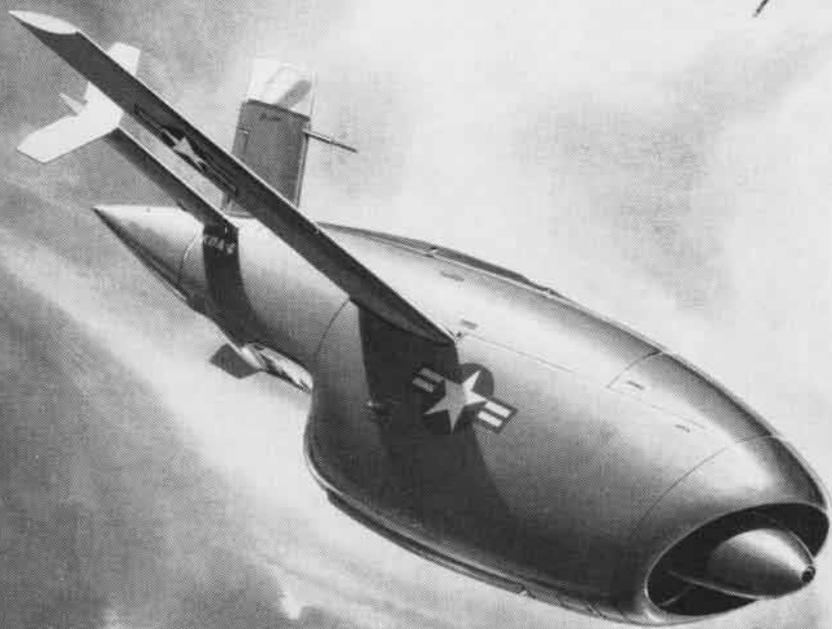


NAVAL AVIATION

NEWS



T. GREGORY

41st Year of Publication

NOVEMBER 1959

NavAer No. 00-75R-3





THREE-DIMENSIONAL PUNCH

With SecNav William B. Franke embarked, U.S. Task Group ALFA conducts exercises in Atlantic waters. Built around the ASW aircraft carrier, USS Valley Forge, the group contains seven escort destroyers, two submarines and air support units. Flying from the carrier's flight deck are S2F Trackers, HSS helicopters, AD-5W Skyraiders, whose power is augmented by Norfolk-based P2V's.



NAVAL AVIATION

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FORTY-FIRST YEAR OF PUBLICATION, NOVEMBER 1959

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■ COVERS

Artist Tom Gregory salutes the Yuma Air Weapons Meet, Operation Top Gun, with his "Cowboy in the Sky" cover . . . The photo Crusader (back cover) was one of two flying with the Constellation "Hurricane Hunters" of Airborne Early Warning Squadron Four. This picture was widely reproduced in the press.

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NAVAL AVIATION NEWS

VS-27 Sweeps Air Honors Tops All Carrier ASW Squadrons

Air Antisubmarine Squadron 27, commanded by Cdr. Robert E. Taylor, has made a clean sweep of Naval Aviation awards for carrier based ASW squadrons for fiscal year 1959.

VS-27 won the coveted Battle Readiness Excellence pennant for the third successive year, the CNO Aviation Safety Award, and a ComNavAirLant safety citation for a year of accident-free operations. A fourth honor came when the squadron was awarded the Isbell trophy for excellence in anti-submarine warfare.

Operating with Carrier Divisions 18 and 20 on ASW exercises during the year, the squadron flew 9794 hours, mostly low level while hunting subs, and made 2793 carrier landings aboard USS *Lake Champlain* and USS *Tarawa*. In preparation for this number of accident-free carrier landings, the squadron logged 10,000 field carrier landings without a blown tire.

Operating 20 S2F *Trackers*, VS-27 enjoyed 90 percent aircraft availability for ASW missions during the year.

Garrison Norton Honored SecNav Franke Presents Citation

Former Assistant Secretary of the Navy Garrison Norton has been presented the Navy's Distinguished Public Service Award in recognition of his contributions toward furthering the Navy's research and development program from 28 June 1956 to 5 February 1959.

The presentation was made by Secretary of the Navy William B. Franke. Mr. Norton was cited for "his sustained outstanding service to the Department of the Navy in furtherance of the research and development program of the United States Navy and of Naval Aviation. . . His calm, perceptive leadership during a period of burgeoning technological progress and increasing scientific emphasis provided



MR. NORTON GETS AWARD IN PENTAGON

the impetus and direction for elevating the stature and strengthening the organization for research and development in the Navy, keeping the Navy in the forefront of scientific advances throughout the world. . . As a Naval Aviator in his own right, Mr. Norton has had a sound appreciation of the role of Naval Aviation in the framework of national defense.

"During his tenure in office he exerted enthusiastic and unflagging effort to provide the balanced aviation forces, ready and trained, needed to perform Naval Aviation's missions."

New Frigate Named Halsey To be Started Under 1960 Program

A guided missile frigate will be named in honor of the late Fleet Admiral William F. Halsey, Jr. Designated DLG-23, the warship is authorized for construction under the 1960 shipbuilding program.

Construction is scheduled to begin next month at the Navy Shipyard, San Francisco. The launching date is scheduled for September 1961, with an expected commissioning date set for the latter part of 1962.

Admiral Halsey died August 16. He led carrier task forces to victory in the Pacific during World War II.

35 Win Safety Plaques Unit Award Winners Announced

Thirty-five Navy and Marine aircraft units have won the annual Chief of Naval Operations Aviation Safety Awards.

