# NAVAL AVIATION NEWS


44th Year of Publication

AUGUST 1963

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# ASW AIRMEN AND AUTOMATION

Kneeling in the foreground of this picture are four men assigned to fly Navy's newest anti-submarine helicopter, the Sea King. In the background are 20 men who support the crew and service the aircraft (p. 40 for key). Behind these 24 men stand hundreds of other members of the ASW team, including unseen research and development specialists who try to narrow the odds in the sophisticated game between submersibles and those who hunt them. One such effort is A-NEW—a Navy/Industry project applying the latest computer techniques to an old problem (p. 6).

# NAVAL AVIATION NEWS

FORTY FOURTH YEAR OF PUBLICATION AUGUST 1963

## ■ IN THIS ISSUE



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## ■ COVERS

Front cover shot of President John F. Kennedy on the rostrum during his visit (described on pp. 19-21) to NOTS China Lake, Calif., was taken by Thomas Forletto, PHAN. . . . The men in the above picture are identified by their skills on page 40.

# NAVAL AVIATION NEWS

## Midshipmen Train in ASW

### Board Four East Coast Carriers

Anti-submarine warfare tactics discussed in the nation's college classrooms during the academic year are now being practically applied for 150 First Class and 1400 Third Class Midshipmen from 52 leading colleges and universities across the nation.

The future Naval officers are participating in exercises aboard ASW carrier groups. The units demonstrate various phases of readiness and provide the NROTC Midshipmen with a working knowledge of the Navy.

"These Midshipmen must be familiar with every aspect of our Navy," said VAdm. Edmund B. Taylor, Commander ASW Force, Atlantic. "Anti-submarine warfare, as they will witness, is equally as important as air warfare or any other type of combat. To strengthen the efforts toward improving our ASW capability, they must understand the submarine threat."

Midshipmen are participating in every technical phase of ASW operations, including special joint exercises scheduled with allied forces. They track and locate designated "enemy" submarines and learn of the opportunities in ASW Naval Aviation.

In each of the seven-week cruises, the Midshipmen are given the possibility of flying on routine squadron missions. Each selected Midshipman is teamed with a junior officer to learn first hand the duties of the officer and the squadron functions.

Flag ships participating in the summer cruises are: USS *Randolph* (CVS-15), Task Group Alfa, Capt. H. L. Harty, Jr., commanding; USS *Essex* (CVS-9), ASW Carrier Group Three, Capt. J. M. West, commanding; and USS *Intrepid* (CVS-11), ASW Carrier Group Four, Capt. J. C. Lawrence, Commanding Officer.

## Become a 'Chuting Star'

### Navy Jump Team has Openings

The *Chuting Stars*, the Navy's parachute exhibition team, are now accepting applications from qualified parachutists.

All applicants must be 21 years old, rated, eligible for at least two years shore duty, and willing to travel nine months out of the year. Yeomen or Personnelmen are preferred.

The jump team offers a challenge to men willing to undergo rigorous training and hard work.

If you would like to reap the rewards of having served with a great team, contact the Officer-in-Charge, *Chuting Stars*, NAS PENSACOLA, Fla., via chain of command. A photo of the applicant must accompany request.

## P-3A's Based in Bermuda

### Extend Navy's Surveillance Scope

The Navy is now operating its newest anti-submarine patrol aircraft, P-3A *Orion*, from Kindley AFB in Bermuda. This extends the Navy's capability for ocean surveillance and detection of submarines.

The *Orion* became operational in August 1962 and combines the latest improved equipment for search, detection and destruction of enemy submarines, with the tremendous tactical advantages of speed and endurance.

**DEDICATION CEREMONIES** *for a new headquarters building at Cherry Point were presided over recently by MGen. Richard C. Mangrum, Commanding General, 2nd Marine Aircraft Wing, who unveiled a plaque marking the official start of operations by Marine Aircraft Group 14. During his speech, MGen. Mangrum contrasted MAG-14's modern structure with a former home: "The first time I visited MAG-14, the Group was working in tents on Guadalcanal during WW II."*


**AN OFF-BROADWAY PRODUCTION** *of the Gilbert and Sullivan operetta "HMS Pinafore" is presented aboard USS Ranger (CVA-61) at Hong Kong by 35 students from the New Asia college. The performance was not marred by the anachronistic "beware of propellers and jet blasts."*

## SecNav Names Ney Awards

### CVA-34, Pax, Corpus, Runners-up

First runner-up in the afloat category of the annual Ney Memorial Award for best Navy-wide general messes went to USS *Oriskany* (CVA-34), while first and second runner-up slots for the ashore category went to NAS CORPUS CHRISTI and NAS PATUXENT RIVER, respectively.

Secretary of the Navy Fred Korth announced the winners. First place in the afloat competition was won by USS *Frank E. Evans* (DD-754). The best general mess ashore honor went to the Pearl Harbor submarine base.

"I am grateful for the interest of all commands and their commissary personnel throughout the Navy," Mr. Korth said, "for their active continuous interest in improving the Navy's well-established tradition of excellence in food service."

## Radio-TV Links CV's-Jax

### Crews, Dependents kept Informed

There is a new wrinkle in the people-to-people program that has the men aboard *Saratoga* just about as happy as their dependents and friends back in the Jacksonville area. ComFAirJax has initiated a program of weekly radio spots for carriers based at that city. It is designed to inform local audiences of the activities of the ships when they are at sea or visiting other ports.

The taped radio spots run from three to four and one-half minutes and include the activities of the carriers, important events, and spotlights on crew members and men attached to Jacksonville-based squadrons aboard.

Senior chief journalist Robert M. Ohl, ComFairJax assistant SIO, conceived the program and arranged for the tapes to be broadcast over radio station WPDQ. In return, a weekly radio show of local Jacksonville highlights will be mailed to the carrier when deployed.

The program now in operation in *Saratoga* will be implemented aboard Jax's two other based carriers, *Shangri La* and *FDR*.

A local Navy TV newscast is to be conducted by ComFAirJax, and will appear three times a week over WJXT-TV. The show will include film clips of port visits, arrivals of important guests, and other news events.

The Fleet Air Photo Lab at Jax will process and edit film submitted by the carriers. In return, arrangements have been made to compile a four to five-minute news show each week on Jacksonville area happenings. This work will be done by the TV station and forwarded to the carriers for showing on shipboard closed-circuit television.

## SecNav OK's New MC Unit

### HMM-365 approved for 3rd MAW

Secretary of the Navy Fred Korth has approved the establishment of Marine Medium Helicopter Squadron 365 at MCAF SANTA ANA, Cal.

The squadron, equipped with UH-34D *Seahorse* helicopters, provides assault transport for cargo and troops of the Fleet Marine Force during ship-to-shore movements.

The squadron is attached to Marine Aircraft Group 36, MAW-3.

## E-2, P-3 Systems Taught

### Courses at North Island, Moffett

The Naval Air Maintenance Training Group at NAS MEMPHIS has started training courses in the weapons system of the E-2A *Hawkeye* at NAS NORTH ISLAND and the P-3A *Orion* at NAS MOFFETT FIELD. There are approximately 27 courses offered on each aircraft, covering the entire spectrum of weapons system maintenance.

These courses range from a minimum of 40 hours to a maximum of 12 weeks in length. Supplementary courses in the ship test system and the aviation tactical data system are included.

LCdr. Kenneth L. Beckman, Officer-in-Charge, NAMTraDets NORTH ISLAND, and Robert W. Hurt, ATCM, leading CPO of NAMTraDet 1025 (E-2A) head up the 40-instructor complement for the *Hawkeye* courses. Instructors receive factory training at Grumman Aircraft Corporation.

LCdr. Russell Thurman, Jr., Officer-in-Charge of NAMTraDets MOFFETT FIELD, and Horace H. Webb, ATCM, leading CPO of NAMTraDet 1012 (P-3A), lead the 37-instructor complement for the *Orion* courses. Personnel from VP-31, the CRAG at Moffett, and VP-46 account for most of the student strength for the first classes formed. Completion of all courses offered on the P-3A, taken consecutively, would take approximately 2½ years to complete.

The number of *Hawkeye* NAMTraGru detachments will be increased to 90, while the *Orion* detachments will number 82. Spread over the U.S., these detachments teach maintenance to Navy and Marine Corps personnel of the Fleet, effecting a high degree of maintenance proficiency with a minimum of lost time and travel expense to the operating activities.

# GRAMPAW PETTIBONE

## Glued On

An A-4C (A4D-2N) pilot had filed an IFR flight plan for the return leg of a cross-country flight, this segment being from a Gulf Coast base to his home station on the West Coast.

He performed a careful pre-flight of the plane, instructed the line crew thoroughly on starting procedures, and then completed a normal engine start.

He received clearance to taxi and was cleared on the duty runway in takeoff position to await his ATC clearance. The takeoff check list was completed at this time; ½ flap, speed brakes closed, trim at 5 degrees nose UP. Lift-off speed had been computed at 140 knots at the 4000-foot marker. Gross weight was 18,500 pounds, including two 300-gallon wing drop tanks and a center-line tank containing miscellaneous gear.

He had a crosswind of 15 knots at 90° relative, but the 8000-foot runway had three sets of abort gear and a Davis barrier in the end zone. The local weather was outstanding with scattered high clouds and eight miles visibility.

His ATC clearance came through and, on being cleared for takeoff, he rechecked all items on his takeoff check list and poured on the power.

At the 4000-foot marker, he had 140 knots at 100% power. At 5000 feet down the runway he had 150 knots and attempted to lift off. But

*the nose would not lift!* At 160 knots, he had the stick all the way back against what felt like the stop, and the nose only porpoised slightly on the oleo. But the nose wheel did not break ground and the aircraft would not rotate to a takeoff attitude.

The A-4C was accelerating steadily, and he decided to keep trying to fly it off instead of aborting the takeoff.

As he went off the end of the runway into the overrun, he had 180 knots, both hands were on the stick and he was pulling back with all his strength. He briefly considered ejection. The A-4C went through the Davis barrier as if it were made of butter and started to lift off. Airspeed was now 200 knots.

He was finally airborne 931 feet past the end of the runway and felt a slight "thud" as he passed over the heavy wire mesh boundary fence. This thud was the collision of the left main landing gear with the fence about three feet from the fence top. Twenty feet of two-inch steel pipe was now firmly wedged in the landing gear structure as he climbed up to an altitude of 3000 feet over the station.

Calling the tower, he told them of the collision with the fence and was informed he was trailing smoke. Actually this was found to be fuel from his ruptured drop tanks when an A-1H (AD-6) joined up to look over his damage. The left main landing gear was also broken and trailing at a 45-degree angle.

The pilot was vectored to a drop area to jettison his external tanks and then returned to the field to attempt an arrested landing on the newly foamed runway.

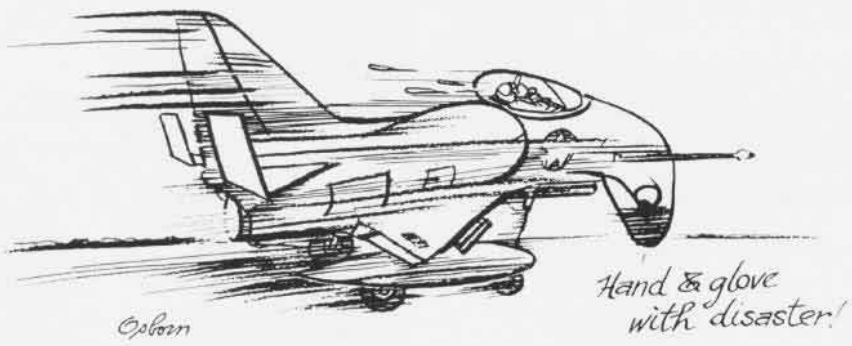
The landing was much less eventful. Approach was made at 105-110 knots and, upon touchdown just short of the pendant, the pilot shut down the engine.

After engagement the A-4C swerved left and sheared the nose wheel as it left the runway, then briefly nosed up and fell back in an upright position. The pilot exited uninjured. Aircraft damage was assessed as overhaul. Although the flight had been a very short one, it had been costly.

***Grampaw Pettibone says:***

**Great horned Toadies!: This whole hairy deal was simply caused by inadvertent actuation of full-nose-down trim while this otherwise thorough pilot was correcting for crosswind on the takeoff. The more speed he attained on the roll down the runway, the stronger the nose-down forces became. It is virtually impossible (and this is the moral of my yarn) to take off with this trim condition in all A-4 aircraft. *EVERY* pilot must take particular care to insure that the glove slack between thumb and forefinger while gripping the stick does not roll in *full down* trim!**

***A-4C* Service Change 230, which limits nose-down trim travel, will eliminate some of the hazard but remember, a *light touch* on the stick—please!**






ILLUSTRATED BY Osborn

## Memo from Gramps:

**As our whiskers get gray, some of us tend to forget past problems or, because we get out of close touch with our younger fire-eatin' types, just don't see their problems in the same light.**

**One of the biggest problems of a young hard-workin' aviator today is FOOD and how to ease that achin' stomach while wearin' flight gear. At sea it's no problem, but ashore everyone is enforcing "uniform of the day" like crazy and probably with good reason. Remember though, an aviator or crewman works both early and late hours, especially during heavy training cycles or during alert periods. When an air station is overloaded during an exercise or an alert, lockers are not usually available for flight gear in the flight line area and a man must dress in his room. Special arrangements to eat in flight gear become almost mandatory or he is going to cut corners on the flight planning, briefing, or preflight of the aircraft. This could lose us a million dollar aircraft—and him, maybe his LIFE.**

**This is an old problem but is now complicated by lengthy briefing and pre-flight requirements for present day birdmen. "Kick the tires, twang the wires, light the fire" just doesn't cover it anymore.**

**Consider what you can do to solve their problem. It's easy for the man with the gray whiskers to order a special table for early or late fliers, a "fast service" table for men in flight gear or good food in a clean snack bar near the flight line or a "milk truck" from Ship's Service to roam the airfield areas.**

**You'll get no direct thanks, but you'll get some mighty snappy salutes and "Gangway for the Skipper" everywhere you go. They'll *know* the "No. 1 EAGLE" had a hand in it.**

## Tough Day

A flight of three C-1A aircraft flew out from a West Coast base to a CVA operating off shore to conduct some very necessary carrier qualification landings for new pilots. All three planes had very experienced aircraft commanders aboard who were scheduled to ride as copilot and safety pilot during all day and night landings.

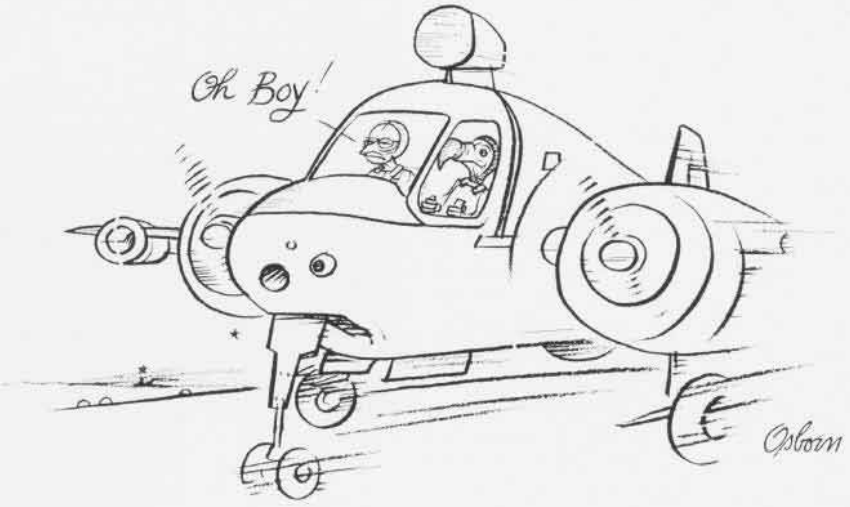
They arrived overhead at 1300 local time and orbited in the Delta pattern, awaiting recovery at 1400. The big ship finally turned into the wind and each aircraft made two arrested landings, changed pilots on deck and launched again.

While on the deck each aircraft commander/safety pilot was given a copy of the proposed schedule. They were somewhat staggered to find they were each scheduled for a minimum of 34 arrested landings, 22 day and 12 night, with a possibility of 4 to 6 more if time permitted. Whew!

The afternoon went pretty much as scheduled. One aircraft commander, whose woes form the basis for the rest of this yarn, rode through 16 day landings with six wave-offs. The qual pilots weren't bad, wave-offs being mostly for lineup. Any tendencies toward low and slow, he took care of over ICS with a few well-chosen words. One of the three afternoon qual pilots, a complete stranger, shook his confidence a bit by announcing as he strapped into the C-1A's left seat that he might have trouble starting the engines as they were usually running when he entered the cockpit! This man also stated that *all* of his previous experience had been in jet aircraft! This *bird* he rode with through four arrestments and two wave-offs and then secured for dinner. Total cockpit time for day—five hours.

About two hours later, at 1920, they started engines again for night quals. The weather wasn't bad, although haze eliminated the horizon and a heavy overcast made it black as ink. Approaches were tightly controlled by the ship, CCA being the order of the day. With three different pilots, our safety pilot now rode through 16 CCA approaches to a total of seven arrested landings with eight wave-offs interspersed between traps.

Finally, at 2300 local time, after an approach in which the qual pilot had line-up trouble, a cut was taken on signal in an apparently good position. There was a little crosswind from the right and the port wing dipped just prior to touchdown. The No. 5 wire was caught with the C-1A heading left of centerline. Near the end of the rollout, the port wheel dropped over the deck edge and they went in the catwalk. Total night time this day—3.5 hours. It had been a long day!




***Grampaw Pettibone says:***

**Sufferin' catfish! The one thing that staggered me on this whole deal was 34 arrested landings scheduled, maybe a total of 38-40 if time permitted. I sure wonder if the character who made up *that* schedule had ever done it himself! Fleet Commanders have put out directives which clearly state the limiting number of arrestments any one pilot may make per day. Just because it doesn't specifically apply to copilots or crewmen doesn't mean the *intent* wasn't there. Some people just need *everything* spelled out.**

**As for the man who 'always had the engines running when he got in,' Ol' Gramps could write a book on him.**

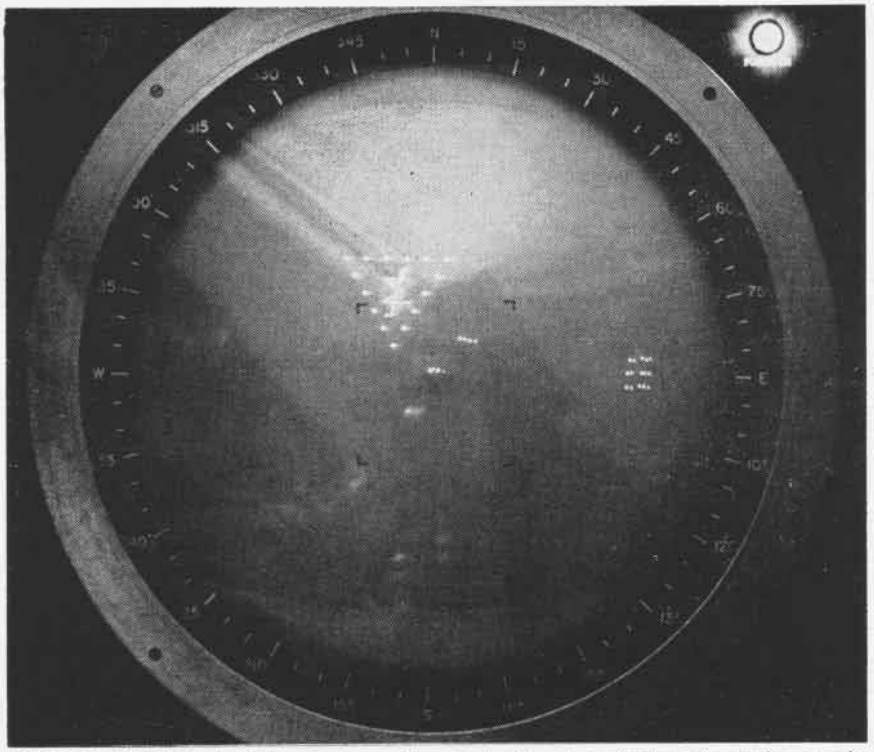
# 'A-NEW' APPROACH TO AIRBORNE ASW

By LCdr. E. G. Buck, BuWeps

ONE OF THE MOST awesome threats to the security of the free world is the ever improving performance and threatening potential of enemy submarines. Indeed, anti-submarine warfare frequently has been cited as the Navy's "most crucial problem."

