particular 25 percent differed from the 25 percent utilization of the other two carriers. If you consider that in models and numbers of aircraft the deck loads were nearly identical, you will realize that providing the parts is a very difficult and complex problem.

The parts problem is just one of many which CAMSI will attempt to identify, analyze and solve. Analyses of various problem areas have revealed that, in many cases, the total problem does not lie exclusively within the cognizance of any single systems command but is shared by several. The solution which is considered excellent from the point of view of one systems command may impact unfavorably in an area which is under the cognizance of another. Often it is the proverbial case of the left hand not knowing what the right hand is doing.

It is intended that CAMSI will eliminate or appreciably reduce this sort of thing. To ensure that CAMSI can do its job, it has been given the status and authority of an air project with the code designation PMA-260. Its sponsor is the Deputy Chief of Naval Operations (Air Warfare), and CAMSI will work very closely with the operating divisions of the systems commands. These divisions have the responsibility and know-how for implementation of specific plans.

And what are some of the specific CAMSI plans? One of the most important CAMSI projects involves improvement of maintenance spaces aboard ship. Under the leadership of NavShipsSysCom, the planned improvements are now being translated into ship alterations. Also under way is a pilot program to improve the reliability of out-of-production avionics equipment. The improvement of equipment which is out of production, but still in use, has long been a serious problem.

And CAMSI has not forgotten that people make the Navy go. The CAMSI personnel program includes proposals which will improve the training and detailing of plane captains and quality assurance personnel, revise the NEC system and make management train-

ing available for LDO's, warrant officers and senior enlisted men. In an effort to ensure that future CAMSI programs will reflect the fleet point of view, a maintenance improvement questionnaire was recently sent to all sea-based squadrons, carriers, LPH's and AIMD's which support carrier aviation.

The CAMSI team will consist of officers and civilians, full or part-time representatives from all the principal systems commands concerned, with PMA-260 serving as the lead activity. It is hoped that the special status of PMA-260 will enable it to solve problems without undue delay caused by red tape or inter-command boundaries. In cooperation with already established elements of the Naval Material Command, CAMSI hopes to be able to make contributions in all areas of aviation maintenance. In effect, CAMSI might be considered the ombudsman of the maintenance man, ensuring that the system and the fleet maintenance man realize and understand each other's problems through improved communication.

CAMSI will utilize the "total-systems approach." Although much has been written about the systems approach, the concept can be rather vague in itself and can mean many things to many people. In CAMSI, the systems approach means that the aircraft carrier, its embarked air wing and shore-based support facilities must be considered as a single entity or integrated system; a maintenance or support action which affects any part of the system will affect the whole. For example, if we decide to relieve shipboard Aircraft Intermediate Maintenance Departments (AIMD's) of a certain maintenance function, we must also consider the impact upon depot and shore-based AIMD workloads, new spare parts requirements, available storage space and COD availability — among others.

Heading the CAMSI office as project manager is Captain Richard J. De Prez, a veteran carrier aviator. He has a staff of four civilians and three naval officers. Three of the civilians are graduate engineers; the naval officers have all had fleet experience in aircraft maintenance or aircraft carrier operations.

Capt. De Prez, who recently relinquished command of NAS Norfolk, insists that CAMSI operate in the "real world." Recommendations and proposals for improvement of carrier aircraft readiness from fleet personnel are solicited and welcomed. CAMSI will seek speedy action.

The "3I" system will be used in the approach to problems: Identify, Improve, Implement. However, one must realize that CAMSI cannot make the problems vanish overnight. Certain improvements will not be visible until they are incorporated into the first ship, most likely USS *Kitty Hawk* (CVA-63), and some improvements will not be visible at the working level. Although many of the obstacles to improved maintenance exist only because "it has always been that way," CAMSI will not seek change merely for the sake of change. More effective maintenance and increased readiness are the criteria by which all practices, procedures and managerial systems will be judged.

CAMSI is not responsible for any particular weapons systems or equipment and has no special interests. Its only interest is in improved aviation maintenance support and increased material readiness. Its only customer is the working maintenance man.