The permanent CNO citation and bronze plaque are given to top squadrons selected from the major Naval and Marine air commands, both regular and reserve, in recognition of the importance of accident prevention to economy, morale, and combat readiness.

Other awards also go to the some 319 regular and reserve units which flew accident free during the year.

In announcing the winners, the Navy noted that it had also just completed its safest fiscal year of flying on record. Operations were 7 percent safer than last year—a previous low in seven years of consecutive downward accident trend.

The reduction of the accident frequency resulted in a saving of 41 lives, 88 major accidents, and more than \$30,000,000 in damaged and destroyed aircraft and equipment.

The fiscal 1959 year also saw fewer injuries, fewer aircraft destroyed, and fewer carrier and carrier landing accidents.

Increased use of *Forrestal*-class carriers contributed to the reduced accident rate. Their landing accident rate is about one-half that of the smaller *Essex*-class carriers.

There was only one fatal landing accident on the large carriers as against 10 on the smaller.

A special award went to the USS *Thetis Bay* (LPH-6) which has compiled over 16,000 accident free landings since becoming an amphibious assault ship.

The winning units are as follows:

Fighter Squadrons 14, 124, 193 and 727; Attack Squadrons 35, 106, 152, 155 and 672; Patrol Squadrons 5, 22, 49, 741; Utility Squadron 7; Heavy Attack Squadrons 5 and 6; Air Antisubmarine Squadrons 27 and 861; Heli-

copter Antisubmarine Squadron 7; Helicopter Utility Squadron 751; and Fleet Aircraft Service Squadron Three.

Fleet Tactical Support Squadrons 21, Fleet Aircraft Support Squadrons 117 and 822, Airborne Early Warning Squadron 12, Airship AEW Squadron 1, CIC School at NAS Glynco, Basic Training Squadrons 3 and 9, and Advanced Training Unit 501.

Marine units cited for safety awards were: VMF(AW)-114 and VMF 218; Helicopter Transport Squadron 361 and Marine Training Squadron One.

Aerial Gunnery Record Set Crusader Pilots Register 103 Hits

Air-to-air gunners of class 4-59 set a record for the Fleet Air Gunnery Unit Pacific when they scored 103 hits in a single banner to register the first "Century" banner since the introduction of the FSU at FAGUPac.

Scoring hits were Lt. Henry C. Whelchel, Jr., of VF-174; Capt. Larry J. Godby of VMF-122; and Lt. Walter S. Smith of VF-124. Their instructor for the flight was Lt. Robert L. Merritt.

It was only the fourth firing run at 20,000 feet for the *Crusader* students who compiled an average of 20.6 percent. The previous high banner was compiled by class 3-59 whose four students scored 78 hits.

The Fleet Air Gunnery Unit Pacific



STUDENT GUNNERS TALLY HITS ON BANNER

gives advanced weapons training to selected Navy and Marine Aviators of the Atlantic and Pacific Fleets. It is the only such unit in the U. S. Navy.

Antarctic Flights Begin R4D-5's Take to Air from McMurdo

Two ski-equipped R4D-5 *Skytrains* began flying test and familiarization flights from McMurdo Sound, Antarctica, 11 September to begin air operations for *Deep Freeze 60*.

Capt. William H. Munson, commanding officer of VX-6, arrived at Christchurch, New Zealand, by R7V 14 September to learn that the airstrip

which had been prepared for wheeled aircraft at McMurdo had been struck by a blizzard. It would have to be re-worked for the arrival of the first planes scheduled to fly south from New Zealand in early October.

The R4D's that flew in September were part of a detachment that had been left behind at McMurdo Sound when VX-6 returned to Quonset Point.

VW-15 Pilots Score Heavy Log 4000 Hours and 552,000 Miles

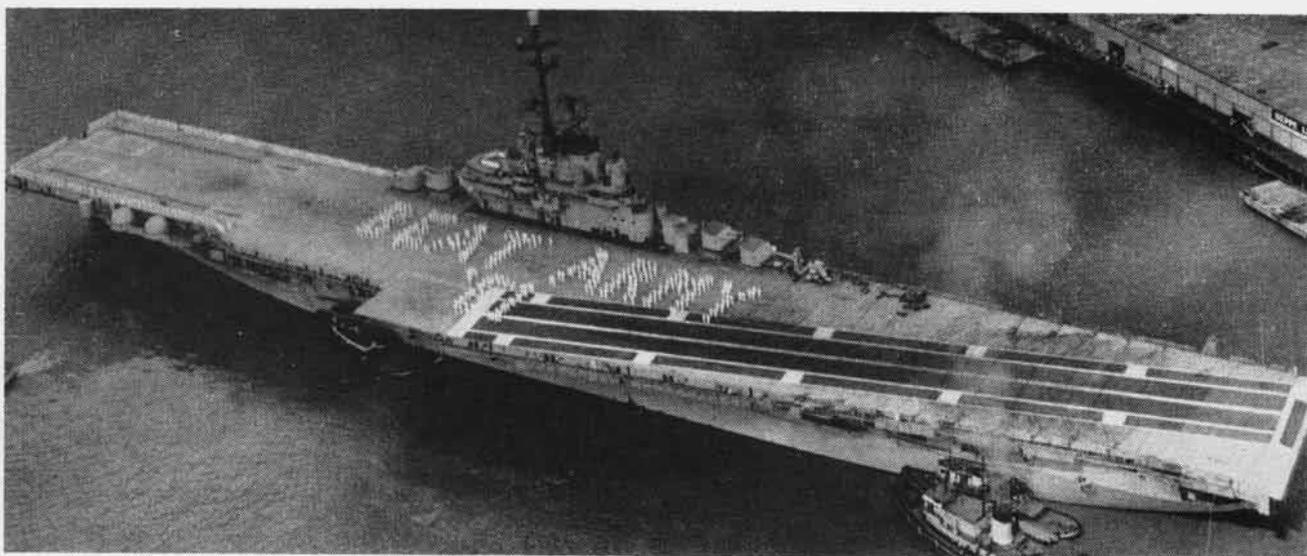
In a single two-year tour of duty with VW-15, Cdr. J. W. Chalkley, Jr., and LCdr. Gordon D. Bradberry flew the equivalent of two and a half trips to the moon.