Airborne ASW activities in particular are becoming more complex because of rapidly moving targets. To compound the situation, the demands imposed on the flight crews reduce their efficiency and effectiveness because they have too much to handle. There are too many opportunities for human error and the future will bring evolutionary as well as revolutionary changes in tactical environments.

To cope with this problem, a Navy/Industrial team has been established to advance airborne ASW effectivness. The program is called Project A-NEW with management control and overall direction emanating from the Bureau of Naval Weapons. The name A-NEW is a nickname, not an acronym, that was given to the project during early budget discussions; i.e. WA-(NEW) before it got its present number WA-022. Technical leadership is the responsibility of the Naval Air Development Center at Johnsville, Pa. The Naval Air Test Center, Patuxent River, has flight test responsibility in coordination with the NavAirDevCen.



**THE A-NEW SYMBOL,** *signifying the summation of all integrals, is fed into the display console. Several major corporations make up the A-New team, under direction of the NAD Center.*

The A-NEW concept, which originated almost three years ago, is to provide the Fleet with an integrated airborne ASW system capable of handling present and future enemy submarine threats. The concept ranges from study through simulation, laboratory evaluation, and flight testing of prototype systems. All of this will be accomplished prior to freezing of the final production design. Furthermore, analysis of the problem has shown that overall avionic systems development, engineering, integration and test prior to establishing specifications for production aircraft are among the most important considerations in the solution of the airborne ASW surveillance and attack problem.

**MOCK-UP OF THE EXPERIMENTAL** *computer and display shows compactness. Raw data is fed from the test bench (R) to the computer which generates ASW information displayed on the console.*

ASW aircraft are some of the most exacting man-machine systems in existence. The avionic system installed on board the typical ASW aircraft is unique among airborne systems because it consists of a great variety of unrelated complex equipments and subsystems. These must be integrated into a completely functioning system without overloading the aircraft.

Most ASW systems have been developed by first purchasing an airframe and then incorporating the avionics equipment. This method has led to some undesirable results owing to performance limits of the aircraft and

limited space available restricting the choice of equipments or changes in concept. A major purpose of A-NEW is to specify the avionic system *prior* to airframe design and thereby develop improved weapon systems.

The personnel complements for carrier-based and rotary wing aircraft will probably remain essentially as they are now. This is true because it is efficient to use the crew to greater advantage rather than to reduce its number. By using automatic equipment, the crew is less burdened and more efficient in fulfilling its mission.

**The A-NEW program is made up of five broad categories of endeavor, which include: study, simulation, dynamic mock-up, flight test and operation evaluation. This is an orderly plan which will lead to Fleet introduction of new aircraft and systems in the next few years.**

• *Study*, as its pertains to the A-NEW concept, includes a constant survey of developmental programs applicable to airborne ASW. Operational analyses have been established. Based on these efforts, a fixed wing A-NEW system has been postulated and recommendations have been published. This phase is under continual review and re-evaluation.

• The *simulation phase* of the program is well underway. Simulation of hardware for analysis and test is being accomplished before delivery of the first experimental system. Test and evaluation at the component level is being made as equipments are made available by the contractor.

• The first *dynamic mock-up* is now in operation. The aircraft portion of this installation approximates a P-3A. A constant updating of the mock-up, as new equipment is delivered, will allow measurements to be made of the relative effectiveness of the various possible configurations. It is anticipated that the great majority of the systems development and integration engineering will be provided through the use of the dynamic mock-up. One of the most important milestones of this part of the program is the phase wherein operational problems are completely simulated in a competitive environment. Known in A-NEW terminology as the "Real World Problem Generator," this digital simulator will be the only such ASW facility of its kind in existence. Its purpose is to pit the A-NEW system against enemy submarine capabilities expected in 1968 and beyond.

• A *flight test phase* is an essential part of the A-NEW program. The YP-3A has been assigned to the Weapon Test Division of the Naval Air Test Center at Patuxent River. Flight testing will be the responsibility of that division. This was done intentionally so that an independent analysis under actual conditions could be separated from the mock-up environment and could provide valid input conditions for the mock-up. Airborne testing is done under actual conditions, so that the system design is being evaluated by experienced anti-submarine warfare personnel and by the design engineers.

• The results of the *evaluations* will undoubtedly lead to system refinements. The philosophy of A-NEW is to assume, integrate, try; reassume, reintegrate, re-try, etc.

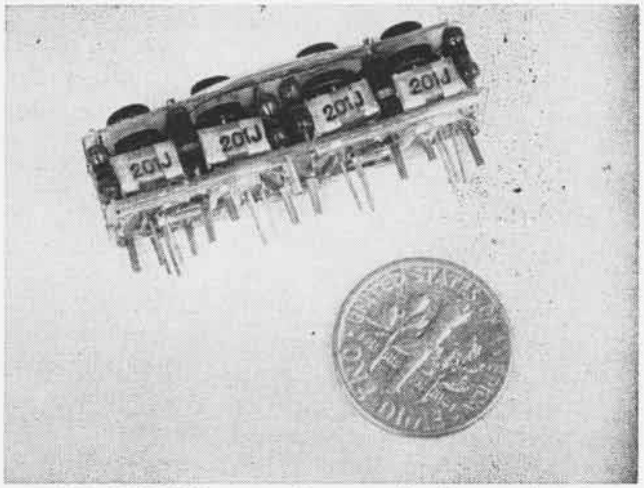
**One salient feature which distinguishes the A-NEW system from any other avionics system is the use of a central digital computer and associated computer generated displays as the heart of the system.**

The new systems will have greatly increased computational and coordinating capabilities which will be accomplished through the use of a digital data processing system. In addition, the stored program computer can be made to accommodate new and different tasks allowing considerable flexibility and growth potential. A change in mission is handled simply by a change in the computer program. The computer will be used to improve classification by coordinating data from many sensors, including pre-mission stored data and incoming data from automatic digital data link communication equipment, which will be part of the new system.

The computer will be used to improve navigation by reducing data to latitude and longitude positions, automatically maintaining aircraft and sonobuoy position coordinates. These coordinates will be properly related through new equipment providing exacting data as to positions of aircraft, submarines and sonobuoys.

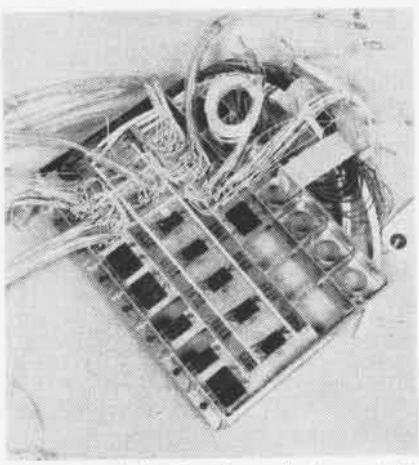
The computer will assist in the determination of optimum tactical employment of sensors, sonobuoys and

**INTERIOR CONNECTIONS** *of the basic building blocks are made by resistance welding to ensure high environmental tolerance and reliability.*




**A TYPICAL COMPUTER** *circuit package is smaller than a pack of chewing gum, but yields a component density exceeding 120 items per cubic inch.*

armament, thereby providing a tracking and attack capability against multiple surface or sub-surface targets. Additional capabilities in handling a large number of targets for search, classification, localization, tracking and attack will be provided where possible by the use of newly developed or improved sensor detection equipment. The data processing system will aid considerably in reducing crew fatigue



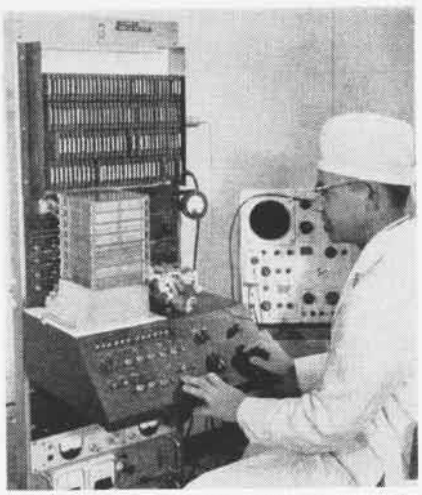
**A PARTIALLY WIRED** *back panel of a computer module indicates its potential capacity.*

by eliminating tedious, repetitive activities and allowing maximum attention to critical tactical situations.

The presence of a highly reliable digital computer and display system not only enhances tactical capabilities, but also permits in-flight monitoring and a certain amount of actual fault isolation. Provision of test points in the equipment, careful sub-assembly packaging, and the design of test routines for fault isolation will aid in providing a total systems reliability and maintainability far exceeding what we have now.

IN THE DATA integration area two major programs are now being pursued. First, a UHF tactical data link is being developed within the framework of existing Navy programs for rapid automatic interchange between all cooperating units of the ASW problem. As a result, each unit will have access to the data held by all of the other units on an essentially instantaneous basis.

Second, the airborne digital computer being applied during the experimental phases is one which also provides compatibility with other systems, both in hardware and software.



**TECHNICIAN TESTS** *the magnetic thin film memory stack before inserting into housing.*

In addition to the new computing, communicating, and automatic signal detection equipments, it is anticipated that improved radar, ECM, MAD and sonar detection and sonobuoy communication and control systems will be available.

A specific Navy/Industry team has been established to fabricate and integrate the first experimental A-NEW system with its Digital Data Processing System. The principle team members at present for this effort include the UNIVAC Division of the Sperry Rand Corp. for the computer and software, Loral Electronics for consoles and interface equipment, Dunlap and Associates for human engineering, Lockheed Aircraft Co., and Grumman Aircraft Co., for system requirements and configuration studies, and General Dynamics/Electronics for the tactical display.

The program is being managed technically, both systems-wise and equipment-wise by the United States Navy. The materializing of a system in its technical aspects must be coordinated from one strong central authority and cannot be achieved by the dispersion or relinquishing of authority with the hope that cooperative effort will then effect successful integration. Only with Navy management will various competitive contractors contribute their best efforts and latest knowledge freely to the overall benefit of the entire system development. By utilizing the Naval Air Development Center and the Naval Air Test Center engineering personnel, the "know-how" in the technology of micro-miniaturized, solid state, highly reliable digital systems will rapidly accrue to the Navy. This technology will be in great demand across the spectrum of airborne systems in the years of development that lie ahead.

**A RECOMMENDED SONOBUOY** *pattern, calculated by the computer, appears on display console and is studied by a technician. This is a prototype model used to test the data processing system.*

**CROWDS GATHER** *for commissioning ceremonies and ribbon-cutting at the Naval Aviation Museum in Pensacola. Static displays of aircraft of the Fleet and training command, formations of flight students, bands were highlights of opening celebration.*

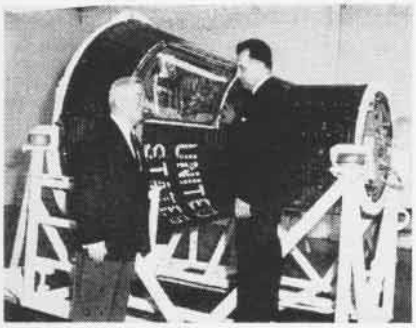
# AVIATION MUSEUM OPENS IN PENSACOLA

NAVAL AVIATION has its own storehouse for memories.

The Naval Aviation Museum opened June 8 at the "Cradle of Naval Aviation", Naval Air Station, Pensacola, Florida. In an all-day Open House celebration featuring the *Blue Angels* flight demonstration team, the *Chuting Stars*, parachute exhibition team, and other air demonstrations, Northwest Floridians joined with the Pensacola Navy in opening the museum.

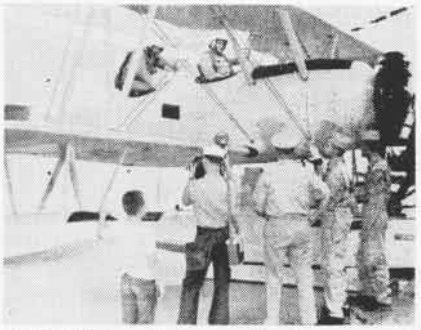
LCdr. Jackie Cooper, television and movie actor who holds a reserve commission, acted as M.C. for the formal dedication program. Principal speaker was VAdm. W. A. Schoech, USN, former Deputy CNO (Air), who is now Chief of Naval Material. Admiral Schoech turned ribbon-cutting honors over to Adm. J. W. Reeves, Jr., USN (Ret.), who took an active part in the formation of the museum.

Located across the street from the headquarters of VAdm. Fitzhugh Lee, Chief of Naval Air Training, the museum has started receiving contributions to its collection of memorabilia. Included in opening day materials were an early fighter plane, an F-4B, various training aircraft, and the spacecraft flown by Astronaut Scott Carpenter.



**MUSEUM PLANNERS** *Fred Verville (L) and Paul Garber inspect Scott Carpenter's craft.*


**RIGHT AT HOME** *in uniform is TV's Hennessey, Jackie Cooper, now a Naval Reserve LCdr.*



**FAMED N3N** *on floats, favorite of past years in the training command, is viewed by visitors.*

VADM. WILLIAM A. SCHOECH

## SCHOECH'S SAYONARA

# ADDED MATERIAL STRENGTH FORESEEN

**In July VAdm. W. A. Schoech, implementing an important part of the Navy's reorganization, became Chief of Naval Material. VAdm. John S. Thach assumed the post of DCNO (Air).**

VADM. JOHN S. THACH

THE BILLET of Deputy Chief of Naval Operations for Air is the most gratifying shore assignment in Naval Aviation a Naval Aviator can have—at least I consider it so. It is one I had long aspired to, and for that reason I am glad to have been given this opportunity to express the pleasure that my term of office gave me, and my gratitude to all the members of Naval Aviation for their support, one of the principal factors that has made my short stay so enjoyable and rewarding.

I am particularly grateful to all hands in Naval Aviation for the substantial reduction in aircraft accidents during the fiscal year just ended—6.5 per cent reduction in total accidents and about an 18 per cent reduction in fatalities. As heartening as this is, it is not enough. Most of our improvement has resulted from vigorous emphasis on material factors and Standard Operating Procedures. Our work in these areas must continue unabated because there are still gains to be made here.

Human factors, however, are even more important in accident reduction than the material ones. Unfortunately, this is an area in which we haven't worked hard enough, either with air crews or supporting personnel.

These human factors, which contribute to more than 70 per cent of our accidents, are composed of such things as individual accident proneness (long-term as well as day-to-day), carelessness, poor training practices, disregard of orders, etc. An assault on this facet of accident prevention has the potential of saving 50 to 100 lives per year, but this can be achieved only if those responsible, from the top down to squadron commanders, are convinced that accidents can be prevented without any impairment of operations. As a practical matter, nothing impairs squadron operations more than the loss of an airplane and an experienced crew.

Even though I will no longer be directly responsible, my interest in Aviation Safety will continue, and I have every expectation of a further and more significant decline in the accident rate. My plea is that each Naval Aviator work on this every day. Put your ideas in writing and send them up the line.

And now some comments on another subject which is also of major importance to Naval Aviation. An event of considerably greater impact than the change of watch in DCNO (Air) took place on 1 July. With the promulgation on that day of General Order No. 5, the Navy entered on a new major era in its continuing evolution. General Order No. 5 deals with the assignment and distribution of authority for the administration of the Navy and Marine Corps. One of the principal provisions of this new organizational delineation is the allocation of greatly enlarged responsibilities for the overall material support of the Operating Forces to the Chief of Naval Material. As the first Chief of Naval Material under this realignment, I would like to take this opportunity to make a few observations for my aviation shipmates.

In an overall sense, the organizational improvements in material support of our operational forces directed by Secretary Korth are designed to assure the maintenance of our material excellence with even more efficiency than at present. To be specific, the reorganization accomplishes this in the following ways:

*First*, by retaining the operator's relative freedom from industrial responsibilities, the time-honored and war-tested Navy tradition of a bilinear organization is further strengthened.

*Second*, by placing a single military head over all of the Navy's material functions, military participation in the choice and production of the tools of Naval warfare is reaffirmed and enhanced.

*Third*, by organizationally consolidating functions in the material production area, which were already substantially consolidated in practice, sound management principles are applied.

As the first new Chief of Naval Material, I foresee this consolidation of all the Navy's producer Bureaus under a single material commander resulting in even greater material strength not only to us, "Sailors and Marines of the Air," but to all our operating forces.

As you read this, the new Chief Aviator, Admiral Thach, already will have reaffirmed that there is no finer group of men anywhere than those who make up Naval Aviation. I know you will give him the loyalty and devotion you gave me. These are the very things which are making Naval Aviation a strong and reliable part of the Free World's strength.

—W. A. Schoech

# PHANTOM II STARS AT PARIS AIR SHOW

**By Capt. Edward L. Barker, USNR**

THE U.S. NAVY'S F-4B *Phantom II* was named "the plane of the show" at the Paris Air Show, June 6-16, at Le Bourget Airfield. The McDonnell *Phantom* was piloted by Lt. Robert Byrne and navigated by Ltjg. Richard McGuire while R. Thompson, ADJ3, was the mechanic. All were from Fighter Squadron 102.

The *Phantom* was one of three airplanes from the nuclear aircraft carrier, USS *Enterprise.* A sharklike A-5A *Vigilante* from VAH-7 was piloted by LCdr. Richard Wright, who was also in charge of the flight. His crew included Lt. R. Dunleavy and M. Papson, Aviation Machinist's Mate (Jet) 2nd.


PILOT AND HIS RIO WITH F-4B PHANTOM II

A familiar A-4C *Skyhawk,* piloted by Lt. Robert H. Byng, flew in the group and was looked after by J. Arnot, ADJ2.

The *Vigilante* stayed on static display during the show. Also present was a company Chance Vought TF-8A *Crusader* two-seat trainer. Chief D. Szechy supervised the mechanical and ground crew operations. The French Navy has ordered the F-8E fighter version for their forces.

Halfway through the show, a Lockheed P-3A *Orion* completed a record flight from Van Nuys, Calif., to Le Bourget in 14 hours, 17 minutes. Among the 21 people on board were Cdr. Robert J. Wooten, Lt. Charles F. Rouse, and Lt. Leo A. Lukenas.

The USAF was the largest single foreign participant at the exhibition. This service's display included F-101, F-102, F-105, F-106 fighters; C-130, C-135, C-140 transports; T-38, T-39 trainers; and the F-100 aerobatic team.

AT PARIS AIR SHOW, LE BOURGET FIELD, U.S. WAS REPRESENTED BY A VARIETY OF AIRCRAFT

The U.S. Army was also well represented and closely followed the USAF in numbers of personnel present. An experimental Rocket Belt proved to be the most sensational development displayed.

British entrants included the V-bombers, *Victor* and *Vulcan,* a *Hunter* trainer, a naval *Buccaneer,* the P-1 *Lightning* aerobatic team, the new Vickers VC.10 tail jet transport, a


ROCKET BELT PROPELS AIRMAN OVER DOME

number of helicopters, and two VTOL P.1127 research planes. The P.1127 has but one Bristol Siddeley *Pegasus* engine which provides both downward and horizontal thrust by swiveling its four nozzles in the desired direction.

The flying during the last two days of the show provided some splendid aerobatic demonstrations by the USAF *Thunderbirds,* Swedish delta-wing *Drakens,* RAF *Lightnings,* Italian F-86E's and French *Mysteres.* Eleven French Navy *Etendard IV M's,* just coming into service with the new carriers, Clemenceau and Foch, also put on an impressive air display consisting of rolls and tail chases. The NATO *Breguet 1150,* Atlantic ASW twin-turbo-prop competitor of the P-3A, was flown with French colors.

Because of the very brief time allocated to individual aircraft flying demonstrations, the U.S. Navy team emphasized the F-4B and A-5A aircrafts' phenomenal speed range in runs in front of the spectators, culminating the demonstration in a slow blown-flap approach and amazingly abbreviated landing runs.

The 1963 event also marked the second time that the U.S. has participated in force. Exhibits by NASA were once again housed under the geodesic dome. LCdr. Walter M. Schirra's space capsule, located outside the dome's doorway, provided a strong attraction to the NASA exhibitions.