One final word. CAMSI cannot help you unless it hears from you. Personnel are encouraged to contact CAMSI by informal means. The autovon is 222-8467 / 8468 / 8469 / 8520 / 8521 / 8522. CAMSI welcomes the help of everyone — from admiral to airman. This is an opportunity to put your ombudsman to work.

Lighting conditions in maintenance spaces aboard the carriers are often inadequate.

CAMSI is attempting to simplify technical publications for easier use on flight line.

NAVAL AVIATION NEWS

F-3D's Serve Army

WHITE SANDS MISSILE RANGE, N.M. – Three obsolete Navy fighter planes will play an important part in the development of the Army's newest surface-to-air missile, *Sam-D*.

The missile systems division of the Raytheon Company recently flew three F-10 (F-3D) *Skyknights* to White Sands from Hanscom Field, Mass. They will be used during the initial testing phase of *Sam-D*.

The stubby jets were built in 1948-49 and used during the Korean War. The plane is generally credited with shooting down the first enemy jet at night.

The F-10 was selected for the project because it has two front seats, a large cone for the installation of instruments, and is cheaper to operate than available commercial jets

During the testing phase, one of the old jets will serve as a "target" while the other will give chase. Sitting next to the pilot in each aircraft will be a senior electronics technician who will be checking highly intricate instruments throughout the test flights.

The F-10's at White Sands are the only ones now flying. One is in the Wright-Patterson Aircraft Museum. The three, on loan from the Navy, are flown and maintained by civilians working on an Army contract.

Power Distribution System to Utilize Solid State Tech

WARMINSTER, Pa. – To overcome the deficiencies of today's electric systems, the Naval Air Development Center is developing an electric power distribution system utilizing solid state technology. As electric systems have become more sophisticated with the addition of radar, advanced communications and navigation equipment, flight surface actuators, etc., the need for solid state electric logic (SOSTEL) has grown. However, technology for distributing and controlling electric power from source to point of use has remained basically unchanged. The bulky, heavy complex of wires and controllers in present systems will not be adequate for tomorrow's aircraft.

SOSTEL features include the separation of electrical control functions from power circuits; initiation of electrical control functions by solid state transducers; transmission of control data over common party lines, using multiplexing techniques; centralization of system logic in a central processor; solid state power switching; and integration of protective functions in power switching modules.

Electrical control information is fed from solid state transducers to encoder-transmitter terminals strategically located throughout the airframe. Each terminal can handle information from up to 64 sources, which is coded and transmitted on a common party line to a central data processor, using time division multiplexing techniques. A logic program stored in the processor's electrically programmable memory indicates the action to be taken. Then the processed data are again coded and transmitted on the party line to receiver-decoder terminals which use

AIMD WHIDBEY

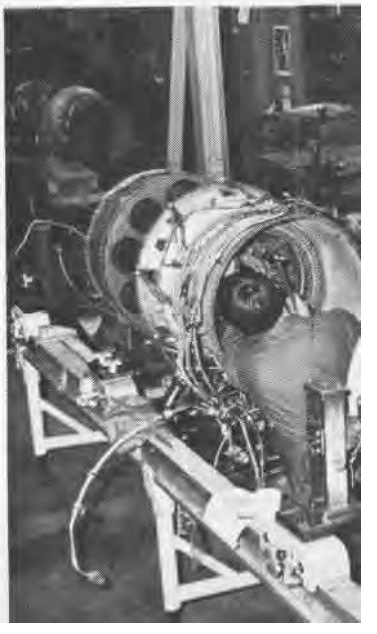
For the second consecutive year, the NAS Whidbey Island Aircraft Intermediate Maintenance Department has been awarded the ComNavAirPac proficiency award as the top shore-based large AIMD serving Pacific Fleet Naval Aviation.

The award is presented annually to the AIMD that demonstrates the most outstanding achievement in aircraft maintenance. This year's competition pitted Whidbey Island against Alameda, Atsugi, Barbers Point, Cubi Point, Lemoore, Moffett Field, Miramar, North Island and Sangley Point.

Headed by Commander Joe Corsi, AIMD is composed of approximately 500 officers and men including, in addition to a nucleus of permanently assigned personnel, maintenance personnel from each of the many supported activities, among them all VA's, VAQ's, NARTU's, and MARTD's.

This team assures deploying squadrons of top performing aircraft and well trained intermediate level maintenance personnel.