They also accumulated more than 4000 hours in *Super Constellations*.

Flying 230 North Atlantic Barrier missions of 2400 miles each, they experienced some of the worst flying weather imaginable.

On the ground at Argentia, fog is common. In the air, ice is an ever-present flight hazard. Because of these weather conditions, at least half the take-offs and landings are made at or near GCA minimums.

Both officers served together previously in VR-2 at Alameda where they flew the *Mars* seaplane throughout the Pacific. Before that, they served together as Naval Academy instructors.



TIT FOR TAT! On the annual aviation indoctrination cruise last summer, the class of 1961 of the U. S. Naval Academy was given a series of lectures at the rocket center at Cape Canaveral. When the army officer who gave the series invited one of the midshipmen to "launch a rocket," the unsuspecting midshipman pulled the lanyard hanging from the overhead and a large flag unfurled with the words "Beat Navy"

emblazoned across it. Later, on a five-day cruise on the USS *Antietam*, the 253 members of the class decided to launch a counter attack. While the ship was in New Orleans, the group got together and plotted their strategy. As the ship moved out in the Mississippi River, the air group of midshipmen formed on the flight deck and struck back. The words of the snappy formation spelled out the slogan, "Beat Army."



GRAMPAW PETTIBONE

Over, Under—and Out

A young fighter pilot was positioned on the port catapult, ready to go for an 0730 launch. He had carefully preflighted his F8U *Crusader*, the weather was CAVU and, all things considered, it was a good day for a CAP hop.

He had a good turnup and saluted the catapult officer. After a normal delay he felt the first shock of the shot (A), followed immediately by a second unusual shock and a noticeable lack of acceleration. He quickly retarded the throttle and tromped on the brakes to stop her. It seemed that the tires were skidding, so he released and reapplied the brakes (B). As he approached the bow, it became readily apparent that the F8U wasn't going to stop.

The pilot remembered heading for the water in a 70° dive, striking hard (C), and the cockpit rapidly filling with water as the windshield side panels shattered. The F8U sank immediately up to the tail structure, then bobbed to the surface and flipped over on its back.

Hanging inverted in the cockpit underwater, the pilot was breathing easily, his oxygen mask being snug and watertight.

He reached for the face curtain and pulled hard, but nothing happened, so he groped around, found the windshield bow, oriented himself, and



pulled the ditching handle to release himself from the seat. He cleared the sinking *Crusader* using the standard Dilbert Dunker method of escape.

Kicking up to the surface (D), the pilot saw the side of the ship racing past him and was sucked under again (E), now breathing oxygen from his bailout bottle.

Surfacing again, he found himself facing aft and the white, foaming wave bearing down on him. Sucked under, deeper this time, he inflated his life vest. As he surfaced, exhausted, the helicopter was hovering overhead.

Discarding his chute and paraft, he

found himself too exhausted to enter the sling normally, so he hooked a helo sling strap to his torso harness' shoulder ring and was hoisted (F), carried dangling over to the plane guard destroyer and deposited safely on the fantail, somewhat waterlogged, but otherwise uninjured.



Grampaw Pettibone says:

Dunk me in the briny deep!
This lad musta been thinking pure thoughts all week, 'cause if ever a hop turned into a can of worms, this was it!

A cold cat shot and a thorough keel-haulin' are not normally conducive to long life or further appreciation of the finer aspects of life in the blue.

The launching pendant failed during the cat shot, causing his hairy ride. Rigid inspection procedures instituted by BuAer should preclude further failures, so relax fellas, they've been checked.