VIGILANTE, ONE OF ENTERPRISE'S ENTRIES

**AIR-TO-AIR REFUELING** *operation shows largest prop aircraft (Hercules) and smallest jet attack aircraft (Skyhawk) in U.S. Marines' aircraft inventory. Story by Gen. Binney, outlining the mission of Marine aviation, is excerpted from a talk given recently to aviation writers.*

# STATUS REPORT: MARINE AVIATION TODAY

**By MGen. A. F. Binney (Ret.)**
**Former Deputy Commander**
**Fleet Marine Force, Atlantic**

MARINE AVIATION is an integral and important part of Naval Aviation. We represent approximately 16 per cent of the total number of airplanes flown by the Navy and, perhaps even more significant, 39 per cent of the tactical combat types. Marine aviators are, by definition and designation, "Naval Aviators." Any discussion of Naval Aviation therefore, should include a consideration of the Marine Corp's portion of the Navy's aeronautical establishment.

Although we are a part of Naval Aviation and are designated "Naval Aviators," the job which we have to do and the way we go about doing it, is of necessity different from the Navy.

The Marine Corps is one of the two military services within the Department of the Navy. The missions of the Marine Corps are stated in the National Security Act of 1947, the primary one being: "To provide Fleet Marine Forces of combined arms, together with *supporting air components*, for service with the Fleet in the seizure or defense of advanced Naval bases and for the conduct of such land operations as may be essential for the prosecution of a Naval campaign."

To do this job, public law further provides that the Marine Corps, within the Department of the Navy, shall be so organized as to include not less than three combat divisions and three air wings and such other land combat, aviation, and other services as may be organic therein.

The operational relationship between the Marine Corps and the Navy has been little understood in the past. The true relationship is still not fully understood by all today. The main point to keep in mind in this respect is that the combat elements of the Marine Corps—the Fleet Marine forces—are assigned to the operating forces of the Navy. As an integral part of the U.S. balanced fleet, they are further assigned to the operational command of the respective unified commanders.

An important element of the U.S. Fleet is the amphibious task force. The responsibility for the development and maintenance of an effective amphibious

warfare capability is incumbent upon the Navy and Marine Corps jointly.

The value of amphibious forces to project U.S. power overseas gains immeasurably from the fact that they can be pre-positioned in seaborne readiness on international waters in close proximity to an area of incipient strife. Built up to the degree necessary to meet the specific threat, these forces may exert a profound and stabilizing influence without the actual commitment of a single man. Should the show of force be insufficient, such forces can be committed in a matter of hours at the time and place, and in the precise strength needed to produce the most favorable effect. So employed, their commitment would not signal irrevocable involvement, since, if desired, they could be withdrawn as rapidly as committed, should political exigencies demand. In other words, amphibious forces can be employed with discrimination, in exactly the right amount, or they can be withdrawn as the threat lessens. No expensive and vulnerable overseas bases and no, sometimes hard-to-get, over-flight rights are required in the pre-positioning of these forces. Complete freedom of action is afforded by the traditional freedom of access to international waters. We don't need the permission of any nation, friendly, neutral, or hostile, to be nearby and ready.


**HELICOPTER DELIVERY** *of troops and equipment is one of Marines' tactics during beach assaults. Attachment atop rotor is called ROR (Rocket on Rotor), an auxiliary power system for lifting.*

The Navy-Marine Corps team exploits the flexibility, the mobility and the operational economy implicit in using the sea as a base. We perceive and reap the rewards conferred by a system which relies upon trained landing forces—where men, their logistic substance, and their fire support, are all packaged and ready in ships, and are launched upon our enemy from the ocean, in any strength and form demanded by the specific situation.

All of this indicates the primary role of Marine Aviation. We are to be prepared to participate in amphibious operations and equipped, trained, and ready to operate in a completely expeditionary environment.

What is the nature of an amphibious operation?

An amphibious operation is an attack launched from the sea by Naval and landing forces embarked in ships or craft involving a landing on a hostile shore. It normally requires extensive air participation and is characterized by closely integrated efforts of forces trained, organized and equipped for different combatant functions.

The element of the Navy-Marine Corps team inherent for this critical amphibious operation is the amphibious task force—composed of Naval amphibious and Fleet Marine Force units.

It includes carrier-based aviation forces—for air support and air defense. It contains a surface ship component—to provide missile and Naval gunfire

**1953 PHOTO** *taken on USS Mindoro shows early use of vertical envelopment concept for delivery of Marines to assault areas. Use of faster, larger helos has increased its potency in 1963.*

support, as well as close-in anti-submarine protection. In addition, the amphibious force consists of assault transport and logistic ships embarking balanced quantities of supplies, equipment, and vehicles. The landing force is a specialized Fleet Marine Force air/ground team of combined arms.

Amphibious task forces may be large—built around one or more divisions and appropriate supporting aviation forces: or they may be small—designed around a landing force not larger than a battalion landing team and a squadron of airplanes. But whether large or small, the force is a compact unified whole—working, living, and training as an homogeneous unit on a year-in, year-out basis. It is a packaged Naval Force; not one brought together at brief notice or on a tenuous organizational basis, but one designed, trained, and equipped specifically for the task of short notice overseas operations; a force accustomed to getting quickly aboard ship, going to sea, staying at sea, and fighting from the sea.

I HAVE DISCUSSED the slot in which the Marine air/ground team operates. Specifically, Marine Aviation is required, and must be prepared, to provide a complete "package" of tactical aviation encompassing the entire spectrum of tasks which are required in support of modern military operations. This spectrum includes four basic functions:

- Anti-Air Warfare—Provide the necessary counter air effort to gain and/or maintain air superiority in and around an amphibious objective area.
- Offensive Air Warfare—Provide for the delivery of a wide variety of air-to-surface weapons against enemy personnel and installations in direct support of the landing force.
- Service Support—Provide the necessary air transport and helicopters for rapid movement of personnel and material into and within the combat area.
- Aerial Reconnaissance — Provide the landing force commander with photographic, visual, and electronic intelligence gathered by means of airborne reconnaissance sensors.

These tasks are not unique to Marine Aviation. Any combat situation would require similar tasks be performed by tactical aviation—whether it be Army, Navy or Air Force. What is unique about Marine Aviation is the fact that

**"MARINE AVIATION** *is, within itself, a complete package of tactical air equipment, able to project itself ashore in a hurry and operate in a truly expeditionary environment."*

**MARINES EXPEDITE** *building of a runway of matting to set up expeditionary airfield. Short Airfield for Tactical Support (called SATS) can support attack aircraft in limited runway areas.*

**"HAVE AIRFIELD**—*will travel" is motto of Marines using the SATS system. Runway length is only 2000 ft., utilizing catapult assist for takeoff and arresting wire system for landings.*

it is a modern land-based tactical air unit, equipped with and trained for the utilization of carrier-based aircraft and equipments. This permits it to operate in a completely expeditionary environment. It is a packaged air organization requiring no functional augmentation for the conduct of modern land-based tactical air operations. Utilizing the tactics and equipments normal to carrier operations, the Marine Corps has developed what we call a SATS (Short Airfield for Tactical Support). This airfield is literally a land-based aircraft carrier. It permits Marine Aviation to be projected ashore onto any small airfield or suitable piece of terrain. The requirement for large sophisticated airdromes has been eliminated.

Marine Aviation is, within itself, a complete package of tactical air equipments, able to project itself ashore in a hurry and operate in a truly expeditionary environment. We have this capability now. We expect to obtain a land-based catapult soon which will then complete our development program and permit us to graduate from SELF (Shore Expeditionary Landing Field, 3000+ ft.) to our objective, SATS (only 2000 feet long). We can honestly say "Have Airfield—Will Travel!"

As to our future plans: *In the anti-air-warfare area,* we will gradually replace the F-6 *Skyray* and F-8 *Crusaders* with the *Sparrow*-equipped, all-weather-configured F-4 *Phantom II.*

*For offensive air operations,* we plan to incorporate the Grumman A-6 *Intruder* into Marine Aviation. The Marines were, to a large extent, responsible for getting this weapon system started. Let us assume all the black boxes work; the airplane will give the Navy/Marine Corps a true all-weather tactical attack capability for the first time and will provide a significant increase in tactical aviation's ability to support ground forces. We Marines are looking forward to receipt of this machine.

The vertical envelopment concept has for years been hamstrung by the limited amount of lift available within the current crop of helicopters. The new family of turbine engines and other advancements in the state of the art has now reached a point where new VTO aircraft will permit the true realization of a third dimension in amphibious assault. We plan therefore, to replace our current inventory of UH-34 *Choctaws* with the Boeing CH-46 *Sea Knights.*

For the heavier lift requirements, we are going to buy the Sikorsky CH-53 as the replacement for the CH-37 we now have.

In the reconnaissance area, we have programmed photo versions of the *Phantom II* to replace our RF-8's. We have also laid on a requirement for a light armed reconnaissance aircraft. This machine is not dissimilar from the *Coin* aircraft which have received considerable publicity in recent months. In that our current inventory of light weight visual reconnaissance aircraft really does not have an attack capability, this aircraft, when available, will provide a new dimension for direct support by air-ground attacks within U.S. Marine Aviation itself.

Concurrent with these new aircraft, we also plan the procurement of a large variety of ancillary equipments, all designed to improve the overall package which Marine Aviation provides. Noteworthy among these are:

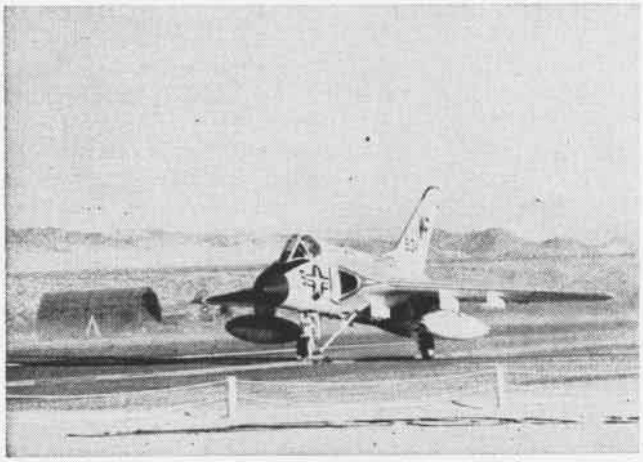
1. The catapult for our SATS airfield already mentioned. Also continued improvements in all the other components involved.

2. The Marine Tactical Data System, a land-based system completely compatible with the Navy NTDS, for improvements in air defense and overall command and control.

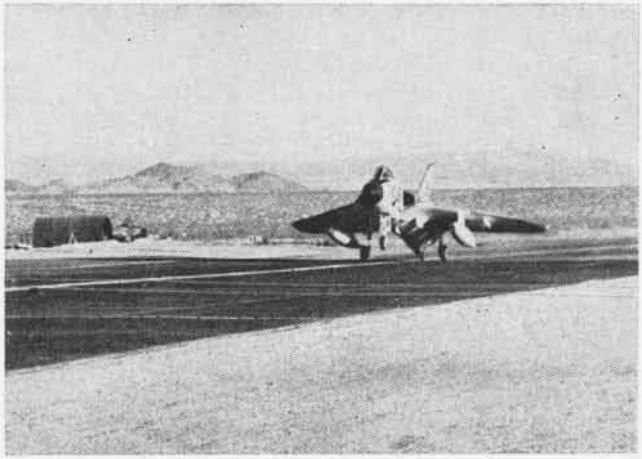
3. New radars which promise a considerable improvement in early warning detection range.

4. The new "eye" family of air-to-ground weapons, which promises considerable increase in effectiveness per attack.

In summary, Marine Aviation is organized, trained, and equipped as a completely expeditionary air component of an integrated air/ground team, the Fleet Marine Force. These forces are a part of the respective Fleets. We can and do operate from aircraft carriers but our specialty is moving into an objective area, in a hurry, to provide modern tactical air support for an amphibious landing force. We have this capability now. I have every confidence that we will continue to improve our posture in the future. ★ ★ ★



**TWENTY NINE PALMS,** *Calif., provides testbed for catapult system with Marine Skyray as test vehicle. Aircraft is tied to bridle and ready.*



**WITHIN SECONDS** *after start of run, the Skyray is lifting from runway and winging beachward on air support mission for Marine assault.*

# TRAINING AVIATORS FOR COMMAND AT SEA

**NAVAL AVIATORS** *are getting their chance to qualify as OOD's on USS Forrestal. Standing (left to right) are LCdr. J. L. Akagi, JOOW; Cdr. R. E. Chamberlain, JOOD; Cdr. H. E. Gerhard, JOOD; and their instructor, Ltjg. J. T. Henrizi, OOD. At rear is Capt. L. R. Geis, carrier C.O.*

**By Ltjg. John T. Henrizi**

THOUGH PRIMARILY mindful of the clarion call, "Pilots, man your planes," a secondary summons being answered by selected senior grade naval aviators on board the USS *Forrestal* (CVA-59) is "Relieve the watch. On deck, Section Two." On most carriers, Officer of the Deck (Underway) training and qualification are reserved for ship's officers in the grades of Lieutenant and below from the Gunnery or Operations Departments. While this is the case on *Forrestal*, a very important addition to this group has been made. Commanders and Lieutenant Commanders of Carrier Air Group Eight are now offered the opportunity to train and qualify as OOD (Underway).

This is an earnest effort to bridge the traditional gap in officer training and experience caused by an early career concentration in aviation. The Naval Aviator is, of course, a line officer in the full sense of the term and may be called upon to fill responsible shipboard duties. If his ambition is to command some day one of the Navy's great surface vessels, it is vital that he be given as much training as is possible toward that end.

The genesis of this far-reaching program was the joint brain-child of the *Forrestal's* Commanding Officer, Capt. L. R. Geis, and the Navigator, Cdr. W. B. Barrow. Inspiration and drive from this upper echelon greatly enhanced the probabilities of success and insured continued concurrent interest in the program from the outset.

The feasibility of training and finally qualifying senior Air Group aviators for OOD (Underway) depends on three important ingredients: ambitious Commander and Lieutenant Commander type aviators; a heavy operating schedule; and a workable program. Air Group Eight supplied the first ingredient, the Sixth Fleet deployment scheduled for August 1962 through February 1963 fulfilled the second, and *Forrestal* provided the program.

Since all of the candidates held important positions in the Air Group, this training and the standing of watches had to be conducted on a non-interference basis. This was a most difficult program to solve. *Forrestal's* answer was the utilization of the small group concept to provide individual tutoring and allow these officers to stand watches at their convenience. To accomplish this, two of *Forrestal's* most experienced OOD's were taken off the regular watch bill and assigned to train three candidates each. This made it possible for six officers to be in training continuously.

While in port, on a daily basis, these groups met and discussed all possible aspects of bridge watchstanding. Tours to the signal bridge, CIC, after steering station, forecastle, and engineering spaces were conducted with the OOD, or an officer of the Department concerned, presenting the information.

Motivation and enthusiasm ran high in the teams with long serious bouts of questions and answers in an effort to properly prepare for the at-sea period.

By careful scheduling, these groups of three, plus their instructor, could be combined into a watch team and used together on the bridge. The key was to grant preferential status in the following two ways. First, they were not rotated on the regular watch bill; and, second, they could relieve a bridge watch team at any time. To eliminate the necessity of all three members of the team being present for any given watch, the team leaders were afforded the option of keeping members of the regular watch for fill-ins as required.

As feasible, contingent upon flying schedules, the teams stood a daily watch. When possible the team leaders selected the most active bridge watches such as those involving sorties, port entries, replenishments, ASW exercises, and formation steaming. In the latter, two types were experienced; when *Forrestal* was designated as the OTC or when the embarked flag (Commander Carrier Division Four) assumed command as CTF 60.1. In this way, the teams gained the broadest spectrum of experience in the shortest possible time.

Starting with the Junior Officer of the Watch, the rudiments were explained, demonstrated, and practiced; thence to Junior Officer of the Deck where increased emphasis was placed on the immediate corrective actions necessary in the ship's varying tactical situations. When this stage of training had progressed satisfactorily, the watch would be turned over to the candidate as OOD while his mentor remained available for advice or remedial action.

Throughout all activities, teamwork and interdependence were stressed. The briefing prior to a watch was not a stereotyped re-hash, but rather an individual effort to ascertain pertinent information peculiar to the tactical situation and projected situation. A monitored oral turnover followed. Then with a formal salute and the terse, irrevocable, "I relieve you, sir," responsibility passed to the team. Rotating the duties of the members produced an awareness of all elements of the multiple tasks assigned. Completion of the watch was followed by a "debrief" to discuss questions and suggestions generated during the watch.

Approximately 125 hours of actual bridge watch time and 100 hours of briefings, ship's tours and study were sufficient to prepare an officer to "take the deck." He was then required to stand the "top watch," OOD (Underway), during each of the ship's major evolutions as well as several normal steaming watches. The impact of the responsibility he faced during this phase of the training was his most demanding and rewarding experience. If his performance met the very high standards required during Fleet operations, the officer was then awarded his letter of qualification.

**CDR. GERHARD** *of Fighter Squadron 103 checks ship's position on bridge of CVA-59.*

The basic thinking during the entire program has been directed toward a re-awakening and strengthening of seamanship abilities for Naval Aviators as line officers. Many of these officers have had little opportunity to take part in any form of training regarding an OOD qualification. Squadrons embarked in a carrier are loath to allow their junior officers to be assigned bridge watches, not because of any desire or design to retard their professional growth but owing to the necessary channeling of energies toward the accomplishment of a unit's mission.

Net results of *Forrestal's* efforts thus far: six Naval Aviators qualified; six others in training; further cementing of the Carrier/Air Group team and the proved feasibility of a new and vital training program. The motivating precept, to enhance the potential of selected aviation officers for command at sea, still stands.

• In the history of aircraft carrier construction, the U.S. Navy did not complete hull numbers 35, 44, 46 and 50 through 58. Construction of these carriers was either terminated in the early stage or cancelled.

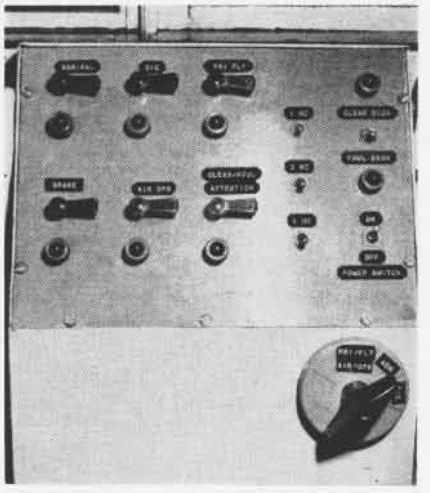
## Carrier Captain's Panel

### Kearsarge C. O. Solves a Problem

On the bridge of an *Essex*-hull carrier, the commanding officer has to be a gymnast to reach the various switches, buzzer buttons and phones he uses to control the flight deck and flight operations.

To solve this problem, Capt. E. P. Rankin, Commanding Officer of the USS *Kearsarge* (CVS-33), had his electronics officer design and build a control panel to house all these switches, buzzers, communications outlets, etc., and install it conveniently close to his bridge chair.

On this panel, Capt. Rankin has:



**NEW PANEL AIDS CAPTAIN ON BRIDGE**

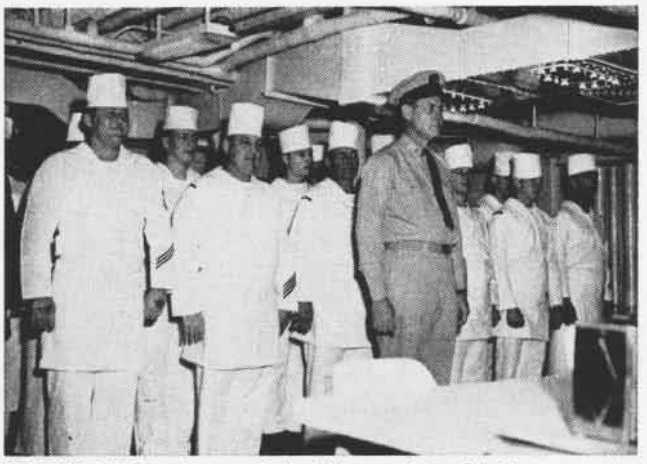
*1.* The flight deck "clear" and "foul" deck switches, lights and power switch.