AIMD is a maintenance activity whose primary mission is to support the maintenance needs of the tenant squadrons. Intermediate is applicable since AIMD maintains those components that are beyond the capability of individual squadrons but do not require a complete overhaul.



these commands to drive power switches, indicator lights and other devices.

The use of solid state sensors, micrologic, and power switching allows many refinements in electric power control, which increase its efficiency and minimize transients normally created by load switching. This, in turn, allows for more relaxed design criteria in utilization equipment power conversion circuits. A model of a SOSTEL system has been built and is being evaluated. Results are encouraging and an early flight test is planned.

Lightning Spotter Developed

ARLINGTON, Va. — Navy research on thunderstorms has led to the development of an optical device which can detect lightning as far as 100 miles away. The ultrasonic device registers the presence of lightning by sensing the minute, short-lived changes in light intensity caused by the lightning. It is based on optical sensors which register lightning in distant clouds even when not visible to the eye in bright daytime. The new instrument was developed as part of a broader program of research into the atmospheric phenomena that present a hazard to naval operations. Atmospheric electricity can affect missile launchings, aircraft operations, communications, refueling operations and weather forecasting.

Besides its usefulness as a research tool, the new instrument may find other practical applications around ships and naval air stations. As a scanning device, it can detect the presence of dangerously electrified clouds and pinpoint distant areas of lightning, thereby contributing greatly to the safety of air operations.

The new instrument was developed by scientists of the New Mexico Institute of Mining and Technology under a research project supported by the Office of Naval Research.

Atlantic Corsairs Vie in Weapons Meet

JACKSONVILLE, Fla. — LCdr. F. H. Gerwe, VA-12, scored a laydown bull's-eye and a 16-foot weighted dive bombing average to take the top individual A-7E honors in the Atlantic Fleet's third light attack air-to-ground weapons meet in August.

Commander J. F. Donahue, X.O. of VA-72, was the best A-7B weaponeer in the meet which was held at Pinecastle Impact Range in the Ocala National Forest. He had a laydown bull's-eye and a 60-foot dive bomb average.

Squadron honors went to VA-81 as the best A-7E entry, and VA-46 as the top A-7B unit.

Nearly 80 pilots from six Cecil Field *Corsair II* squadrons participated in the two and one-half day derby.

The competition included two high or low angle glide bomb runs with the first Mk 76 practice bomb weighted 60 percent. The event counted as half total squadron merit and 70 percent for individuals.

One low-level laydown delivery of a Mk 106 practice bomb represented 30 percent of the unit and individual scores.

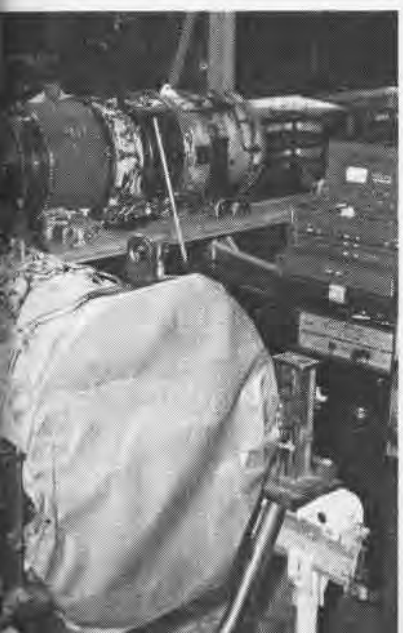
Four strafing runs rounded out the unit scoring. A-7E's were allowed 250 rounds of the standard 20mm load; A-7B's fired 150 rounds.

DOES IT AGAIN

Typically, when a malfunctioning aircraft part is located, a new part is ordered from supply and the old part is inducted into AIMD for repair and return to the supply system. If the part is not repairable at AIMD, it is forwarded to a depot activity for overhaul.

During the past year, AIMD Whidbey was able to repair 85 percent of the items inducted.

Although AIMD is considered an intermediate link between squadron and overhaul activities, its personnel frequently assist squadron personnel in aircraft work, performing all maintenance tasks, including some overhaul work that can be more efficiently accomplished on station.



AIMD also maintains and operates a pool of aviation ground support equipment, including test sets, air conditioners, aircraft starting and power units, and numerous other items essential to the conduct of day-to-day operations.