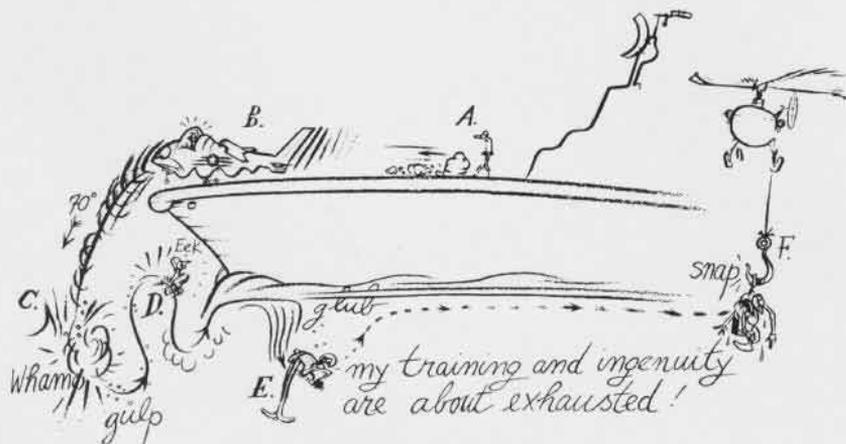
Desert Ordeal

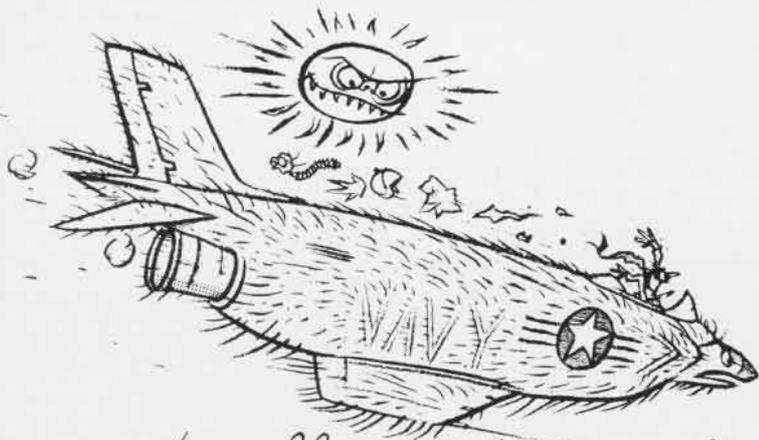
An F3H *Demon* was launched from a desert base on an intercept mission under positive radar control. Take-off and climb-out had been normal, and several changes of heading had been received and acknowledged by the pilot.

As he was climbing through 19,500 ft. at .85 Mach, either the canopy blew off or he lost a windshield panel. The wind blast was terrific! The pilot was forced back in the seat, and his arms flailed up overhead. His helmet and oxygen mask were torn off and he momentarily found himself unable to see. The plane began to roll violently both left and right.

Bringing his arms down with great effort, he hit the speed brakes and thought he cut the throttle to idle. The *Demon* went into a steep dive but he was able to recover using nose up trim as it passed through 10,000 feet. He discovered that he had flamed out, probably when he cut the power.

The F3H now went into a sharp climb, stalled, and began a left spin. The pilot grabbed for the face





just call me Hairy!

curtain but had considerable difficulty grasping it, for the curtain had pulled out and was streamed back over the head rest.

As the *Demon* spun back through 10,000 feet, he succeeded in ejecting. After falling for what seemed a considerable distance, he realized his seat was not automatically separating, so manually opened the lap belt, reached for and pulled the chute "D" ring. His chute opened immediately at an estimated 1200 feet above the desert!

There was no wind and he descended vertically in the chute at what seemed a high rate of descent. He hit hard and stiff-legged, felt a numbing pain in his back and was unable to move.

The 110° heat from the desert sun was almost unbearable, and the pilot finally was able to pull the chute towards him and fling it over a bush as some protection from the blazing sun. He could see the smoke billowing up from the blazing wreckage of the F3H about $\frac{3}{4}$ of a mile away. It was deathly still and hot, not a moving thing could be seen.

After three parched hours, he sighted a rescue helicopter heading for the burning wreck and fired both day and night flares without a response. A second helicopter appeared and passed directly overhead. The downed pilot forced himself to his feet and although in intense pain staggered approximately 75 yards. He was seen by the helicopter crew, who immediately landed, loaded him aboard, and flew him to the air field, only 25 miles away. Medical examination revealed he had suffered a fractured vertebra from the impact.



Grampaw Pettibone says:

Great balls of fire! This lad was under radar control, and yet when they lost him from the scope 25 miles east of the station, they simply notified the flight leader. He *assumed* the plane had returned to base! Operations at the base was not notified of a possible crash until two hours later! That big column of black smoke out in the clear desert air shoulda been like a beacon in the sky and merit a *little* investigation! The whirlybird crews oughta keep their eyeballs uncaged and look around a bit as they approach a wreck instead of getting target fixation on a flaming hulk the guy probably got out of anyhow.

The reason the auto lap belt didn't fire was because someone *forgot* to put a cartridge in it! This is criminal. It fouls up the whole escape system, could cost a man his life.

The pilot was by no means lily white. He owned a G suit but didn't wear it, left his sheath knife in the ready room, had a chin strap on his APH-5, but had it unfastened and had not gotten a Hardeman suspension rig for his oxygen mask. Why go out to fly with two strikes on you? Preflight yourself as carefully as you look over your machine. It's just as important. It's your life you're playing fast and loose with.

Rescue

A plane guard destroyer swung into position on the big CVA, preparing to high-line transfer a crewman who had been critically injured when thrown against a gun turret by high seas.

Decision to high-line him was made because of high winds (37 knots) and rotor engagement limitations on the

CVA's helicopter. The big carrier was unable to turn out of the wind since she had a fleet tanker alongside and was refueling.

Sea state was 5, with a 12-foot wave height and frequent rain squalls in the area.

A helo pilot, standing near his tied down bird in the vicinity of No. 1 elevator, suddenly saw another detachment pilot who had been watching the transfer operations running toward him, giving the "turnup" signal. Jumping into the whirlybird, shouting to the crew to stand by and to untie the helo, he made an immediate start. As the last blade boot was being removed, the CVA began sounding her horn and passed the word, "Man overboard."

Rotor engagement was normal with very little blade flapping, and the helo lifted off as soon as he had a "green flag" from the director.