*2.* Switches for the 1 MC (ship), 3 MC (hangar deck), and 5 MC (flight-deck). A hand microphone attached to one end of the panel is connected to each of the three circuits when the switches are on.

*3.* Buzzer call switches to Primary Fly, CIC, Air Operations, and the Flag Bridge. A sound-powered phone located in a holder on the other end of the panel routes through a three-position selector to connect the Captain to each of the four locations, Primary Fly and Air Ops being on one circuit. It connects the three principal people for flight deck operations (Captain, Air Officer and Air Operations Officer).

"The panel is functional, convenient and practical," Capt. Rankin says. Use of the panel on CVS-33 has proved to be highly efficient in every way.

**CAKE IN A CAPSULATED** *crust, coffee, Cooper and congratulations were on the calendar of the Kearsarge after recovery of the NASA astronaut.*



**LEADING CHIEF** *and some of the 130 men of the S-2 Division participate in opening day ceremonies of CVS-33's modernized mess decks.*

# BIG KAY TAKES 'MESS' OUT OF MESS DECK

Atmosphere. That's the word to describe the mess deck spaces of the USS *Kearsarge* (CVS-33). And comfort. They are a pleasure to the eye. Gone are the tired, green decks and bulkheads and the institutional look of benches and ten-men tables. With careful planning, cooperation of Department heads, and plenty of self-help, the crew is now eating at four-man tables and seated in individual contour chairs, all carefully color-coded for compatibility with new deck tile and bulkhead colors.

Gear cages are gone and upkeep equipment has been relocated. New lighting has been installed. Corner drapes relieve the traditional austerity.

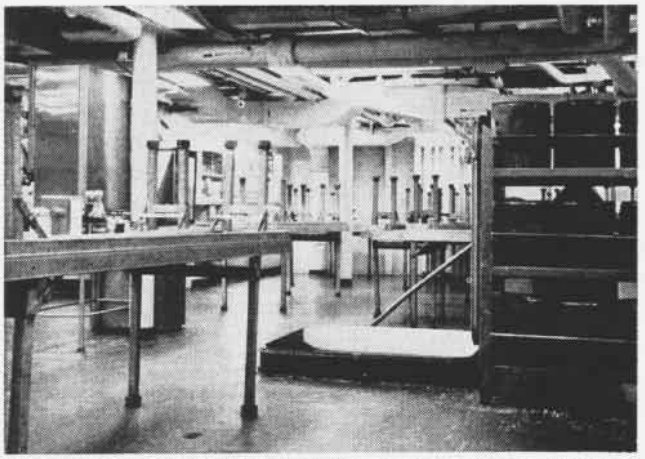
Durability of the new equipment has been proved by its unscarred success after three months of "sailor-testing" and a rough winter passage between Long Beach and Bremerton.

In redecorating the space, designers were very careful to avoid "the cheap lunch counter look." Music-to-eat-by is piped to the mess deck by the ship's radio station, KEAR.

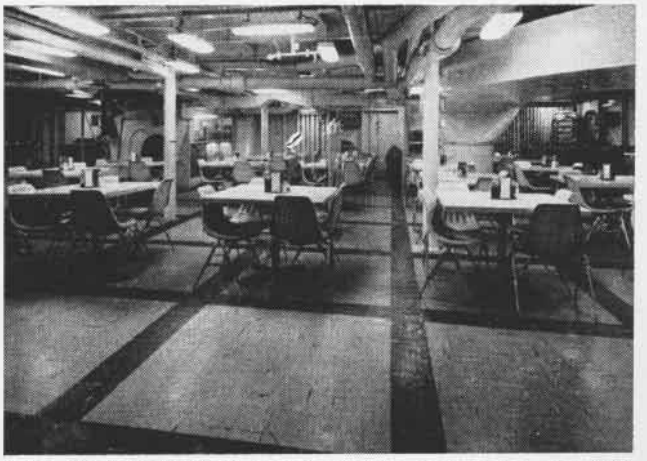
"Skeptics didn't think a Navy crew would appreciate this renovation," a release from *Kearsarge* states. "However, there has been an interesting psychological change in the crew's attitude. There has been absolutely no damage to furniture, the spaces are quieter, there is no skylarking, and added respect for cleanliness has developed."

*Kearsarge* also advocates expanded meal hours up to round-the-clock feeding to adjust to HUK operations, and to minimize the time spent waiting in line. The cooks don't mind, according to the release, since pressures of short interval messing hours are avoided.

Squadrons deploying in CVS-33 "have practically ceased ordering box lunches," according to Capt. E. P. Rankin, C.O. "They know a meal in pleasant surroundings awaits them."



**BEFORE THE TRANSFORMATION** *of Kearsarge's mess spaces, fold-away tables and exposed storage racks presented a "dreary" atmosphere.*



**AFTER THE RENOVATION,** *four-place tables, contour seats, new lighting, compatible paint, and fireproof drapes improve habitability.*

# PRESIDENT VIEWS NAVY MIGHT AT NOTS


EAGER CITIZENS LINE CHINA LAKE STREET TO SEE PRESIDENT

PRESIDENT KENNEDY became the first American Commander-in-Chief to visit the 20-year-old Naval Ordnance Test Station at China Lake when he and his party observed a fire power demonstration there on June 8th. The President was on a tour of West Coast military installations with SecNav Fred Korth, Under Secretary Paul Fay, CNO, Adm. Anderson, and service and legislative leaders.

Air Groups 16 and 11 from the USS *Kitty Hawk* and USS *Oriskany* combined with VX-5 and planes of NAF CHINA LAKE to demonstrate the effectiveness of current weapons and delivery systems, some still being developed.

In the first segment of the hour-long show, carrier-based aircraft fired *Bullpups*, HVAR's and *Zuni* rockets at targets erected on the Mojave desert floor. The planes displayed tactics and weapons used in "stand-off, softening-up" phases of an air strike against land targets. In a spectacular finale, the aircraft laid a curtain of fire with napalm bombs.

The second segment of the show, billed as the Research and Development phase, exhibited a vast array of weapons. Some are scheduled for Fleet delivery early next year.

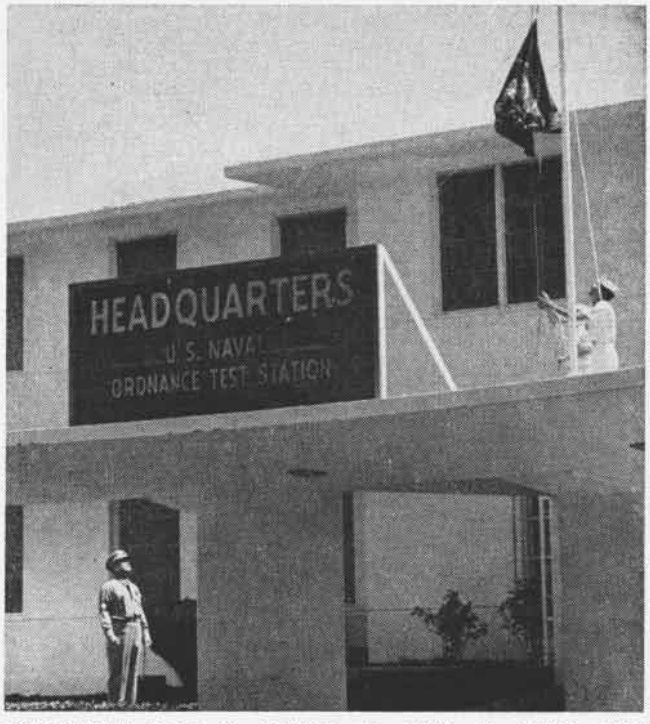
The high-speed 20-mm cannon, HIPEG, capable of firing 12,000 rounds per minute, was demonstrated. Slung in pods on the underside of A-4 *Skyhawks*, HIPEG fires faster than any gun known and blends the staccato of its bursts into a steady roar.

In one of the show's highlights, an F-8 *Crusader* released a *Sidewinder* 1-C air-to-air missile which struck and destroyed an F-9 target drone. Invented and developed at NOTS, the *Sidewinder* was successfully used in combat by Nationalist Chinese fighters against Red MIG's.

The President also saw the Navy's newest anti-radar missile score a kill on a target nearly eight miles from the point of release. Later, in a special NOTS briefing, experimental land mines, retarded bombs, cluster weapons and other armament systems were described to the visitors.

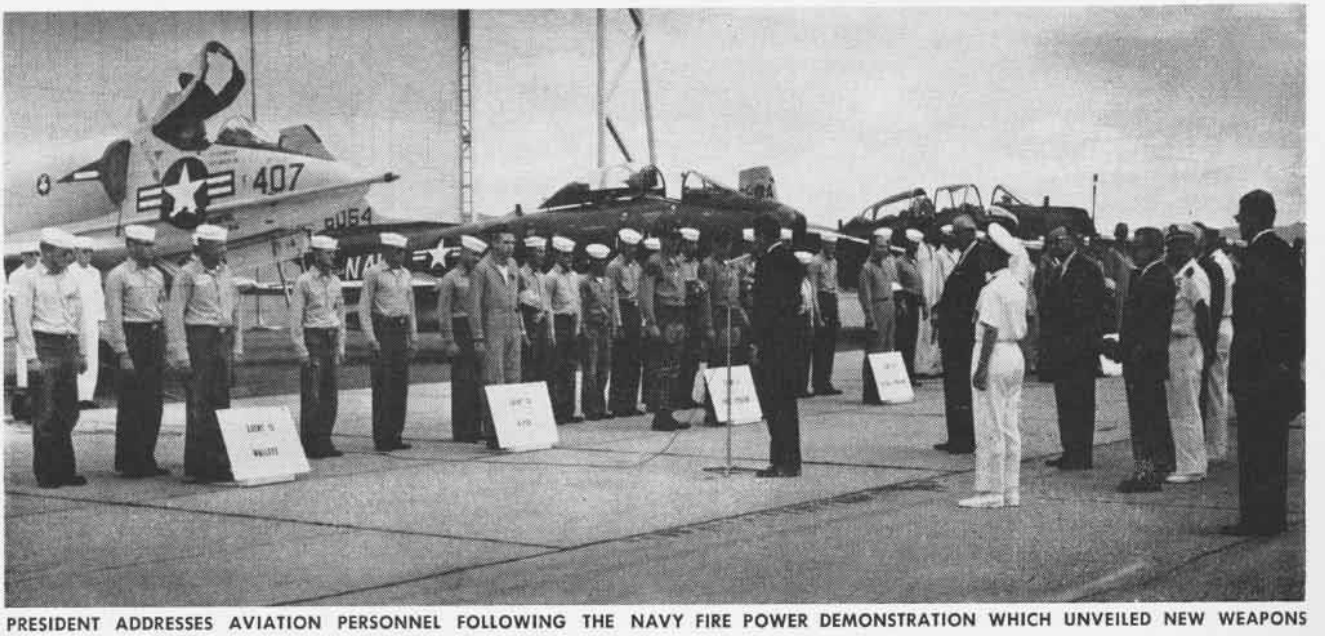
In a brief address before departing, the President cited the military and civil service personnel at NOTS: "I think all of us today are proud of the fact that, in one way or another, we have the opportunity to serve our country."

COMMANDER-IN-CHIEF ARRIVES FOR WEAPON DEMONSTRATION

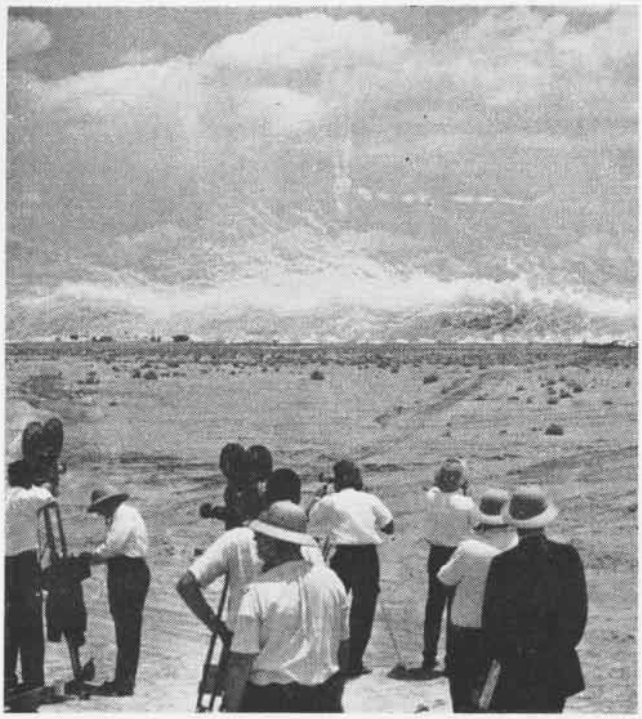



PRESIDENTIAL FLAG IS HOISTED AT NOTS IN CHINA LAKE

THE TEST STATION AT CHINA LAKE IS A SPRAWLING INSTALLATION SET IN CALIFORNIA'S MOJAVE DESERT. UNIT IS 20 YEARS OLD




PRESIDENT ADDRESSES AVIATION PERSONNEL FOLLOWING THE NAVY FIRE POWER DEMONSTRATION WHICH UNVEILED NEW WEAPONS



ATTACKING AIRCRAFT MAKE FIERY INFERNO OF MOJAVE DESERT

MUSHROOM CLOUD ERUPTS IN TARGET AREA AFTER BOMB DROP

SKYHAWKS IN TIGHT FORMATION SWOOP OVER TERRAIN AT LOW ALTITUDE AND DROP NAPALM BOMBS WHICH EXPLODE IN MASS OF FLAME

# PRESIDENT VISITS KITTY HAWK


**PRESIDENT ARRIVES** *aboard Kitty Hawk after one-hour stop aboard USS Oriskany, where he viewed Tactical Data System and static displays.*

**AERIAL DEMONSTRATION** *was flown for President's group by CVG-11. President talks over shoulder with RAdm. Masterton, and Adm. Sides.*

BEFORE VISITING China Lake, the President and party had witnessed an aerial demonstration at sea aboard the USS *Kitty Hawk,* which was part of an 18-ship force of the First Fleet. Before departing the carrier, he said:

"On behalf of all of us who visited with you today, I want to express our warm appreciation. I think all of us have been impressed by how vigorously and successfully the United States Navy has applied all of the modern advances in science and technology to this age-old struggle of maintenance and control of the seas.

"Just as Adm. Mahan said more than 50 years ago, any country which wishes to protect its security and the security of those allied with it must maintain its position on the sea. If there is any lesson of the 20th Century, and especially of the past few years, it is that, in spite of the advances in space and in the air, strategic air, this country must still move easily and safely across the seas of the world.

"Events of October 1962 indicated, as they had all through history, that control of the sea means security. Control of the seas can mean peace. Control of the seas can mean victory. The United States must control the seas if it is to protect our security and those countries which stretch thousands of miles away that look to you on this ship and the sister ships of the Navy.

"I want to express our appreciation to all of you. The sea is a friend and an enemy. Those of you who sail it, know it; those of you who sail it carry with you our warmest appreciation."

**SPECIAL HONOR** *went to Charles Carmichael, RD1, who presented Kitty Hawk (CVA-63) plaque to President on behalf of ship's plankowners.*


**KITTY HAWK'S** *emblem forms a backdrop as President Kennedy talks to crew at the conclusion of his visit aboard the Pacific Fleet carrier.*

**OLD BUNK BOTTOMS** *and canvas are the basic materials for this helicopter rescue slide designed by Cpl. Robert J. Roland and SSgt. Gerald Lafave of USS Boxer (LPH-4). Slide lowers injured personnel safer and faster.*

## Seahorse Saves Submariner

### Slices Pea Soup Fog for Rescue

Working in "pea soup" fog, the pilots of an SH-34J *Seahorse* helo from Helicopter Anti-submarine Squadron Five used the aircraft's instrument flying capabilities to find the USS *Entemedor* (SS-340) some 75 miles at sea and transport an ill submariner aboard to NAS QUONSET POINT and an ambulance ride to USNH NEWPORT.

Pilots Lt. Gordon Dey and LCdr. Donald Jones homed in on the sub's radio transmissions. Despite rough communications and surface visibility below 300 feet, Lt. Dey located the sub and hovered over it while Mike Hammer, ADR3, operated the hoist to bring the sick man aboard.

In the helo, the patient was given medical treatment by Cdr. Ernest F. Latham, MC.

## Oceana Gets Top Award

### Jet Base Commended for Safety

NAS OCEANA, Va., received the Secretary of the Navy Award for Achievement in Safety for 1962 in ceremonies at the Master Jet Base in early June. RAdm. Forsyth Massey, ComFAirNorVa, presented the award to Capt. I. L. Dew, Oceana's C.O.

A letter from Secretary of the Navy Fred Korth to Capt. Dew said, "The safety record attained by the personnel under your command attests to the prudent observance of the Navy's safety rules and accident prevention practices."

RAdm. Massey also cited the Oceana Air Station Jet Observation Point, a static display of naval aircraft, as an outstanding product of a safety-conscious command. Located along the highway leading to the base, the display encourages motorists to take a break from driving and observe the planes on view. On holidays, fresh coffee and soft drinks are served to the guests.

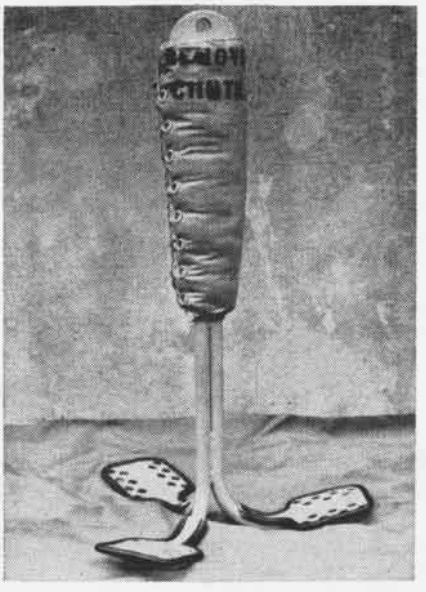
## Rescue Seat Now Named

### Memorializes Pilot Lost at Sea

The three-pronged helicopter rescue seat, widely used in Naval Aviation today, has been officially christened. BUWEPS directed the Aviation Supply Office to designate it the "Boyd Rescue Seat" in memory of Cdr. Raymond A. Boyd, USN. Cdr. Boyd lost his life at sea on April 6, 1957, following his forced ditching in an F-8 *Crusader* and unsuccessful rescue attempt by a helicopter.

The tragedy prompted further research into rescue devices and led to the development of the three-pronged seat. Capt. R. G. Dosè, then C.O. of VX-3, conceived the idea in the latter part of 1957. In February 1958, the new seat, built by HU-2, was evaluated. It proved to be far superior to the "horsecollar sling" used previously.

Abraham Spector, ADR3, a helicopter crewman, was also killed in the accident while attempting to assist Cdr. Boyd into the sling. Spector was posthumously awarded the U.S. Navy and Marine Corps Medal for bravery.



**RESCUE DEVICE CHRISTENED 'BOYD SEAT'**

**MY SON, MY SON.** *Kenneth E. Chambers, Sr., AMS1, (L), joins his two sons, Ken, Jr., (C), and Michael L., both ADR3, at VP-23, based at NAS Brunswick. Besides the Chambers trio, VP-23 has four other pairs of brothers.*

## Jax Pilot Masters Loft

### Scores Three Straight Bulls-Eyes

Lt. Hank Lesesne, a *Skyraider* pilot in VA-176, pulled off a remarkable feat recently when he made three consecutive bulls-eyes in loft bombing at the Stevens Lake practice target near NAS JACKSONVILLE. On his fourth run of the day he dropped another Mk 76 bomb only 50 feet from the target. The loft maneuver, also referred to in pilot lingo as the "idiot loop," requires precise handling of the A-1H attack aircraft.

## Caduceus to Aircrewman

### Corpsman Claims Wing Distinction

George M. Gray, HM1, of VP-28, claims the distinction of being the only corpsman in the Navy awarded aircrewman wings. The wings were presented to him during ceremonies at MCAS IWAKUNI, Japan, by Cdr. Lloyd A. Kurz, C.O. of the squadron.

Gray first became interested in earning his wings shortly after joining the squadron in November 1961. Since then, he has flown almost 200 hours, learning the various anti-submarine warfare crew positions.

This flight time stood him in good stead. He successfully completed a check flight and qualified as an ASW crewman in the radar and electronic counter measures positions.