The successful operation of this potpourri of people and equipment is dependent on the cooperation and support of many other station departments and activities. AIMD personnel readily acknowledge that the supply department and supported squadrons aided them in achieving the success that the award represents.

Letters

Supercritical

In the August 1971 issue of *Naval Aviation News* there was an interesting article titled "Supercritical Wing" by Michael G. McDonell. I was specially interested in the F-8A *Crusader* with the new wing. When I read BuNo 141353, it sounded familiar. I checked my film collection and found I had photographed this airplane when it served with the Naval Air Reserve Unit at NAS Dallas, Texas, July 1966.

Ronald Picciani
434 Arbutus Ave.
Horsham, Pa. 19044

Gotcha

In the August 1971 edition of *Naval Aviation News* there was an interesting article titled "Cramming for Jamming."

My concern is with the first paragraph which stated "But on January 29, 1971, the last of the old breed of Whidbey's West Coast fleet A-3's left the station forever."

I "gotcha" there! VAQ-129 Det 19 returned to NAS Whidbey Island (home-plate) from a successful nine-month deployment to Southeast Asia aboard USS *Hancock* (CVA-19) in late May 1971 with three EKA-3B's and 100 men and officers under the leadership of LCdr. R. T. "Crunch" Gundermann. We achieved a remarkable reenlistment rate of 75 percent and an average aircraft availability of 72 percent. (We're still shaking our heads over that.)

As maintenance/material control officer, I recall transferring the last EKA-3B on June 10, 1971. I remember it well because we had to wait for ComFAir-Whidbey's approval on our corrosion control and aircraft material inspection prior to transfer/disestablishment.

Peter J. Tomson, CWO2
Power Plants Division
NAS Kingsville, Texas 78363

Caught

The August edition of *Naval Aviation News* contained an article entitled "Catch a Fallen Star." You mentioned Helicopter Composite Squadron One from Imperial Beach, Calif., as one of the primary pickup units. The correct name of the unit is Helicopter Combat Support Squadron One, which provided the primary recovery helicopter for the *Apollo 15* recovery.

The squadron made a highly successful pickup and we are mighty proud of it! We would appreciate our correct name in print!

M. M. Stevens, Ltjg.
Public Affairs Officer
HC-1
NAS Imperial Beach, Calif.

These are valid, welcome complaints. We want to prevent this sort of erroneous information from creeping into *NANews* as much as those of you who have written to us. We must admit that we do make errors; however, we ask those of you who release news items or write feature material for our use to check your facts before sending them to us. Both of the above letters point out errors of fact which were built into material sent to this publication. We do catch and correct most errors, but some slip past. Since it is not possible to have personal knowledge of all aspects of the activities within the Naval Aviation community nor the time to check out each statement of fact in every release, we hope that PAO's will give us some assistance by giving releases closer scrutiny before dropping them in the OUT basket.

Naval Aviation Films

The following motion picture films are among the latest released by the Film Distribution Division, U.S. Naval Photographic Center. They deal with specifics in Naval Aviation.

MN-10731 (unclassified) *Hook Down, Wheels Down—Part 1 and Part 2*. The history of the aircraft carrier from the *Langley* to the *Kennedy* through the use of documentary footage and filmed interviews with retired Naval Aviators, covering the period from early 1900 to the Battle of the Coral Sea and up to the present (57 minutes).

MN-10997 (unclassified) *F-4 Sparrow Combat Maneuvering—Come to Fight, Come to Win*. F-4 *Sparrow* weapons system, its use and limitations in the air-to-air environment (20 minutes).