The helicopter spotted the man in the water immediately and dropped him the pronged rescue seat. Although bleeding from a head wound and obviously in a dazed condition, the man grabbed the seat, *stood up on it* and grasped the hoist cable above the hook! After much shouting and motions from the helicopter crewman, he finally sat down. The injured man was then rapidly hoisted aboard and flown to the waiting medical personnel on the carrier. Total time since the high-line broke—seven minutes!



Grampaw Pettibone says:

Bust my britches! This was good work! The whole helo detachment worked like a smooth runnin' Swiss watch.

There was one real hitch in the rescue. The man *didn't know* how to get on the rescue seat! Ol' Gramps recommends a copy of the new training film "Helicopter Rescue at Sea," MN8760B, be sent out with every helo detachment and shown aboard their own ship and to escort DD personnel, so that *every man* in the embarked force GETS THE WORD! Every man afloat is a potential rescuee. Let's make every rescue a "routine" job for the helo crews!

Confucius say: Socked-in field is like toothpaste, easy to squeeze out, but hard to get back in. Have a take-off alternate planned!



BASIC

TRAINING

GROUP

NINE

BETTER TIGERS GUARANTEED



MEET A TIGER: He's in his early twenties and some 22 weeks ago had never flown an airplane.

He's logged 115 jet hours and can qualify for a standard instrument rating.

He observes the landing of a T-28 and wonders what it's like to fly a prop airplane. He's never been in one.

He's a beginning flight student who's at home at 40,000 feet and at speeds up to 500K.

He has a total of 832 hours of ground school instruction in his first 38 weeks.

He's one of the first flight students in history to qualify aboard a carrier in jets.

You can meet this Tiger and many more at Forrest Sherman Field, NAS Pensacola, Florida.

He's the product of Basic Training Group Nine's extraordinary flight program being evaluated by the Naval Air Basic Training Command.

The introduction of this Tiger serves notice that a revolution in basic training concepts has paid off some large dividends and is almost certain to form the foundation for future training of Naval Aviators.

The stimulus for the revolution, properly called an "evaluation program" is one of long standing. In back of the significant decision to train students in jets was an aware-

ness of specific needs generated by the ever-increasing complexity and handling characteristics of Fleet operational aircraft. Too, technical comprehension of aeronautical engineering data and aerodynamic aspects required by the new sphere of Naval Aviation was found to be wanting in some pilots just out of the training cycle.

To meet the requirement for a different method of readying students for their demanding Fleet roles, planning was initiated in late 1957 by Vice Admiral Robert Goldthwaite, Chief of Naval Air Training. On 1 July 1958, the Commanding Officer of NAS PENSACOLA was directed to activate BTG-9. With Cdr. R. W. Drewelow as its first skipper, BTG-9 was assigned the mission of training basic students in jets.

The broad terms of the mission spelled out a large order. Qualified jet instructors had to be located. Fifty of them, veterans of two years of *Panther* jet instructing were found at Pensacola following decommissioning of ATU-206. Taking over the spaces of the deactivated unit, BTG-9 commenced flight operations in 30 Lockheed T2V *SeaStars*. The tandem jet represented a hefty change in training vehicles — it weighed twice as much as any single engine trainer to be found in the Basic Training Command.



By Lieutenant A. J. Da Rodda
Basic Training Group Nine

THE FIRST order of business was the adoption of a syllabus which would cover the myriad ground and flight requirements newly created by the Group's unique mission. This involved consideration of many factors.

First, and most important of these, was the student himself. Flight experience backgrounds of the first input group had been varied deliberately to afford wholesale evaluation as the program progressed. Some of the students had flown the T-34 while others had flown the T-34 and the T-28. Another group, which had no reciprocating experience whatsoever, had been trained in the TT-1 *Pinto* jet. A final group reported aboard in July 1959 directly from the U. S. Naval School, Pre-Flight, without having logged any previous flight time.

A singular feature of the undertak-

dynamic principles of this new sphere in Navy Air. The Basic Command staff and BTG-9 rigged the ground and flight syllabi of the new unit to accommodate this vital requirement.

The training of student aviators formerly carried out in 600 hp aircraft at speeds to 200 knots was then shifted to a realm wherein 6000 pounds of thrust, 40,000 feet and 500 knots were indoctrination flight features.

At the end of the first two months of the training experiment, Cdr. Drewelow was able to report, "The boys took to the jets like ducks to water and they have done exceptionally well." As a consequence, activity at the BTG-9 duckpond increased. Student input was placed on a regular schedule, more aircraft were assigned and additional flight instructors from the Fleet were made available.

flies 114.5 hours in the jet trainer, attends 152 hours of classroom instruction and receives approximately 50 hours of support lectures. Successful completion of the course insures the Advanced Training Command of a competent carrier aviator."

Ground training in BTG-9 is a rigorous affair. Each student is met with an ejection seat trainer shot and a low pressure chamber check-out prior to tackling the academic schedule.

All students begin with T2V Engineering and follow with courses in Principles of Flight, Dead Reckoning Navigation, Aerology, Naval Correspondence, Navy Directives, Oral Communications, Leadership, Security, Combat Information Center Orientation, Special Weapons Orientation and Radio Instrument Navigation. Students must also demonstrate ability to



PRESSURE CHAMBER ride is first step in the BTG-9 program for basic flight students.



BTG-9 STUDENT "preflights the reindeer" — a T2V-1—as instructor monitors procedures.