Gray has another goal in sight, that of becoming a Navy paramedic. Joining the Iwakuni Skydiving Club, he has already started accumulating the number of jumps he will need.

# VF-74 FIGHTS CORROSION PROBLEM

By D. R. Collins, AMSC

DURING A RECENT seven-month deployment aboard USS *Forrestal* in the Mediterranean, VF-74 gave increased impetus to corrosion control in F-4B *Phantoms* by revamping its program. Although corrosion is usually associated with the environment of carrier operations, it is also of vital concern to shore-based units.

Through research and development in the field of metallurgy, modern aircraft have become amalgamated structures of various exotic metals, but this has not eliminated the corrosion problem. Despite advanced technology, the properties of these metals have not been attained without certain undesirable characteristics still being present. Subjecting the exotic metals to higher ambient temperatures, salt water spray and stack gases causes corrosion. Dissimilar metal contact and paint adhesion also constitute a problem which must be faced as high performance aircraft continue their Navy mission.

In its new program, VF-74 first formed a separate corrosion control team within the airframe branch of the maintenance department. Since forming such a team at a loss of manpower for routine work was not easily justified, the program was at first experimental.

The team consisted of four men, including the squadron painter, who served as the nucleus of the program. This did not relieve plane captains and other maintenance personnel, however, of their corrosion prevention responsibilities, for an effective program can only be maintained through the active efforts of all hands.

The team began its work by engaging in research. While the effects of corrosion were readily evident, the knowledge of its causes, prevention, and treatment were generally lacking. To overcome this deficiency, a thorough study was made of available technical publications dealing with corrosion and painting. The airframe technical representative obtained additional data which was based on findings of contractor inspections. Once this information had been compiled, the foundation for a program was laid.

The team made several preliminary

PLANE CAPTAINS ON CORROSION INSPECTION

aircraft inspections to determine which areas of the *Phantoms* were prone to corrosion and how often inspections would normally be necessary. This led to the establishment of several types of inspections.

The team decided that the main corrosion control efforts would be concentrated on aircraft which were undergoing periodic major inspections. This proved to be the right time since the airframe interior is open and readily accessible for thorough examination and treatment. During intermediate inspections, the team checked all skin surfaces, wingfold areas, wheel wells and cockpits. Daily inspections were performed by line and quality control personnel who reported corrosion discrepancies. These feeder reports supplement other inspections by the team and contributed to early detection and treatment of corrosion.

All material used in the program, including necessary protective clothing, was maintained in the custody of the control team, except for that used by AME personnel who are responsible for the upkeep of ejection seats.

Corrosion areas of significant size were completely stripped, treated, cleaned and repainted. Smaller areas were tended on an individual basis. Although the climatic conditions of temperature and humidity cannot be controlled on the hangar deck, every effort was made to schedule painting at the best available times.

No corrosion control program would be complete without a proper set of records. Charts were made to pinpoint individual aircraft corrosion discrepancies found during periodic inspections. This provided a basic history for each of the F-4's. "Where to look" areas were also recorded to facilitate location of corrosion during PAR (Progressive Aircraft Re-work) periods. In addition, inspection sheets, listing corrective action taken and a compilation of FUR numbers were filed.

By the organization of a control team, VF-74 learned that the anti-corrosion program paid off dividends. Upon the completion of the deployment, *Phantoms* were found to be in outstanding condition by inspection teams from the McDonnell Company, BUWEPS and ComNavAirLant.

Although the squadron does not claim the program it inaugurated is the only effective solution, it certainly does the job. How effective is your corrosion control program?

## Navy Studies Corrosion

### Course Set up at NAF Litchfield

NAF LITCHFIELD PARK, Phoenix, Ariz., has recently inaugurated a comprehensive aircraft corrosion control training course under the auspices of the BuWeps Fleet Readiness Representative, Pacific. Expert advice was available from personnel in the preservation and storage activity of Litchfield's "Ready Reserve" pool of more than 2000 aircraft.

On the basis of problems reported by both Fleet and shore-operating commands, the course is designed to familiarize maintenance personnel with all phases of corrosion prevention and correction. Because of the wide variety of dissimilar metals incorporated in modern military aircraft and the constant exposure of these planes to the corrosive effects of salt-laden air in coastal areas, corrosion has become a major maintenance problem.

Kenneth W. Minnix, Supervisor of the Analytical Chemical Functions of the Materials Engineering Division at the NAF, designed the program. Two instructors were qualified in May.

Training will be accomplished in five-day sessions conducted on a bi-monthly schedule. The BUWEPS Fleet Readiness Representative, Pacific, will coordinate attendance quotas.

This program will probably save the Navy millions of dollars, improve aircraft availability, and increase the number of hours flown in service life.

## Arresting Cable Tested

### Landing Record Made in 12 Hours

The Naval Air Test Facility, Lakehurst, N. J., established what is possibly a record number of arrested landings during a 12-hour period under project test conditions in early June. The test facility, whose primary mission is testing and evaluation of launching and arresting devices, was confronted with a life endurance test of a Lang lay wire rope evaluation.

The Mk 7 Mod 1 shipboard arresting gear, identical to that used in the Fleet, was installed on a newly opened 12,000-ft. runway. At 0800 on June 8th, the test commenced with three jet aircraft; an F-6A *Skyray*, YA-4B *Skyhawk*, and A-3A *Skywarrior*. Lt. Sidney Meltzer, flying the *Skyray*, made 65 landings. Lt. Dave Bennett and Lt. John Parks completed 13 arrestments in the *Skyhawk*, and LCdr. James Service and Lt. William McCartney were responsible for 58 landings in the *Skywarrior*.

A total of 136 "traps" was made in the 12-hour period. One landing was made every two minutes. With the addition of a new diversion strip located at the test site, it was possible to make arrestments with one aircraft while another was "down" for fuel.

Each project test was photographed and instrumented for test purposes under the direction of James Daley, Performance Analysis, Frank Suppies, Aircraft Engineer, and John Haw, Instrumentation Engineer.

## Milestone Met at Atsugi

### Record Safe Flying Hours Flown

The 10,000th accident-free flight hour has been logged by H&MS-11 at Atsugi, Japan. At the controls of the TF-9J *Cougar* which logged the record hour were LCol. James R. Weaver, C.O. of the squadron, and Capt. Oliver H. McClelland, MAG-11 assistant operations officer.

Since its last accident which occurred in May 1959, H&MS-11 has flown T-1A *Seastar* trainers and its present complement of three TF-9J's, in addition to one C-117D *Skytrain*. The squadron was hosting 31 aviators attached to MAG-11 staff and support squadrons when the record was made.

## Marine Wins Army Medal

### Flew Combat Missions in Vietnam

Capt. Gerald W. Keyes of VMT-1, MCAS CHERRY POINT, was presented the Secretary of the Army Air Medal last May for "meritorious achievement in aerial flight." While on temporary duty with the Army's 23rd Special Warfare Aviation Detachment operating in Vietnam, Capt. Keyes flew 51 combat missions. He piloted an OV-1C *Mohawk* observation plane in the fighting area from Sept. through Dec., 1962.

GEN. MANGRUM PINS MEDAL ON CAPT. KEYES

MGen. Richard C. Mangrum, Commander of the 2nd Marine Aircraft Wing, presented the medal to Capt. Keyes who is an instructor-co-ordinator at the Weapons Delivery School.

## DE Honors Naval Aviator

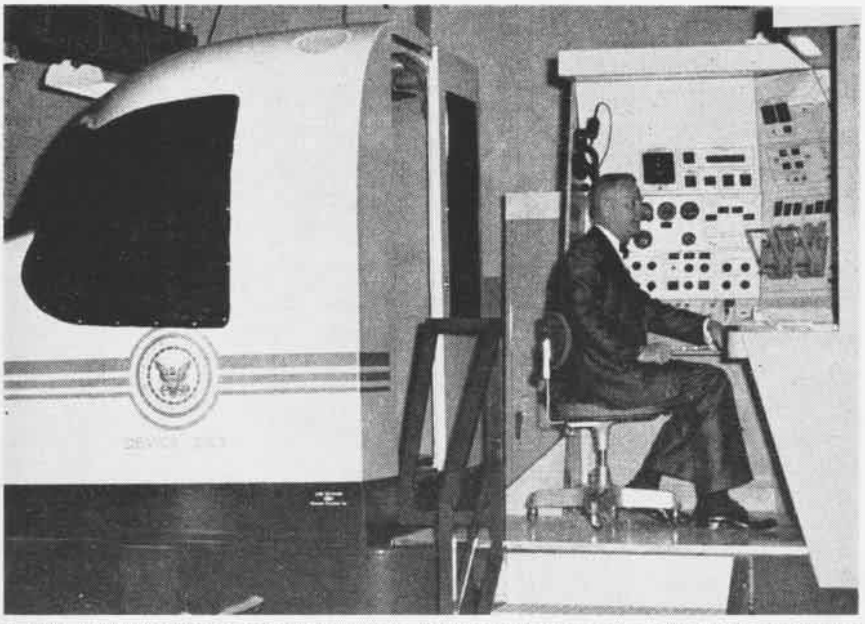
### SecNav Assigns McDonnell's Name

The name of the late Adm. Edward McDonnell, Naval Aviator No. 18, has been approved by the Secretary of the Navy as the official name for DE-1043, scheduled to be launched at Westwego, La., in October 1964.

McDonnell graduated from the Naval Academy in 1912. Two years later, he joined the USS *Prairie* and was awarded the Medal of Honor for extraordinary heroism in battle during engagements at Vera Cruz. In this action, he posted on the roof of a local hotel and established a signal station there, maintaining communication between troops and ships. Under constant fire, he held his post for two days and nights.

He was designated an "actual flyer on heavier-than-air craft" on January 15, 1915, and Naval Aviator on March 22, 1915. He was appointed Navy Air Pilot No. 16 on October 14, 1915, and on January 19, 1918, became Naval Aviator No. 18. He served gallantly in both World Wars and retired December 1, 1951.

Adm. McDonnell's widow, Mrs. Helen Fisher McDonnell, is scheduled to sponsor Destroyer Escort 1043.



**A NEW MULTI-ENGINE** *simulated instrument flight trainer is monitored by civilian instructor Jack Nelson at NAS Corpus Christi. Known as the 2B13, it is the youngest in the family of Link trainers, one of 13 ordered by the station. It simulates a twin reciprocating engine, land-based aircraft with a gross weight of 21,400 pounds with a cruising air speed of 140 knots indicated. The unit has a trainee station, an instructor station and D-C analog computing equipment.*

# THE RED SHIRTS MAN THE PUMPS

By John D. Burlage, J02

NOW, THE SMOKING LAMP is out throughout the ship while stripping and venting the aviation gasoline system."

For most of the men serving in the Seventh Fleet attack carrier USS *Ranger*, that bosun's call means a few minutes' cigarette-less inconvenience. But for the personnel of the ship's V-4 Division, it signals the start of an important part of their day's work.

More than 90 men assigned to V-4 provide the avgas and jet fuel (JP-5) for every aircraft in *Ranger's* air group. It's a job that takes know-how, training, and plain hard work.

The meaning of the bosun's call? This word is passed when V-4 personnel are clearing the avgas storage tanks of condensation. It is a never-ending battle to keep the systems clear of this alien element.

V-4 men seen on the ship's flight and hangar decks are easily recognized by their bright red jerseys. A good part of the division's work is done in spaces far below those reserved for aircraft. Getting fuel to *Ranger* planes means a three-pronged assignment for the division: besides getting their flammable cargo into almost 70 storage and service tanks, the men maintain the spaces and equipment, as well as the fuel itself, and are responsible for delivering it to the aircraft.

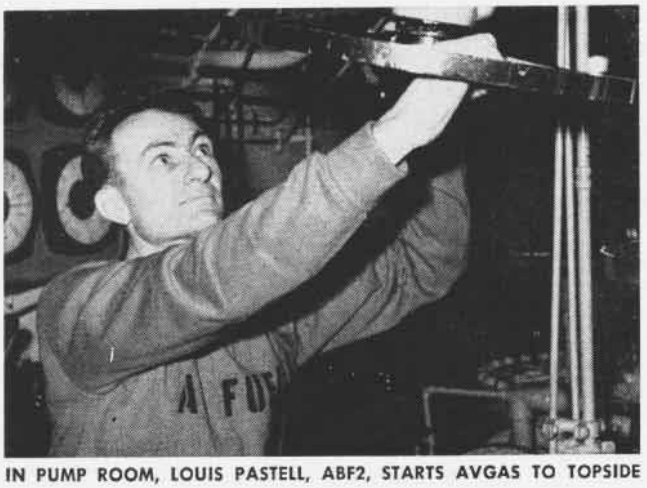
Part of the division is broken up into crews in order to do the jobs efficiently. Seven four-man crews are assigned to the flight deck. Two four-man crews work in the hangar deck. There are six repairmen—two lube oil men, two checkers, two telephone talkers—six men in the ship's avgas pump room and 11 more in the two JP-5 pump rooms.

The senior enlisted man in the division is Leading Chief Edwin F. Culver, ABFC. The Division Officer is Ltjg. Clyde K. Wilson. There are more than 15 petty officers in the division, in addition to Chief Culver.

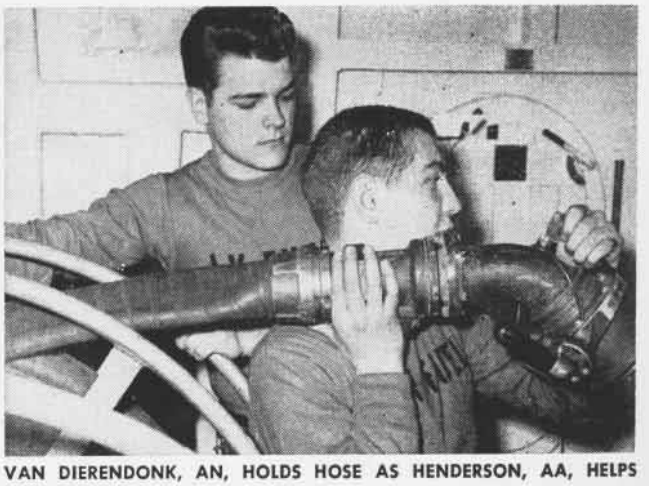
Most of the *Ranger's* aircraft are powered by JP-5 jet fuel. Its thrust powers the F-4B *Phantom II* at more than twice the speed of sound, launches the A-3B *Skywarrior*, as well as the more maneuverable A-4C *Skyhawk*.

There's plenty of JP-5 on hand for V-4 Division to pump into these aircraft. The 56 wing tanks deep within the ship, in which JP-5 is stored, have a capacity of more than a million gallons. The eight service tanks from which the JP-5 is pumped to the flight deck and the hangar deck hold from

LTJG. C. K. THOMAS CHECKS AVGAS WITH JOHN WARD, AN (C), AND PAUL WHITEMAN, ABF1 (R)



IN PUMP ROOM, LOUIS PASTELL, ABF2, STARTS AVGAS TO TOPSIDE



VAN DIERENDONK, AN, HOLDS HOSE AS HENDERSON, AA, HELPS

DEAN MILLS, AN, PHONES TANK-LEVEL READINGS TO FLIGHT DECK

PAPERWORK IS DONE BY EDWIN CULVER, ABFC, AND JOHN HICKMAN

8000 gallons to 25,000 gallons each.

Avgas is used to fuel the ship's propeller-driven aircraft, which include the A-1J *Skyraider*, the C-1A *Trader*, the E-1B *Tracer*, and *Ranger's* two helicopters. Of these two fuels, JP-5 and avgas, the avgas is considered the more potentially dangerous to handle. It is stored in two tanks which have a capacity of more than 200,000 gallons.

V-4 personnel get the stored fuel from tank to plane through a system of pipes and pumps, with the pump rooms acting as control points for the operation. Before fuel ever starts on its way to the hoses, it is thoroughly filtered to clear it of dirt and water.

In filtering the fuel, it is sent through coalescing elements which form water into large drops that separate from the fuel by gravitational pull. Solids, such as dirt specks, are also removed this way. The fuel then enters separator elements that can remove foreign matter as small as five microns. A human hair, by comparison, is some 20 microns in diameter.

Their fuel now ready for the aircraft, V-4 personnel send it topside as needed —often at a fantastic rate. Last November, for instance, V-4 men refueled 31 aircraft in a little more than 40 minutes—no small feat when you consider that an A-3B holds as much as 4500 gallons of JP-5.

Normally, V-4's refueling must be squeezed into the 40-minute turnaround time allotted for aircraft. Within this same period, the aircraft must be re-armed and spotted as well as refueled. For flight deck personnel, this is a feverish, fast-paced period when every movement is pre-planned and efficiently executed. This is no place for laggards, no place for by-standers.

From the start of *Ranger's* Far East cruise last November to the middle of February, *Ranger's* Red Shirts pumped more than four million gallons of JP-5 jet fuel, 300,000 gallons of avgas, 7000 gallons of lube oil, and 1000 gallons of cleaning solvent—yet another very flammable chemical for which the V-4 Division is responsible. By the time CVA-61 completed its tour, the V-4 Division estimates that it had almost doubled the amount of fuel pumped during the November-February operating period.

In addition, the division has manned refueling stations to receive almost like amounts of JP-5 and avgas from a variety of tankers and WestPac shore facilities during that same period.

V-4 men handle their jobs with a skill and aplomb that can fool the inexperienced, who may be tempted to think less of the dangers involved in constant contact with the potentially explosive products that are vital to *Ranger's* mission. But if you want to learn in a hurry how much respect V-4 men have for fire around their fuel, just ask one of them if he has ever taken a "smoke break" on the job.

JOHN NICHOLSON AND JAMES WOOLLEY REEL OUT JP-5 HOSE WHICH ALAN MUNCH, JERRY HENDERSON AND JOHN ROBERTS HAUL

# MARLINS AND NEPTUNES LEAVE CORPUS


**TWO NAVY STALWARTS,** *the Marlin and Neptune patrol planes, fly one of last student instruction hops at Corpus Christi. Advanced multi-engine students will now train in TS-2A Trackers.*

TWO VENERABLE workhorses of the sky have been phased out of the Naval Air Advanced Training Command at NAS CORPUS CHRISTI, Texas. The P-5A *Marlin* seaplanes and P-2E *Neptune* patrol aircraft of VT-31 have been replaced by the smaller multi-engine TS-2A *Trackers.*

According to RAdm. Frank A. Brandley, CNAVanTra, the *Marlins* and *Neptunes* will be assigned to other commands. The *Trackers* came from two training units at Corpus Christi and other outside sources.

The change-over will result in increased economy and efficiency. A considerable amount of money was expended yearly in maintaining the huge 60,000-pound planes. The TS-2A's require less money to operate but will provide essentially the same student training as before. Efficiency will result from leveling off the size of three squadrons in the command and concentrating the student flying time in one type plane.

Authorities in the command say that elimination of instruction in the big planes will not decrease the new pilot's capabilities. Fleet squadrons have reported that they see little difference in aviators who have had all TS-2A training and those who went through the big plane syllabus.

Prior to the change, students trained at three separate Corpus Christi squadrons. After 75 hours in the *Tracker,* they reported to VT-29 for navigation instruction in transport aircraft called the "flying classrooms." They then went to VT-31 for 40 flight hours in the *Neptunes* or *Marlins.*

With the new syllabus, students will receive 140 hours of pilot time in the TS-2A. In addition, each multi-engine candidate will make carrier qualification landings. Previously, the carrier phase was not included for all of the students. Before graduation and assignments to operational Fleet air units, students will undergo navigation instruction at VT-29.

Although the *Marlin* seaplanes are gone, the seadrome at Corpus Christi will remain open for the foreseeable future to handle local Coast Guard and transient traffic.

## Navy Honors Cadiz Citizen

### Gets Meritorious Service Citation

The U.S. Navy honored one of its best friends in Spain when Dr. Jose Villar Vinas of Cadiz was presented the Navy Meritorious Service Citation in ceremonies at the Naval Station located at ROTA, Spain.