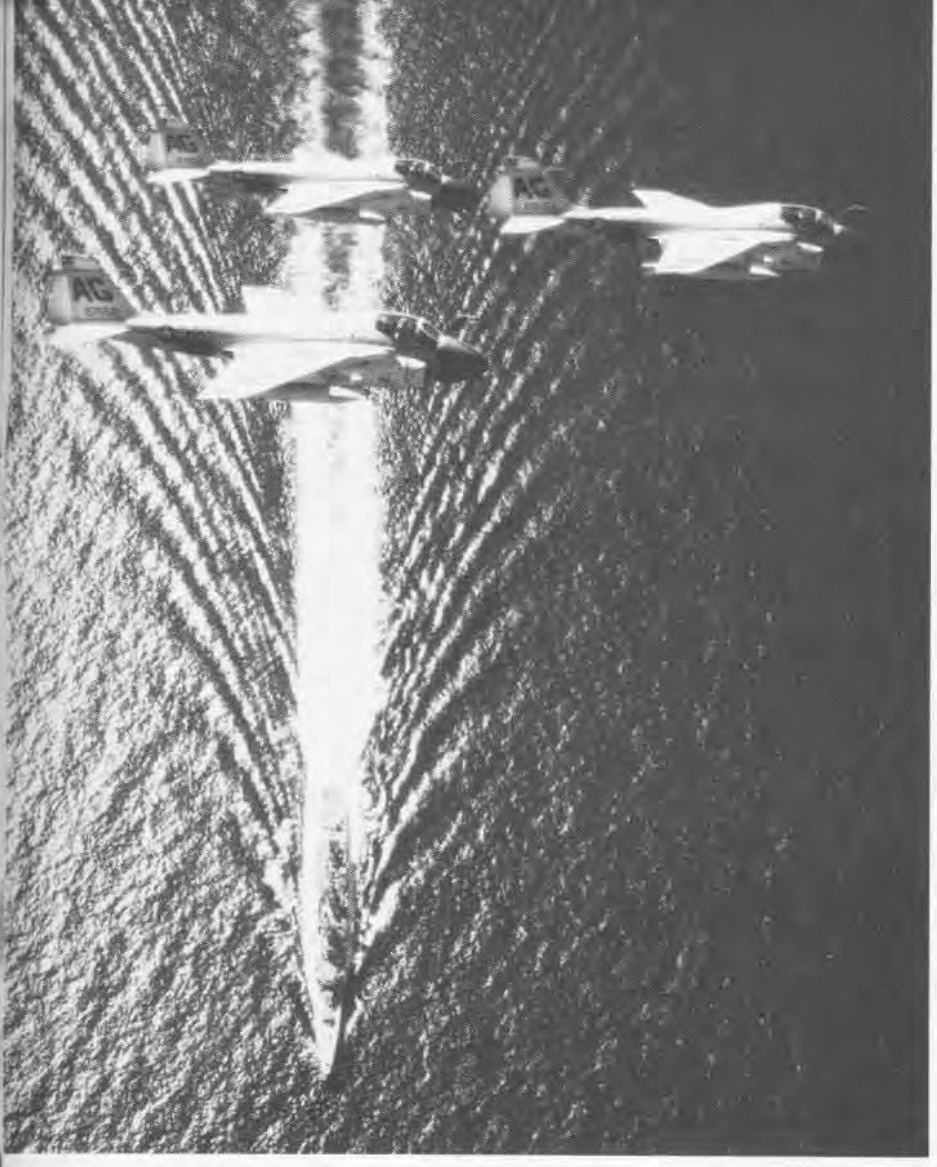
MC-11053 (unclassified) *The Ballad of John Greene*. Training for pilots in the A-7 (28 minutes).

MN-10681 (unclassified) *The Naval Flight Officer—Calling the Signals* (replaces MN-9594). The importance of the Naval Flight Officer to the team effort of an aviation mission (28 minutes).

MN-10766 (unclassified) *Angle of Attack Indicating Systems* (replaces MN 8778). How the system is utilized in flying high performance aircraft (22 minutes).

MN-10479A (unclassified) *A-6A Familiarization—Vertical Display Indicator —Contact Analog Mode*. Training for students on the vertical display indicator (19 minutes).

Instructions for obtaining prints of newly released films are contained in OpNav Instruction 1551.1E.



SQUADRON INSIGNIA

THE SUNDAY PUNCHERS

Commissioned in 1943 as VB-18 at NAS Alameda, Calif., VA-75 began its service flying SB2C's and F4U's from Intrepid (CVA-11) during WW II. In 1957, the squadron moved to NAS Oceana, Va. The 'Sunday Punchers' continued to fly props in the performance of the attack mission until 1963 when they turned in their Skyraiders for Intruders. Cdr. E. W. Foote is C.O.

NAVAL AVIATION
NEWS