ADDED SAFETY feature at Forrest Sherman Field is "the Thang," a portable control tower.

ing was the fact that none of the flight students had been picked because of outstanding grades or because of an expressed desire to become a fighter pilot or an attack pilot. Students in the various groups selected formed a complete cross section of their particular experience level assigned. Most importantly, it was not the student himself who was being evaluated; rather, it was the proposed syllabus and the total concept of the program. The need for jet training in the basic stages was evident; but the degree of that training, the phase of training wherein such jet instruction should commence, and the type of syllabus to be provided, were among the major factors which had to be determined.

It had been reported that pilots just out of the training cycle had been found lacking in the technical comprehension of aeronautical and aero-

The group's present skipper, Cdr. H. V. Weldon, elaborated on the type training conducted by BTG-9: "The program being evaluated provides the student pilot with all of his basic training from transition in the T2V through his carrier qualifications on the USS *Antietam*. And each stage through which a student must progress here is almost a specialized phase of training in itself. By specialization in the pentamerous organization of BTG-9, the group has been able to sustain the ultimate in instructor technique and standardization.

"Each of our students receives pointed guidance through the entire course. He begins with academic training and then proceeds to the transition stage. From there he goes through the instrument course followed by formation flying and finally, carrier qualifications. In a period of 22 weeks, the student

receive both code and blinker messages.

During the first week the student is on board, he is in class all day and usually is ready to enter flight in the second week. For the next 12 weeks, he is in classrooms one half day and in a flight status for the other half. At the end of 12 weeks, he has completed the academic requirements and becomes a full day flight student until the time he completes the course.

Commenting on the 200-hour-plus ground portion of the BTG-9 program, LCdr. Gilbert Gayler, Academic Director, said: "Not all ground training in BTG-9 is strictly concerned with aviation matters. Every effort is made to produce the best prospective officer as well as the best Naval Aviator."

The intensive ground training phase is taught by flight instructors, each of whom is a product of the Academic Instructors' Training School at the

Naval School of Pre-Flight, a training period which takes some three months to complete. Besides teaching academic subjects, each instructor carries a flight student through a particular phase of flight training.

An idea of the thoroughness of ground preparation for flight was afforded by Dewey E. Stone, ADC, of NAMO (T2V Naval Air Maintenance) Section: "Our trainer is available for all hands associated with the T2V from the mechanics to the pilots, and we provide them with first hand information on the systems of the aircraft.

"Flight students learn the entire aircraft from the different sections displayed on our working mock-up panels. He must know both AC and DC units of the electrical system. From our cutaway of the engine, he learns the entire power plant and its accessories.



SKILLED ground support is major factor in group's record. T2V receives oxygen refill.

He also learns the high and low pressure fuel systems, the hydraulic system, cabin pressurization, refrigeration, seat ejection and starting equipment. By the time he is finished with more than 40 hours of classes, the flight student knows his aircraft inside and out."

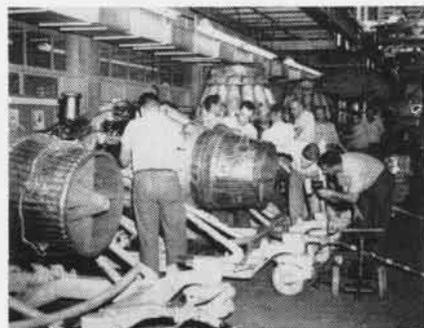
It is in the four phases of BTG-9's flight syllabus that the remarkable process of molding an exceptionally competent Naval Aviator takes place. These are: TPA (transition, precision and acrobatics), Instruments, Formation and Carrier Qualifications.

In transition, or the pre-solo phase, the student normally receives 13 flights of an hour and 15 minutes duration. Flying a maximum of two flights a day with the instructor in the rear seat, the student is provided with a basic knowledge of flight and develops a safe, comfortable familiarity

in a relatively high performance aircraft, before going on his own.

He is expected to demonstrate his capability to fly the aircraft safely through the simple maneuvers and exercises organic to routine flight. The exercise maneuvers stress sound flight procedures and allow limited experimentation with aerodynamic principles. They also provide a firm platform on which the student may develop his individual flight technique and progress to more sophisticated maneuvers.

Once he solos, the student is moved to the precision phase. In seven flights the student improves his proficiency and pilot technique in performing the basic maneuvers of the previous phase and builds up his self confidence in solo flight. Emphasis is placed on smoothness of basic air work and landing



ACCENT on maintenance specialization helped BTG-9 record 10,000 accident-free hours.

technique as well as development of overall flight planning.

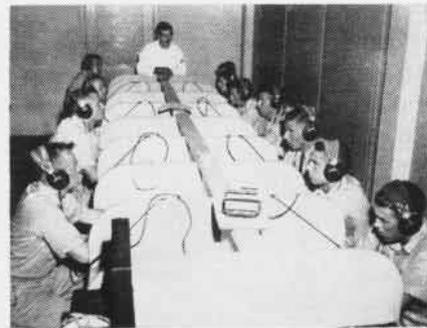
Procedures used in conjunction with a student's first solo illustrate some of the stringent safety measures instituted by BTG-9.

The solo student is closely followed by his instructor in another jet and his prescribed maneuvers are monitored throughout the flight. After returning to the field, the instructor maintains a wing position on the student until he reaches the final approach at which time the Runway Duty Officer takes over and supervises the student until he is safely down on the runway. Communications are provided the Runway Duty Officer by a BTG-9 innovation called the "THANG" (see cut, p. 8). A runway portable tower, the rig is manned by qualified flight instructors and provides extra control for all BTG-9 jets in the pattern.