Capt. G. H. Weber, Commander of U.S. Naval Activities in Spain, read and delivered Secretary of the Navy Fred Korth's citation to the distinguished Cadiz physician. Dr. Villar was honored by the Navy for his many services to American naval personnel during the early construction of the joint installation at Rota, and afterwards. The citation read in part as follows:

"Dr. Villar . . . has since 1957 voluntarily provided medical services to American military and civilian personnel, and their dependents, located at Rota, Spain. Prior to the establishment of the U.S. Navy Hospital at Rota, Doctor Villar assumed complete medical responsibility for the care of American personnel living in Cadiz, Puerto de Santa Maria, Jerez de la Frontera, and other neighboring communities, at all times refusing any monetary compensation for his professional services."

**AIR MEDAL** *is presented to Lt. Robert L. Brace of NATC Patuxent River by RAdm. Paul H. Ramsey, Commanding NATC. Lt. Brace was awarded the medal for helicopter operations while serving with U.S. Army in Vietnam.*

**TICONDEROGA'S** *Ens. H. D. Hays presents a plaque to Hon. Masayoshi Nagano, Mayor of Yokosuka, with a letter from Dr. J. L. Barnard, Mayor of Corpus Christi. The cities have had a people-to-people program since 1956.*

**CDR. J. B. BAILEY,** *VS-33 C.O., accepts the Isbell Award for ASW from RAdm. M. W. White, ComFAir, San Diego, at ceremonies at North Island. Background trophy board carries VS-33's CNO Safety and Battle E Awards.*

## Air Crew Flies Record Hour

### VP-50 Reaches 25,000 Safety Mark

Flight Crew Four of VP-50 recently brought its squadron to more than 25,000 consecutive hours of accident-free flying time.

The Iwakuni unit, commanded by Cdr. William H. Locklin, flies the SP-5B *Marlin* and carries out such missions as search and rescue, aerial mining, patrol and reconnaissance. The record has been running since 1960.

## 150,000 Aircraft Landed

### Jax GCA System has Historic Mark

A U-11A *Aztec* aircraft became the 150,000th plane to land at NAS JACKSONVILLE through the assistance of the ground control approach system used by Radar Air Traffic Control Center 17. The plane was piloted by LCdr. P. J. Demster and copiloted by Lt. R. P. Guthrie.

Master Chief Air Controlman Tom Hanley, leading CPO at RATCC, directed the record landing. LCdr. Demster is the assistant air traffic control officer and Lt. Guthrie is a radar watch officer with the center.

The 150,000 mark was logged 38 months after the center reached the 100,000 mark in April of 1960.

## Parachute Club Organized

### Whiting Group Supported By VT-6

After more than a year's preparation, the Whiting Field Parachute Club celebrated official approval of their organization last May when members made jumps over the Naval training base at Milton, Fla. The group was organized under provisions set forth by SecNav and is affiliated with the Parachute Club of America.

VT-6, which trains future helicopter pilots in precision instrument and all-weather flying, sponsors and supports the club by providing TC-45 *Beechcraft* and pilots for jumping activities. Cdr. H. C. Cyr, squadron skipper, said, "We at VT-6 are certainly happy to be of assistance in furthering the cause of the parachute club." Squadron pilots volunteer to fly the jumpers during off-duty hours, and planes are supplied when they aren't needed for training.

## Air Force Flies Phantom

### Differs Little from Navy Version

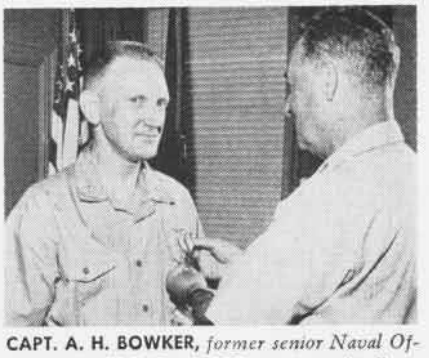
The first of the USAF's F-4C fighters flew last May from Lambert Field, St. Louis, Mo., more than two months ahead of schedule. A modified version of the Navy's supersonic *Phantom II*, the F-4C will modernize and expand the Air Force's Tactical Air Command.

Several hundred of these aircraft will be purchased this year along with an additional number of RF-4C's specially equipped to handle reconnaissance missions.

The Air Force's *Phantom* will have minor differences from those flown by the Navy. Folding wings will be retained but the actuating controls will be positioned for ground crew use only. Larger wheels, brakes and tires will be required for use on paved and unpaved runways. Cartridge starters will also be installed for both of the plane's J-79 engines by the Air Force.

**MSGT. G. E. ANDERSON,** *Air National Guard, gets tips on engine repair from J. A. Sheldon, ADRC, VR-8, NAS Moffett Field. Forty-eight ANG maintenance men are being taught by Navy prior to ANG's receiving 28 Connies.*

**FIRST DESIGNATED** *P-3A Orion Patrol Plane Commander in the Pacific Fleet is Cdr. K. L. Bass, C.O. of VP-46. VAdm. P. D. Stroop commended Bass, who has 15 years of anti-sub experience, in San Diego last June.*



**CAPT. A. H. BOWKER,** *former senior Naval Officer at MATS, Scott AFB, receives Air Force Commendation Medal from LGen. J. W. Kelly. Cited for "aggressive initiative and leadership." Bowker commanded 4000 Navy men.*

# SELECTED AIR RESERVE


**CARDBOARD BOX** *was temporary home for bees displaced from an aircraft at Los Alamitos. Sue Weeks, YN2 of HS-701, checks the swarm.*

**WITH HIS DEPARTMENT HEAD** *looking on, Atlanta's "Man of Month" Presley gets unofficial check from TV's Dr. Hennessey, Jackie Cooper.*

### Active Duty Beekeepers

Two trained bee specialists were at Los Alamitos (on active duty for training) when that station had its annual bee invasion. On board were A. E. Caufman, AD2, and L. L. Jarrell, AD1, of HS-701, who calmly walked up to a bee-infested *Tracker*, took the Queen in hand and thereby broke up the invasion party. The bees' annual trek usually involves the hiring of trained bee specialists, according to a Los A1 source.

### 'Hennessey' Examines Presley

Selected as NAS ATLANTA's "Man of the Month" for June, Journalist First Class Emmett Presley had a special physical examination to determine his "fitness" for the honor. "Doctor" for the event was Jackie Cooper, TV's Dr. Hennessey, a visitor in Atlanta. Presley was selected top sailor among the station's 500 personnel on the basis of "outstanding professional and military performance, safety consciousness, adaptability, attitude, and integrity." He works in the station's Command Liaison office.

### Manpower Center Commissioned

The Naval Reserve Manpower Center was commissioned June 1 at NTC BAINBRIDGE, Maryland. The Center will collect and store information concerning all Naval Reservists (including air reserves not in Selected Reserve Units) in a computer machine system at the center. It will bring together, for the first time, all information about reserve personnel in all the various districts. RAdm. A. S. Heyward, Jr., Deputy Chief of Naval Personnel, was commissioning speaker. Reserve Naval Aviator (TAR) Captain Robert Feiten is the center's first C.O.

### New Englanders in Africa

Medical supplies, toys and educational supplies were among the gifts presented by South Weymouth's VR-914 squadron during a two-week tour in the Med. The squadron, commanded by Cdr. M. J. Ahearn, carried $15,000 in vitamin products and antibiotics to hospitals in Kenitra and Rabat, Morocco; educational materials, including reading kits, to schools in both Morocco and Italy, and toys to an orphanage in Rome.

**ADMIRAL HEYWARD** *speaks at commissioning of Manpower Center at NTC Bainbridge, Md.*

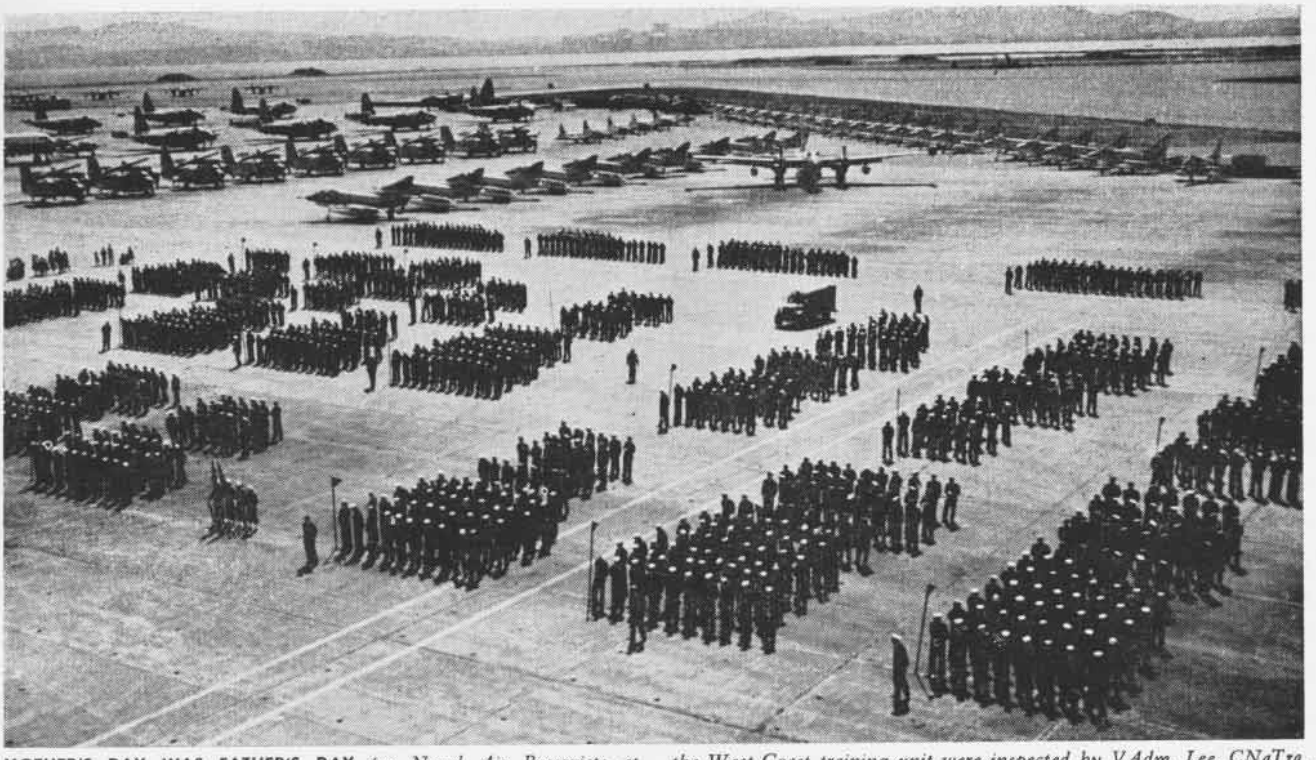
Serving in support of the Sixth Fleet, VR-914 flew a total of 755,930 ton-miles in three C-54 aircraft.

### Inspection on Mother's Day

NARTU ALAMEDA combined Mother's Day with its first major inspection in three years as VAdm. Fitzhugh Lee inspected all military personnel. Admiral Lee, Chief of Naval Air Training, accompanied by Captain E. M. Stever, representing CNaResTra, toured 3,000 inspection-ready men and officers of 32 squadrons and the training unit. Because of the Berlin call-up the unit had not received a staff inspection in recent years.

### 'Sal the Barber' Retires

A quarter of a million heads trimmed, civilian "Sal the Barber" Scalici has retired at NAS FLOYD BENNETT. Sal, who operated a non-Navy shop before the Navy took over the



**MOTHER'S DAY WAS FATHER'S DAY** *for Naval Air Reservists at NARTU Alameda—father's day to stand inspection. The 3000 men of the West Coast training unit were inspected by VAdm. Lee, CNaTra, and a team from the Chief of Naval Air Reserve Training, Glenview*

field, ended 31 years of service as a barber in the New York location. His former clients included many early aviation greats in the 1930's. He recalls that Aviatrix Amelia Earhart used his shop as a "hangout" and sat munching sandwiches while Sal gave haircuts to her aviator friends. "There was no restaurant on the field so she used to bring her lunch into my shop and just sit and talk," Sal said. In 1942, when the Navy took over the airport, Sal sold his shop and became a Navy civilian employee.

### Trailer Designer Commended

Cdr. Albert Elwood of VS-742, NARTU Jax, has been given a letter of commendation for the design and installation of an electronically-controlled training trailer for anti-submarine training at the reserve unit. The award, originated by CNaResTra, was presented by the NARTU commanding officer, Captain Ralph Elliott, Jr. The device simulates flying conditions for patrol and search type aircraft.

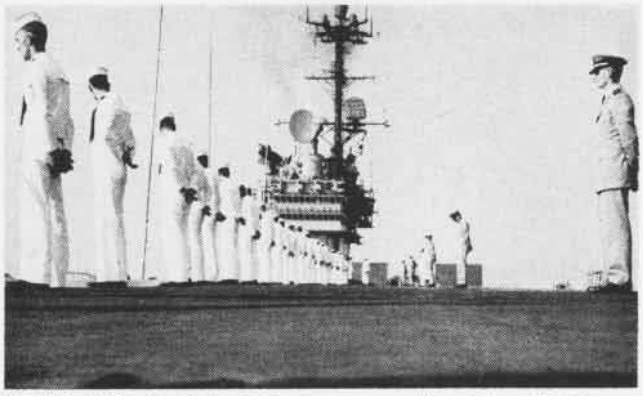
M. J. Marshall, ADR2, of NARTU Jax, was honorman in a leadership course conducted for E-5 personnel in the Jacksonville area. Marshall topped the 20-man class with an 88.98 per cent average in the courses he took.


**SAL THE BARBER** *gets retirement haircut from colleagues as he finishes civilian tour that pre-dates establishment of New York air station.*

**NARTU JAX'S** *Cdr. Elwood receives commendation from C.O., Capt. Elliott, for designing trailer for use in anti-submarine search training*

# AT SEA WITH THE CARRIERS

**BECAUSE THEY SAVED** *USS Saratoga from an unscheduled yard period by repairing a broken turbine, 17 men are cited at Commendatory Mast.*



**VIEWED FROM** *the flight deck—they are usually photographed from a pier—men aboard Independence man the rails as they depart Norfolk.*

## ATLANTIC FLEET

### Independence (CVA-62)

In addition to the major overhaul and maintenance items listed in the April NANEWS, *Independence* had an SPN-10 Automatic Landing System installed during her recent yard period at Norfolk. This system allows the ship to give landing aircraft both glide slope and centerline information, as compared to the centerline only info made available with previous equipment.

This system permits three methods of operation. It is fully automatic and requires only that the pilot fly the aircraft within certain limits, to a point aft of the ship, when the automatic carrier landing equipment takes over and lands the plane.

In the second method, the pilot lands the plane using a special instrument landing system in the cockpit fed by radar equipment.

A talk-down system provides the third method. Here, the equipment operator "talks down" the aircraft, using a visual display of the plane on a radar scope similar to GCA.

*Independence* completed the Admin and Material inspection with a grade of Excellent. Said Capt. L. V. Swanson, commanding, "ComCarDiv Six was well pleased with our concerted efforts. He said the appearance of the men and the ship was outstanding."

**HIS 200TH LANDING** *on Sara is the last for Cdr. Gene Carroll, VA-36 C.O., at tour's end.*

### Randolph (CVS-15)

Members of the North Atlantic Council and the NATO Military Committee in Permanent Session visited the USS *Randolph,* recently. CVS-15 is flagship for Task Group Alfa.

The dignitaries were greeted on the quarterdeck by RAdm. James R. Lee, Commander of Hunter-Killer Forces, Atlantic, and by Capt. H. L. Harty, Jr., commanding *Randolph.* They then inspected aircraft aboard.

### Saratoga (CVA-60)

Cdr. Walter T. Zebrowski, commanding Light Attack Squadron 34, piloted an A-4C *Skyhawk* to *Saratoga's* deck and scored two separate X000th landings. It was, simultaneously, the 37,000th carrier controlled approach and the 32,000th approach made under instrument flight conditions or at night.

Teaming for the approach to the *Sara* were Jerry Lessman, ACC, who acted as approach controller, and Bob Schweizer, AC1, who was final controller during the approach.

### Enterprise (CVAN-65)

When *Enterprise* visited Cannes recently, some 5000 visitors came aboard, among them was director-producer Alfred Hitchcock who led an entourage of theatrical people in Cannes for the annual film festival. When she left Cannes, the *Big E* hosted 20 press representatives from the United Kingdom for a two-day view of air ops and shipboard routine.

Three days out of Cannes, the carrier passed close aboard the Italian training ship *Amerigo Vespucci,* a three-masted schooner manned by midshipmen of the Italian Naval Academy. The schooner was lying almost dead in the water, fully rigged, with only five-knot winds barely filling her sails. It was then Capt. V. P. de Poix, commanding, received one of the strangest messages a carrier captain can receive. "Request your jets make wind for us," messaged *Amerigo Vespucci.* After several good-natured exchanges, *Enterprise* continued on her way.

Next day, the *Big E* logged its 100,000th mile of steaming since com-

**A MacDOWELL CLAN** *bagpiper commands the attention of Capt. J. M. West, C.O. of CVS-9.*

missioning in November 1961.

Ltjg. Earl Clarke, of VA-76, based aboard, made the ship's 18,000th arrested landing. He caught the wire in a Douglas A-4C *Skyhawk*.

The first three *Vigilante* Centurions in the *Enterprise* are members of VAH-7 and hit the 100 mark on the same day. Lt. Gerald M. Ryman was the first to reach the mark. He was followed by squadron C.O., Cdr. Leroy A. Heath. LCdr. Kenneth E. Enney completed the trio.

A rarity nowadays is a plankowner of CV-6 and CVA(N)-65. LCdr. George B. Dutch, holding certificates for both, recently left the nuclear-powered warship for duty in Norfolk.

Capt. de Poix topped the all-time record for total number of arrested landings during a tour of command of an aircraft carrier when Lt. E. W. Albrecht of VAW-12 (Det. 65) made the 17,526th arrested landing in an E-1B *Tracer*. RAdm. R. E. Riera, former C.O. of the *Forrestal*, held the previous record of 17,525. In late June, the 20,000th arrested landing was made on CVAN-65 by Ltjg. Everett T. Keech of VA-65 in an A-1H *Skyraider*. This made Capt. de Poix a charter member of the "20,000 Trap Club."

## Essex (CVS-9)

During carrier qualifications in the North Atlantic, Lt. George M. Lanham of VS-39 made two approaches to the *Essex* in an S-2D *Tracker*. Each time, he received a foul deck wave-off. When he made it aboard on the third approach, it was in fine style. He logged the carrier's 112,000th landing since her commissioning on New Year's Eve, 1942.

Lt. Lanham then taxied up the flight deck to continue his qualifications. He hadn't finished setting records, however, for when he was catapulted off, he added three more zeros to the *Essex* record book—it was the 27,000th consecutive shot on the starboard catapult.

## Franklin D. Roosevelt (CVA-42)

Ltjg. Thomas B. Korsmo logged in two personal "firsts" when he made the 122,000th arrested landing aboard the *FDR*. The event marked his first landing aboard the carrier as well as the first time he landed an F-4B *Phantom II* aboard any aircraft carrier. At the time, he was assigned to VF-101 based at Key West, but received orders to VF-74 at Oceana, Va.

Capt. Walter E. Clarke, commanding the carrier, sent this message to the officers and men of VMA-242 after they departed the ship upon completing carrier requalifications: "To all Marines from Captain Clarke. . . . A fine job done with great spirit. . . ."

**CANADIAN QUEEN** *of Nova Scotia's Apple Blossom Festival greets visiting Essex sailor.*

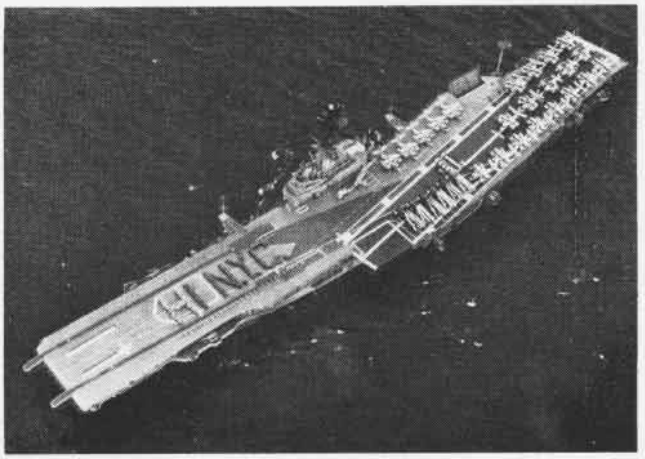
While aboard, the Marines logged in the 123,000th landing (accomplished by 1st Lt. Thomas R. Kosta in an A-4). The following night, the Marine squadron set a new East Coast record of 101 night landings by one squadron aboard one carrier, during one night. The old record was 84 night landings.

Turning over command of *FDR* in mid-July, Capt. Clarke added his name to the growing roster of Ten Thousand Trappers. A total of 13,004 arrested landings were logged in his tenure.

## Lexington (CVS-16)

Lt. Harold L. Wells of VT-5 logged in the 51,000th arrested landing on the *Lexington* in a T-28. Seaman Jerry Ray supplied the cake for the event.

**THIS HAPPY TRIO** *teamed to log the 37,000th CCA in USS Saratoga. From left are air controlman Schweizer, pilot Zebrowski, ACC Lessman.*



**WHEN CVS-11 STEAMED** *up Hudson River, her Intrepid crew and 243 members of American Inst. of Aeronautics and Astronautics said "Hi."*

**RANGER SHOWS** *versatility in aircraft types aboard. Toward aft are Skyhawks, Phantoms, Tracers, Skyraiders, Skywarriors and Crusaders.*

**YORKTOWN RETURNS** *to the West Coast after a tour with the Seventh Fleet, during which officers and men earned a Battle Efficiency E.*

# PACIFIC FLEET

## Ranger (CVA-61)

The "Ten Thousand Trap Club" has a new member. Capt. George C. Duncan, commanding *Ranger* until relieved by Capt. William E. Lemos in May this year, joined the club. The TTTC is comprised of carrier commanding officers whose ships have logged 10,000 or more arrested landings during their tour of command. Capt. Duncan logged 15,212 "traps" since May last year. [For the top "trappers," see USS *Enterprise* (CVAN-65) above.]

The 56,000th landing on board the *Ranger* was logged by Lt. Jan C. Hoeffel, who piloted an A-1J *Skyraider* of VA-95. It was his 94th night catch. He went on to become the carrier's first night Centurion.

When *Ranger* completed her fourth WestPac tour, VF-91 and VF-96 returned to home base at NAS MIRAMAR, VA-93, VA-94 and VA-95 to NAS LEMOORE, and VAH-6 to Whidbey Island. Before entering San Francisco Naval Shipyard (see p. 36), an enterprising statistician aboard presented these figures for contemplation.

*Ranger* traveled 51,766 miles, issued $3½ million in payroll, sold 875,276 packages of cigarettes, and 933,754 soft drinks, while using 41,862 pounds of coffee. The fuel gang pumped 661,168 gallons of avgas, a small figure compared to the 8,573,607 gallons of JP-5 for the ship's jets. There were 2,142,000 meals served and more than 2000 movies shown. Mail men aboard delivered 153,967 pounds of mail and cancelled 503,182 outgoing letters. Corpsmen aboard issued 182,000 APC's.

## Ticonderoga (CVA-14)

Two *Ticonderoga* flight deck firefighters were commended recently by Capt. James G. Daniels, III, commanding the carrier. In shipboard ceremonies, he cited Gary L. Booker, AN, and Arnold M. Steele, AN, for their rescue of a trapped jet pilot from his burning plane.

The incident occurred on the night of May 2 while the carrier was engaging in flight ops in the South China Sea. Booker and Steele were serving as "hot suitmen" in the flight deck crash crew when an A-4C, attempting an emergency landing after losing its right wheel, crashed into the stern and slid up the deck. The cockpit section burst into flames. The two airmen raced to the cockpit and freed the pilot, "saving him," read the commendations, "from possible serious or even fatal injury."

## Bennington (CVS-20)

Recently out of the yards is the USS *Bennington* which finished refresher training with an overall grade of Good. Excellent marks were received in Special Weapons, Navigation and Ship Control. In an editorial printed in the ship's paper, "Hukster," Capt. C. E. Healy, commanding, expressed his pleasure. "Even more gratifying," he wrote, "was the smooth and rapid manner in which the entire ship returned to the tempo of Fleet operations. During our last period at sea, all evolutions were conducted as if we had been operating for six months. Air operations went smoothly and the flight deck crews looked like pro's.

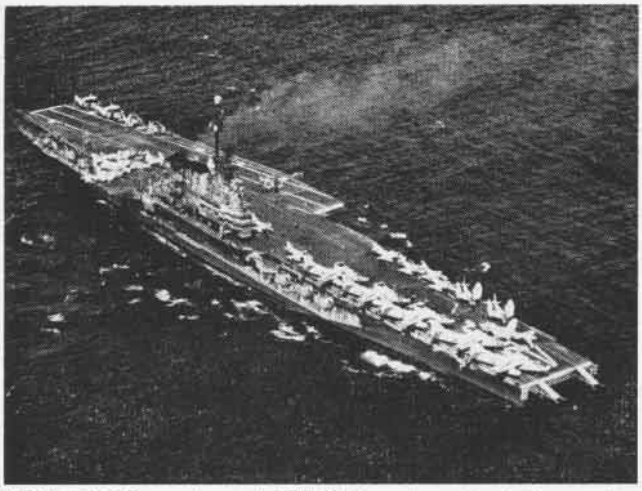
"We also got a good start towards winning the Battle Efficiency Pennant for CVS's, receiving several outstanding grades in our competitive exercises. I'm certain we can keep this record going."

*Bennington* is slated to deploy to Seattle and Alaska this month. "In the more distant future," Capt. Healy wrote, "*Bennington* will participate in forthcoming manned space shots in the same role as *Kearsarge*."

## Yorktown (CVS-10)

VAW-11, Detachment Tango, logged the 89,000th safe landing on the *Yorktown* in an EA-1E *Skyraider* piloted by Lt. Arnold H. Henderson, with Ltjg. James M. Burgess, controller, and William L. Williams, AMS2, technician.

*Yorktown* tied up at Pier E at the Long Beach Naval Station when she completed her Far Eastern tour. Returned to the U.S., the *Fighting Lady* won the coveted Battle Efficiency plaque awarded by Commander Naval Air Force, U.S. Pacific Fleet for being the best "battle ready" carrier of her class in the Pacific. Capt. W. C. Moore commands CVS-10, flagship for RAdm. J. A. Jaap, ComCarDiv Nineteen.



**FRESH OUT OF** *a yard period, USS Midway has rejoined the operating Fleet and this month heads for a Mid-Pac cruise in Hawaiian waters.*

**KITTY HAWK PLAYED** *host to the "Bald Eagles," a group of early Naval aviators, in a four-day period while operating out of San Diego.*

## Midway (CVA-41)

After months of extensive overhaul at the San Francisco Naval Shipyard, *Midway* proceeded south and engaged in a month of intensive underway training off the coast of San Diego.

CAG-2 came aboard for two weeks of underway flight ops. In that time, prop-driven A-1 *Skyraiders* of VA-25 were flown, in addition to F-4 *Phantom II's* of VF-21, F-8 *Crusaders* of VF-111, A-4C and A-4E *Skyhawks* of VA-23 and VA-24, and A-3 *Skywarriors* of VAH-8. Hovering by and watching them all were the UH-1's of HU-1.

Underway training completed, *Midway* returned to Alameda for a week in port. Her current operating schedule calls for short periods at sea until the latter part of this month (August) when she will make a cruise to Hawaii.

## Hornet (CVS-12)

*Hornet* hosted several groups recently. Among them were 26 orphans from the Optimist Home for Boys, Pasadena, Calif.; members of the Society of Aeronautical Weight Engineers, their wives and children, totalling 150; 30 representatives of the Mariner Ship *Hornet*, a senior Girl Scouts chapter, one of several chapters adopting the name of U.S. ships serving in WW II; and 25 members of Brownie Troop 60, younger Girl Scouts from the Rossmore area of Los Alamitos.

Lt. Don M. Shafer of VA-35 made the 77,000th arrested landing aboard the *Hornet*, Lt. C. B. Fabrizio copiloted. A specially engraved cigarette lighter was presented Lt. Shafer by *Hornet's* Air Boss, Cdr. J. P. Bouldin.

## Oriskany (CVA-34)

The PLAT (Pilot/Landing Aid Television) system has been installed in *Oriskany*.

Recently, the carrier hosted one hundred "sea lawyers" from western states. The attorneys were naval reserve officers in San Diego for a two-week West Coast law seminar, designed to refresh them on military justice.

## Kitty Hawk (CVA-63)

The "Bald Eagles" swooped aboard *Kitty Hawk* in June, upon the invitation of VAdm. Paul D. Stroop, ComNavAirPac. The Bald Eagle qualification was originally limited to the first 400 Naval Aviators, but has since included the very earliest Navy helicopter and jet pilots. The early aviators billeted aboard CVA-63 and then were airlifted to MCAS El Toro and the Pacific Missile Range at Pt. Mugu.

*Kitty Hawk* is the recipient of a plaque presented to Capt. W. L. Curtis, former C.O., by Mr. Robert C. Jackson, president of Ryan Aeronautical Corporation. The occasion was a direct bulls-eye by a *Terrier* guided missile on a Q-2C drone. The missile demolished the drone when it struck directly in the tail section.

Sixteen Latin American diplomats visited the attack aircraft carrier in San Diego during a three-day West Coast tour. The diplomats, ambassadors to the U.S., or representatives of the Organization of American States, were greeted by VAdm. R. T. S. Keith, First Fleet Commander, and VAdm. Stroop. Representing 12 countries, the group toured the ship and lunched aboard. Capt. H. H. Epes, Jr., commands CVA-63.

## Constellation (CVA-64)

In a quiet ceremony on the forecastle of CVA-64, amid lengths of anchor chain and gleaming capstans, Ltjg. Bert C. Dodson, Third Division Officer, and the former Miss Sonya Prochorchik were married at Iwakuni, Japan. Chaplain (Cdr.) P. W. Reigner conducted the ceremony.

Another "happy marriage," has been repeatedly demonstrated by *Constellation* and USS *Hassayampa* (AO-145). The two ships have established records in refueling and broken them repeatedly to establish new records.

It began in early April when *Hassayampa* transferred an average of 9837 barrels of fuel oil an hour to *Constellation*. This set a record between PacFlt oilers and carriers. Four days later, the two met again, this time bettering their old mark by 410 barrels an hour. On the third encounter, in the China Sea, a total of 11,426 barrels an hour was pumped, equalling 479,892 gallons—enough to fill 16 30,000-gallon railroad tank cars every hour.

The men who manned the fuel lines on both ships did well. All fuel lines

were rigged and unrigged in 12 minutes, a time which exceeds the Seventh Fleet's Task Force 73's standards of excellence.

## Coral Sea (CVA-43)

The Naval Air Training Command's requirement that all Naval Aviators must land aboard an aircraft carrier in order to qualify for the Wings of Gold paid off recently when a pilot from a land-based squadron had an emergency at sea. Towing a target, Ltjg. J. C. Collins of VU-5 suffered an engine malfunction in an A-1E *Skyraider* which indicated it might fail at any moment.

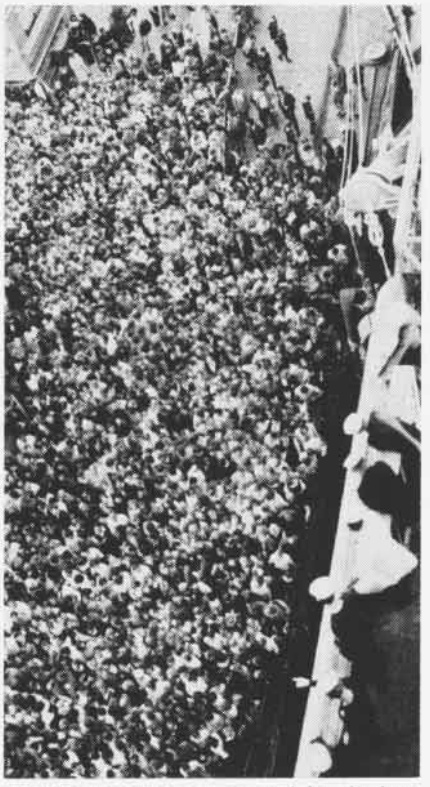
*Coral Sea*, in the area, turned smartly into the wind. Although the carrier was not at flight quarters at the time, the deck was respotted in less than five minutes, and Ltjg. Collins was given a Charlie signal. Although he had never made a carrier landing in the A-1E type, nor had he ever practiced in the mirror landing system pattern, Collins successfully brought the plane aboard on the first pass.

The malfunction remedied by VA-152 personnel aboard *Coral Sea*, the aircraft was catapulted from the ship and returned to NAS CUBI POINT without further incident.

*Coral Sea's* participation in the 21st annual celebration of the Battle of the Coral Sea at Sydney, Australia, started with a 21-gun salute, announcing her arrival at Sydney Harbor. The hosting Aussies pulled out all stops in welcoming the visitors: parades, dedication ceremonies, dances, and athletic contests. Some 86,000 people swarmed aboard, averaging 6000 a day, during the two weeks CVA-43 berthed at Sydney. In the first few days in harbor, thousands of visitors had to be turned back for lack of accommodation.

It was an eventful, happy and fortunate visit. A carrier-based E-1 *Tracer*, returning from a reconnaissance mission, spotted the yacht *Cythera* which had been missing for a week. When not open to the public, the carrier hosted parties and special tours for the blind children and orphans of Sydney.

While at Subic Bay, the carrier delivered 25,000 books to Peace Corps representatives stationed in the Philippines. The books were donated by the Chamber of Commerce of San Luis Obispo and Palo Alto, Calif., in answer to a request from the Peace Corps. Cdr. R. B. Bergner of Palo Alto, commanding VA-152 in the *Coral Sea*, volunteered to act as liaison officer.



**CORAL SEA** *men were stunned by the large turn-out of Australians during a recent visit.*

## Ranger Set for Changes

### CVA-61 Enters SF Yard this Month

"That rumor you've heard about *Ranger* being converted into a guided missile cruiser isn't true," wrote Ens. Steven R. Raymond in an article appearing in a recent issue of the ship's paper, *The Shield*. He told his shipmates what to expect when their ship enters San Francisco Naval Shipyard Aug. 7, for a six-month period.

"Among the changes that will be readily visible to anyone familiar with *Ranger's* shape will be an expanded flight deck. The forward portion of the angled deck will be expanded to accommodate the new A-5 *Vigilante* heavy attack bomber. Along with the wider deck, *Ranger* will receive new jet blast deflectors."

A nose launching system will also be installed on two of the carrier's catapults. "The signal bridge," he continued, "will be raised another level and the island will blossom with a crowd of new radar antennae."

Most of the changes to CVA-61 will take place inside her steel frame: A new liquid oxygen converter bench will be installed on the hangar deck by the after escalator trunk. Converters will be removed from aircraft and plugged into the bench in a simple procedure.

Magazine modifications will be made to take care of the *Bullpup* missile and a new space for aircraft weapons storage will be built on a platform over the hangar deck.

The ship will also receive evaporator modifications.

A new "integrated" air-intelligence center will be built, expanding around A-I's present location and utilizing the space which now houses the Weapons Coordination Center. The weapons center will be relocated at frame 119 on the starboard side of the 03 level.

A new space will be built at the after end of the hangar deck to house an aviation engine and welding shop. The space will be built across the width of the hangar deck with the forward bulkhead about ten frames forward of the present after end of the hangar deck.

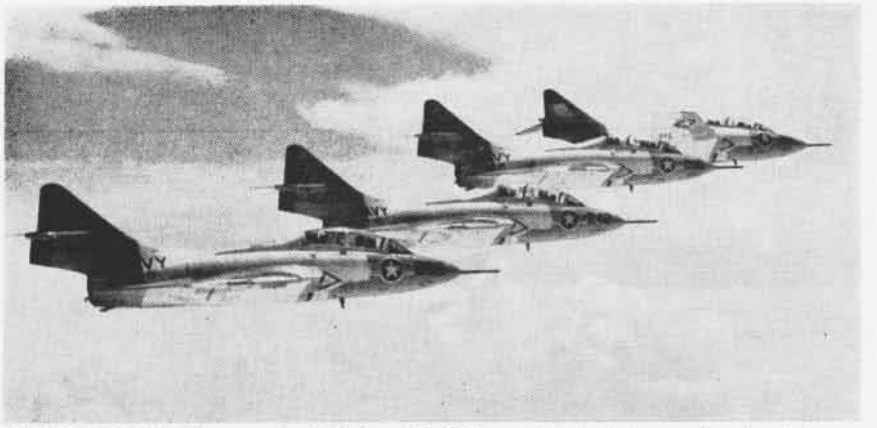
New berthing spaces for the crew will be built on the 02 and 03 levels under the angled deck. The new compartments will be set up in spaces which are now voids. Ten new officers' staterooms will also be built.

"One of the hottest new items coming on board," continues Ens. Raymond, "is the ship's aircraft inertial alignment system. Similar to the inertial guidance system used aboard nuclear subs, the aircraft alignment system will pipe electronic outputs from gyros to outlets on the flight deck. Aircraft computer leads will be plugged into the outlets to receive information from the alignment system."

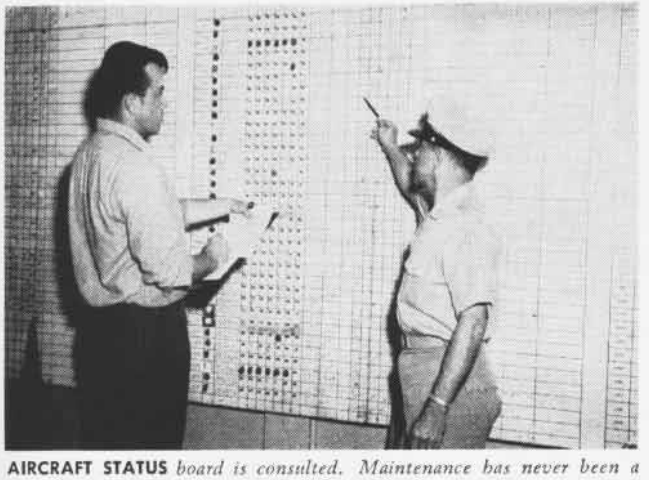
All these alterations will be taken care of by the yard's force. But there will still be plenty for *Ranger* men to do. Among the ship's force jobs will be the construction of an interim washdown system, the installation of a new range in the flag galley, and the preparation of a new barrier barricade storeroom.

They will also install new boiler casings on the sides of the ship's boilers, replace flight deck hose racks with baskets, and strengthen the tracks on the elevator doors during the overhaul.

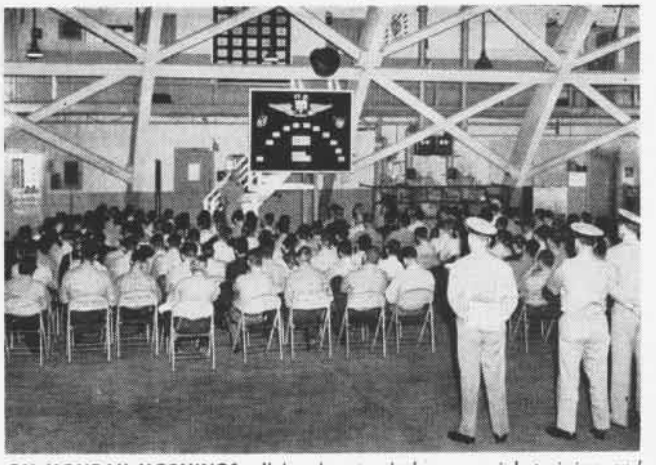
# VT-21 WINS TOUGH COMPETITION WITH SELF



**THESE TF-9J COUGARS** *assigned to VT-21 at NAAS Kingsville helped the squadron break its own record of safe flying hours. VT-21 scored 22,201 safe hours, beating its old record of 21,581 hours.*



**AIRCRAFT STATUS** *board is consulted. Maintenance has never been a contributing factor in any accident involving the squadron's planes.*



**ON MONDAY MORNINGS,** *all hands attend classes on job training and listen to leadership lectures given by officers and senior P.O.'s.*

**FOR ADMIN INSPECTION,** *the squadron personnel, commanded by Cdr. Marlar E. Stewart, fall in on the flight line, flanked by VT-21 aircraft. The squadron achieved a score of "Outstanding" in the last three annual Administrative, Material, Training and Leadership inspections.*

# JAX UNIT TEACHES MAINTENANCE X RAY

**STUDENTS LEARN** *techniques of Sperry X Ray Control Unit from O. R. Daughenbaugh, AMCS. Machine takes X rays of material in another room, leaving operator unexposed to radiation.*

THE AIRCRAFT MAINTENANCE Radiography School at NATTU, Jacksonville, is a rare educational institution. Commissioned in April, 1962, the "C" school trains First Class, Chief and selected Second Class Aviation Structural Mechanics in the theory and skills of applying x-ray principles to aircraft maintenance. Marine Corps and Civil Service personnel are also eligible to attend the two-month course.