The acrobatics stage of TPA is designed to instill confidence in the equipment and the student himself. This stage also serves to develop his orientation, broaden his knowledge of the aircraft's flight characteristics, improve his basic airwork and make a smoother, better coordinated aviator. Flight procedures and techniques taught in this phase can be readily applied to higher performance aircraft, thus providing a foundation for future transition to more advanced aircraft.

The second phase of the flight syllabus, Instruments, is considered the most exacting and demanding of the course by the students and the instructors. The 24-flight program is divided equally between basic instruments and radio procedures.

Once the student successfully completes this phase of training, he knows



GROUND TRAINING totals over 200 hours. Students take Morse code, blinker examination.

thoroughly all the latest procedures and methods of using any navigational aid to assist him in instrument flight. He is also able to control the aircraft from take-off to landing without ever seeing outside the cockpit.

Maj. William Watson, USMC, director of this phase of training, outlined the purpose of this program:

"With the Navy's emphasis on all weather capabilities, the need for intensive training in instruments at the basic level is a must. The pilot of today's high performance aircraft must be able to perform his mission day or night, in fair weather or foul, and this is in addition to all his other skills in Naval Aviation. Instrument flight presents a unique challenge and all our graduates are capable of passing a standard instrument check. The training they receive is that complete. To accomplish this end result, the stu-

dent aviator first learns to fly the aircraft skillfully without any outside reference, and accurately enough so that he can perform precision acrobatics on instruments. He is able, near the final flights in basic work, to recover from any position in which his instructor may place him. Once his basic skills are acquired, the student receives a thorough course in the use of radio navigational aids which will enable him to fly anywhere in the world.

"Although this appears to be quite a workload for anyone, we accomplish much of our instrument training on the ground. Many hours are spent in classrooms on latest methods and procedures. The T2V simulator trainers on the station duplicate any situation imaginable—with sound effects—and the student rehearses each flight in the simulator prior to getting airborne.

"Another form of training provided by the instrument phase in BTG-9 is low level, dead reckoning navigation whereby the student conducts a low and lengthy flight over unfamiliar terrain using no aids other than prior computations and an air navigation chart."

Following the Instrument phase, which includes six hours of night flying, the BTG-9 student gets his first close look at another aircraft in flight as he enters the Formation stage of the syllabus.

In 17 flights, most of which are solo, the young gosling is given the fundamentals of the phase in two and four plane formations. Here he can experiment with the principles of relative motion. His proficiency is developed sufficiently to enable him to fly the aircraft safely through routine formation flight maneuvers necessary to the pursuit of tactical work provided later. The student learns the relative motion laws that govern good tactical air performance and is able to perfect his airwork by seeing for the first time the effects of his control actions in relation to a close fixed reference, the lead plane. It is in this stage that the student begins to differ from the ordinary pilot with the introduction of the tactical teamwork effort and formations necessary to accomplish a given military task.

Upon finishing the formation phase, the student has accumulated about 100 hours in the T2V and is now ready for

one of the most thrilling ventures in his training, Carrier Qualifications. Until recently it was unheard of for a basic flight student to attempt carrier work in a jet aircraft. Three BTG-9 NavCads became the first students ever to fly jets on an aircraft carrier when they qualified in the T2V on the USS *Antietam* 4 June 1959, marking another milestone in the history of Naval Aviation.

LCdr. J. G. Bonvillian, acting Assistant Group Commander of BTG-9 and senior officer of the Carrier Qualification Section, reports, "The precision flying, judgment and skill learned and acquired in previous phases of training is now combined by the student in the preparation for his flight to the carrier. He receives 13 Field Carrier Landing Practice periods. The first two are demonstrated by an



RADM. CARSON (R) hands Cdr. Weldon safety trophy. NAS C.O. Capt. DeLong looks on.

instructor. These flights, seldom over 150 feet in altitude, conducted on a marked airfield, are designed to acquaint the student with the pattern, altitudes, speeds and the Landing Signal Officer signals to be used on the carrier. If, after his 13th FCLP the student has progressed satisfactorily, his next flight is aboard the Navy's first angle deck carrier, the USS *Antietam*, as it cruises in the Gulf of Mexico.

"The student is being trained to conduct his missions from a carrier deck. In that respect he is introduced to operations from this deck at an early stage in his training so that later transition to higher performance aircraft and their operation from the carriers will not be a great problem to face. Practice leads to perfection in any field of endeavor and the sooner the student can get this practice started in carrier work the sooner he reaches his

goal of perfection in Naval Aviation."

Coordination between BTG-9 and the USS *Antietam* has been simplified with the recently established "ship to shore" radio. A simple call from the ship when the "Deck is ready for BTG-9 jets," assures the launching of flights only when a carrier qualification period can be completed.

Finishing the carrier phase of training in BTG-9, the student loses his Basic classification and reports to Corpus Christi, Texas, for Advanced Flight Training.

Many other aspects of BTG-9's unusual program contribute to the end result—the making of a competent jet aviator. Its maintenance program is considered one of the most efficient in Naval Air. Headed by Cdr. E. W. Froelich, the maintenance system has been a key factor in BTG-9's record of 10,000 accident-free hours in 1959. Specialization of personnel and a 24-hour work schedule were responsible for maximum utilization of the T2V's.

Instructor and student proficiency is kept at a peak by regular use of the procedures trainer. The trainer simulates every possible emergency which can occur in the T2V, and the pilot's procedure for coping with a given situation is checked for timing and accuracy.