Students from Naval activities throughout the world comprise classes of 20 men each. They learn radiographic techniques similar to those used by doctors in x-raying the human body, but designed to seek out cracks and defects in aircraft metals that the human eye might miss. Radiation is projected through the material being checked and films record pictorial data for close examination. This process facilitates preventive maintenance and, at the same time, insures a significant monetary savings.

After a week of indoctrination in basic mathematics, radiation theory, and radiographic process, students learn the technical aspects of equipment used. Laboratory experiments follow, and the final three weeks are spent practicing techniques on actual aircraft.

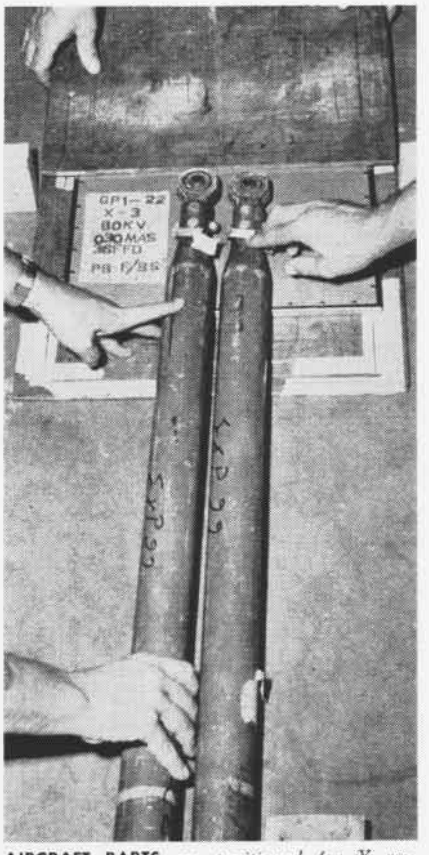
The school also teaches gamma radiography and the use of radioactive isotopes such as cobalt, radium or iridium. Lt. Joseph S. Bouchard, training officer, states that equipment to handle these isotopes is available and will be put into use as soon as a license is issued by the Atomic Energy Commission. When the license is authorized, iridium 192 will be used.

Safety precautions are continually emphasized at the school. Each individual working in the vicinity of radiation sources wears three different devices which measure exposure. A dosimeter is read daily and a pocket ionization chamber, weekly. Once a month a film badge is checked by an industrial hygienist of Jacksonville's O&R department.

"Working with radiation, we have to emphasize safety," says Joseph S. Kordek, AMCS, enlisted supervisor of the school. "If a man is accidentally exposed to radiation, there is no sensation. A weekly radiation dosage limit is set, and if the individual reaches this limit, he is kept away from radiation for the rest of the week."

Work rooms are lead-lined to a height of seven feet to shield against escaping radiation. A survey meter, which measures radiation much like a Geiger counter except that it employs a calibrated dial instead of a ticking sound, is used as a safeguard against excessive radiation. Each measure is designed to insure full protection.

The Navy will eventually have qualified radiographers at every Naval Air Station and on aircraft carriers. Radiographic maintenance on carriers however, must be conducted during in-port periods since the equipment in operation interferes with ships' radar and CIC gear.



**AIRCRAFT PARTS** *are positioned for X ray. "Invisible" defects in metal are revealed.*

Commercial airline companies have used radiographic maintenance techniques for several years. Comparatively new in Naval Aviation, these techniques will increase flying safety, lengthen aircraft service life and reduce the cost of maintaining aircraft.

# Editor's Corner

**EVERYTHING IS RELATIVE? Interviewed as her husband returned from an eight-month deployment to the Far East, the wife of a Heavy Attack Six man said, "Deployment? It's like having a honeymoon every year when he comes home!"**

*Did you hear* the story about the Air Force Major who made 22 passes over a carrier, finally had to be picked up from the sea? His name: Gordon Cooper. (Swiped from final column of 'Blasting Off,' by Major Walt Sullivan, Flight Jacket, MCAS EL TORO.)

**WONDERFUL WORLD OF KIDS. In thank-you letters, received by the *Kitty Hawk* following a ship's tour by a San Diego school class, were comments from some of the children:**

**"When I got home I told my mother all about the ship and she wished she was still in the sixth grade. . . ."**

**". . . and I don't still see how you can make it move because it's so big, I think."**

**"The ship was so wonderful. And the most exciting part was when we were walking up and down the stairs. But I don't know if my legs did."**

*Immobile Rescue?* HU-1's breezy Newsletter told of the first UH-2A *Seasprite* rescue made by squadron pilots aboard the *Oriskany*: ". . . a man was reported overboard and Ltjg. Mowery practically rammed a destroyer to get to the man first. When he got there, he saw it was a dummy, but figured it was part of a drill. He reported that he was putting a crewman into the water to get the 'man' out. Corpsmen (aboard ship) were a little shook with their victim, but covered him up and started for sick bay. It was still a while later before the bridge found out that it was a dummy. Meanwhile, the whole force was all stirred up with the 'man overboard.' Best guess seems to be that the *St. Paul* lost its dummy early in the day. . . ."

**TALKING TO THEMSELVES. HU-1's Supply Department (in the same Newsletter) admits its own faults. "You have probably noticed on your visits to Supply, a group of seemingly confused sailors. This is somewhat true. We are still engrossed . . . with the UH-2A program. We have been supplying information and usage data to everyone but the Wright Brothers. We have made a list, on lists, that were a list, that should be a list, but no longer pertinent, because someone else had made a list, after our list was made."**

*Make sure cat is clean* . . . In a recent column in the NAS ATSUGI *Skywriter*, columnist "Quack Feline" denounced the old "Cat and Duck" instrument flying methods as "highly overrated." (Ancient flying theory holds that a cat can aid in instrument flying because it will always remain upright—a duck, theoretically, is used for the landing because it will not fly under instrument conditions, will head for the nearest land.)

Says "Quack:" . . . "this system has serious pitfalls and the pilot using the system for the first time should observe these important rules:

"1. Get a wide-awake cat. Most cats do not want to stand up at all.

"2. Make sure your cat is clean. Dirty cats spend all their time washing. Trying to follow a washing cat usually results in a tight snap-roll, followed by an inverted spin. You can see this is very unsanitary.

"3. Old cats are best. An old used-up cat with only one life left has just as much to lose as you do and will be more dependable.

"4. Beware of cowardly ducks. Ducks are no better on instruments than you are.

"5. Be sure the duck has good eyesight. Nearsighted ducks will not realize they have been thrown out and will descend straight down in a sitting position. This is hard to follow with an airplane.

"6. Use a land-loving duck. It is very discouraging to break out of an overcast and find yourself heading for a rice paddy. Particularly if there are duck hunters about. Duck hunters suffer from temporary insanity, when they are sitting in freezing water and will shoot at anything that flies.

"7. Choose your duck carefully. If you are not careful, you may get confused between ducks and geese. Geese are very competent instrument fliers, but are seldom interested in going the way you want to go. If your duck heads for Canada or Mexico, you know you have been given a goose."

## VAH-11 Wins at Sanford

### Det. 8 Out-Bombs Other A-3's

VAH-11's Det. 8, skippered by Cdr. Bob de Lorenzi, captured first place honors in the May Bomber Stream competition at NAS SANFORD, Fla. Although VAH-3 took individual laurels in the A-3B bombing derby, VAH-11 piled up a 245 point margin to win. All four of Det. 8's entries finished among the first seven in the event.

Lt. Nick Nichols, pilot, and bombardier Clark D. Arrington, ADJ1, were Det. 8's top crew. Stand-out performers for VAH-3 were Cdr. Henry Dement and his bombardier, Lt. Bill Maliczowsky.

Three local area training targets are used in the competition which tests the ability of crews to meet time schedules, adhere to prescribed courses and effectively bomb the target.

## 1000th Student Graduates

### VT-6 Ends Training Course Early

Marine Aviation Cadet John R. Linderman, USMCR, became the 1000th Cadet to complete instrument training with Advanced Training Squadron 6 at NAAS WHITING FIELD. He was presented his Navy "Standard" Instrument Rating by Maj. W. J. Longfellow, USMC, VT-6 X.O.

In logging its 1000th completion, VT-6 wound up its assigned student load for the training year nearly two weeks ahead of schedule. Commanding Officer of VT-6 is Cdr. H. C. Cyr.

CADET LINDERMAN IS 1000TH GRADUATE

# LETTERS

SIRS:

I read in *Newsweek* magazine that the famous *Blue Angels* will be grounded because the Grumman F11F-1 *Tiger* is no longer in operation in the Navy. I also understood that the Defense Department is unwilling to let them fly the F-4 *Phantom II*.

Millions of Americans are going to miss the *Blue Angels*. As a teen-age boy of 14, I know I am going to miss the *Blue Angels*.

Why can't the *Blue Angels* fly the F-8E fighters? F-8E's are new fighters of the Navy, and very fast fighters. Is the Navy looking into the F-8E's for the *Blue Angels?*

WILLIAM EDWARD SEWELL
Baton Rouge 7, Louisiana

**Following is partial text of a telegram sent by VAdm. Fitzhugh Lee, Chief of Naval Air Training, to *Newsweek*:**

"*Newsweek* says—that the *Blue Angels* may soon be grounded and that the F11F (now F-11A) *Tiger* planes they use are no longer operational. Not so. The facts are that the *Blue Angels* will continue indefinitely as a proud symbol of the excellence of Naval Aviation."

(Editor's note—*Tigers* are in use in the advanced training command program and will remain in the inventory for several years. For additional information on *Blue Angels'* future, read next letter.)

SIRS:

The *Blue Angels* are screening candidates for two vacancies which will be open on the team after the 1963 season. During the past few seasons, the *Blue Angels* have tried to stabilize the tour with the team at three years. The principal reasons for this have been the increasing demands for appearances and an extended show season, which leave a minimum of time for training in December and January.

General qualifications required by applicants are: (1) Completed a tour of duty with a Fleet squadron. (2) Have a background with recent jet experience. (3) Be on shore duty or expected to rotate to shore duty by December 1963. (4) Be a regular Naval Officer.

Any career Naval Aviator interested in applying for the team should address his letter of application:

Officer-in-Charge
U.S. Naval Flight Demonstration Team
(Blue Angels)
Naval Air Station
Pensacola, Florida

LT. BOB COWLES
Public Information Officer

SIRS:

During World War II, I was Commanding Officer of VPB-110, a heavy bomber squadron which flew ASW missions out of England. A number of my former officers and men have formed a committee to organize a reunion in observance of the 20th anniversary of the formation of the squadron.

We are having a certain amount of trouble obtaining the addresses of many of the officers and men who served in VPB-110. For this reason, we would like to "advertise" the reunion.

The reunion of VPB-110 is being planned for the weekend of 6-8 September in Washington, D. C. For details, former members of VPB-110 are requested to write to RAdm. James R. Reedy, USN, Commander Task Force 43, Building "D", Sixth and Independence Ave., S.W., Washington 25, D. C.

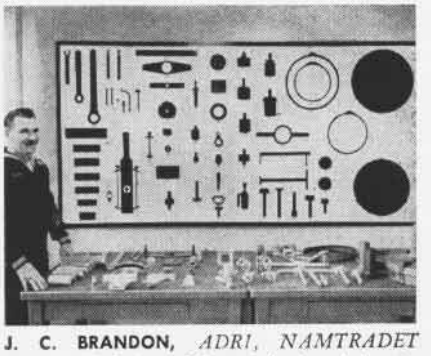
RADM. J. R. REEDY
ComNavSuppFor, Antarctica

**HIGH POINT,** *the Navy's first Patrol Craft-Hydrofoil (PCH-1), demonstrates lift capability of her submerged foils at Puget Sound. This fast, modern sub-chaser is designed for speeds in excess of 50 miles per hour.*

## VMF-251 has Top Gunner

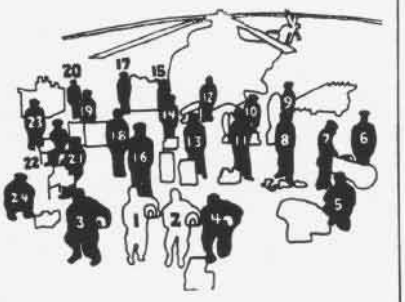
### Tummillo Scores 106 of 143 Hits

In a gunnery deployment at Roosevelt Roads, Puerto Rico, Capt. Pete Tummillo managed a century banner by himself. Of the 143 hits in VMF-251's target banner, he scored 106. He was flying the F-8B *Crusader*. VMF-251 is stationed at MCAS BEAUFORT.



**J. C. BRANDON,** *ADR1, NAMTRADET 1070 (UH-2A), exhibits tools board he designed for Class C Maintenance Training program for G.E. T58-8 turboprop engine. Silhouettes simplify inventory of tools at job's end.*

KEY TO INSIDE FRONT COVER



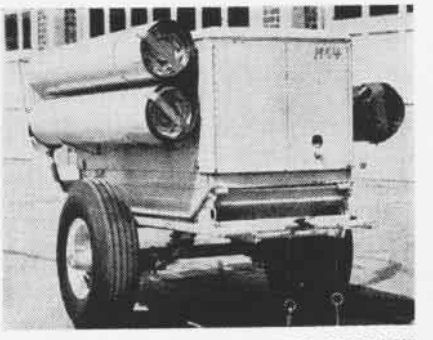

**HELICOPTER ANTI-SUBMARINE** *Squadron Two, stationed at NAAS Ream Field, posed the striking picture of the Sikorsky SH-3A Sea King and crew which appears on the inside front cover. Key to the picture is as follows: (1) pilot, (2) copilot, (3) first crewman, (4) second crewman, (5) aviators equipment, (6) power plants, (7) quality control, (8) electric, (9) air frames, (10) ordnance, (11) radio, (12) assistant plane captain, (13) sonar, (14) information and education, (15) plane captain, (16) corpsman, (17) starter unit operator, (18) cook, (19) operations, (20) material, (21) administration, (22) disbursing, (23) first lieutenant, and (24) personnel.*

## Pre-Heater Is Designed

### Reduces Engine Warm-Up Time

E. E. Waldhoff, of NAS MINNEAPOLIS, has designed an engine preheater which can be constructed on small unit levels. An internal combustion heater radiates clean air through a hose into blankets which are wrapped around the plane's engine, sharply reducing warm-up time.

Construction of the device is simple. For detailed information write: Public Works Dept., NAS MINNEAPOLIS.



**PRE-HEATER FACILITATES ENGINE WARM-UP**

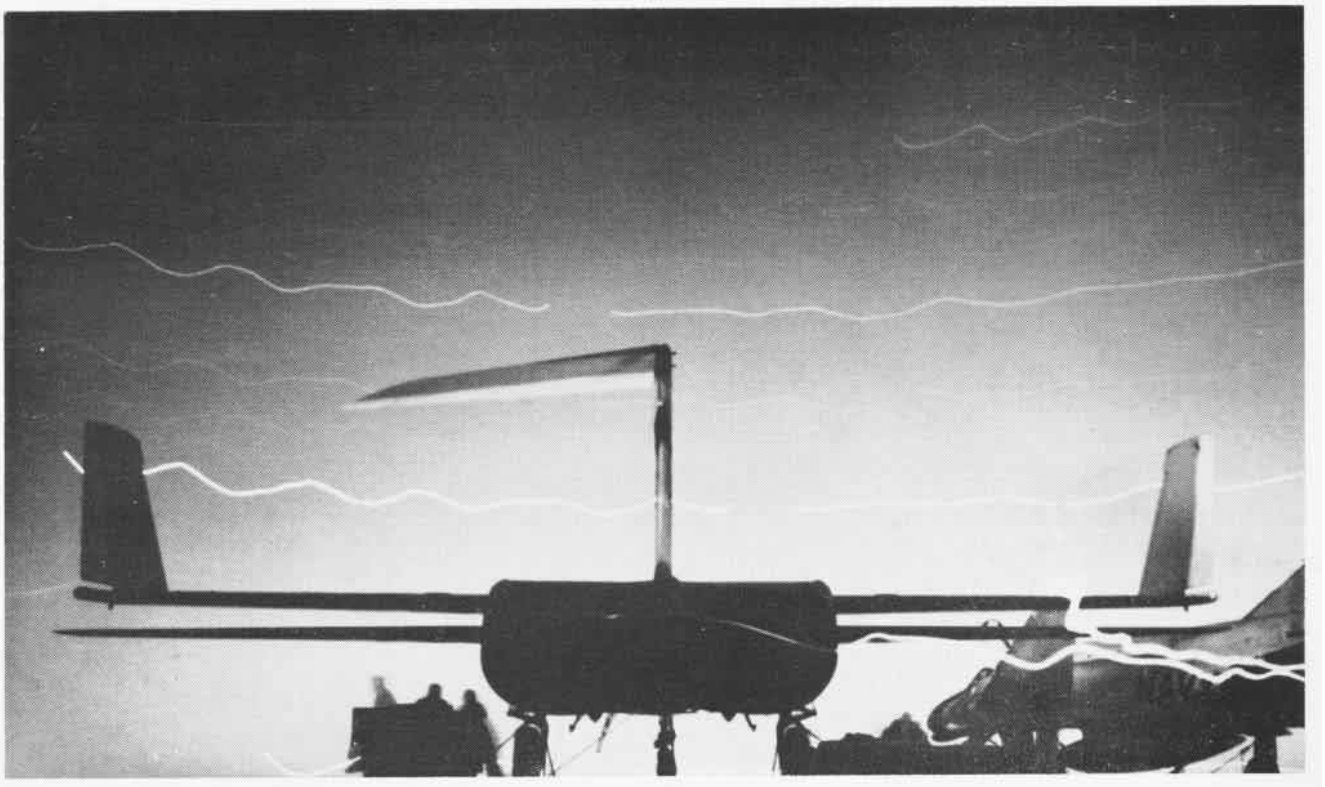
# COMFAIR WHIDBEY INSIGNIA

Each day at Naval Air Station, Whidbey Island, Washington, home of all Pacific Fleet heavy attack squadrons, A-3B Skywarrior heavy attack bombers streak skyward on practice long range radar missions, radar plotting and navigation practice, and the all important Field Mirror Landing Practice. SP-2H 'Neptune' and SP-5B 'Marlin' patrol planes take off on practice long range anti-submarine tactical missions. Commander Fleet Air, Whidbey, exercises control over all Fleet Units in the area, providing them with air training and support as well as coordinating their over-all activities at the base.


THE SP-5B MARLINS ARE A PRINCIPAL AIRBORNE DEFENSE AGAINST UNDERWATER FOES


LONG RANGE HEAVY ATTACK CAPABILITY AT WHIDBEY IS REPRESENTED BY SKYWARRIORS

PROVED AND EFFECTIVE SP-2H NEPTUNES ARE EXPERTS IN ANTI-SUBMARINE WARFARE



# WHAT KIND OF BIRD ARE YOU?

NAVAL AVIATION NEWS

What is it? It ISN'T a stork. Or a pelican about to flap its wings and fly away. It IS an A-5A Vigilante, largest and swiftest of the U. S. Navy's carrier-based attack bombers. With its vertical tail bent and its wingtips folded it just looks like a stork . . . or a pelican.

NAVAL AVIATION NEWS

The Vigilante is a two-place heavy attack aircraft. It takes a trained, coordinated team of officers to accomplish its assigned missions. The front cockpit belongs to a Naval Aviator. Behind him sits a Naval Aviation Officer (NAO) who is the A-5A crew's vital "other half."

NAVAL AVIATION NEWS

Can YOU qualify for either seat?

For information about the Naval Aviator/NAO programs, visit your nearest Naval Air Station or Naval Air Reserve Training Unit procurement officer. Or write today to: NAVCAD, Washington 25, D. C.