Buddy hops are scheduled wherein instructors teach other instructors and keep them current in their instrument work, approaches and landings and other phases. In order not to lose sight of the student's perspective and his current problems, instructors fly the student's position, such as the rear seat in the instrument phase, and duplicate a particular hop the student might have. It brings them closer to the difficulties a student might experience, and provides for an all-around better understanding of the various phases.

Standardization and superior instructor technique are a matter of pride and are maintained at a high level. New instructors are given the complete phases they are to teach within the group after attending accelerated academic instruction at the Flight Instructors' Indoctrination Group. In addition, all instructors are given standardization rides at regular intervals.

Since *comparison* is a common bed-fellow of any *evaluation* effort, a detailed one concerning the BTG evalua-



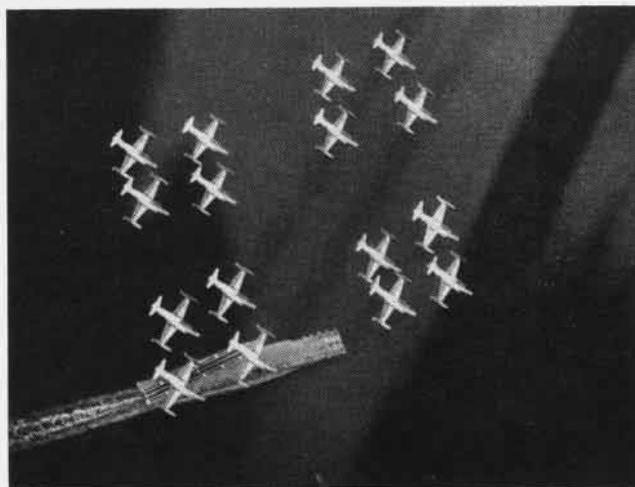
SPEEDY START of flight activities is staged by five Tigers. Candidates for unique jet training evaluation had varied backgrounds.



FINAL PHASE of 22-week course prepares student for carrier qualification. Pilot receives "cut," lands on simulated runway deck.



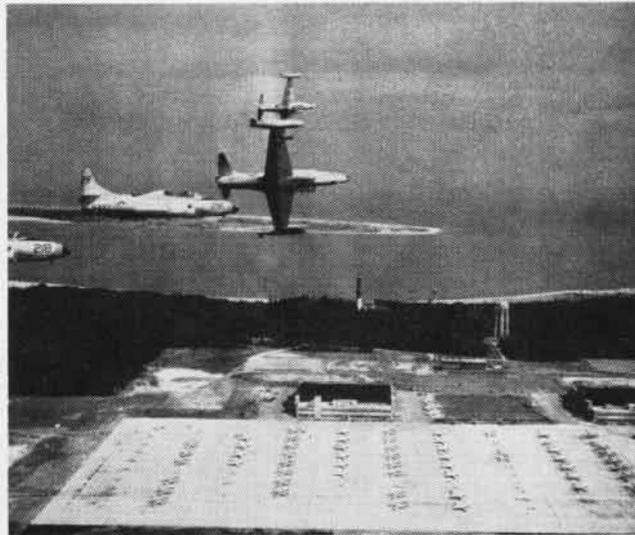
THE NEW BIRD used by Basic Training Group Nine is the T2J Buckeye. Flight above is piloted by BTG-9 instructors after workout on Antietam.



FLEDGLINGS IN FORMATION over USS Antietam are a portrait of precision. Flight syllabus gives each student about 115 hours in jets.



FINAL FLIGHT and biggest thrill in BTG-9 student's life is jet carqual. Students make four landings, two cat launches on angled deck carrier.



PENSACOLA HOME of BTG-9 is Forrest Sherman Field. Exceptional facilities, location and weather are ideal for all-jet pilot training.

tion was prepared by Ltjg. E. I. Carmichael, a BTG-9 flight instructor. His observations are based on some 600 hours of instructing in reciprocating aircraft and 350 hours in the T2V.

► **Simplicity:** The jet is the simpler of the two for a student to learn to fly. The left hand of the student manipulates only throttle and speed brakes where before he had trim tabs, prop pitch, mixture control, cowl flaps and carburetor heat control. In addition, trim in the jet has been simplified by making it electric and placing it on the stick. Furthermore, little rudder trim is required. There are fewer engine instruments to check in a jet which makes for further simplicity in teaching students.

► **Comfort:** The heat of the cockpit area in previous trainers was annoying to student and instructor. Air-conditioned jets have alleviated this problem. Because of the sealed and pressurized cabin and the engine noise being completely behind the cockpit area, instructing is simplified and radio transmissions are clear and without interference.

► **Take-Off:** I believe it is easier for the student to handle the jet on take-off than the prop. He has no trim corrections other than the elevator as the speed increases. In the prop, you have three trim tabs to move when you clean up (retract the gear and raise flaps) and when you change power settings or prop pitch. There is, however, a decidedly longer take-off roll in jets, but runways are longer.



LT. DA RODDA, author of this article, briefs student (L) following instrument hop in T2V.

► **Level Flight:** Jets are touchy on the controls. A slight movement of controls in the much faster jet initially results in over-controlling by the student. If trimmed properly, the prop aircraft appears to be more stable. Once the student gets the technique of controls mastered, however, he becomes a smoother aviator more quickly.

► **Acrobatics:** Both the jet and the prop alike have the same problems. Again, the jet has little or no trim changes whereas the prop requires trim adjustments when speed and power are not constant. This allows the student to concentrate more on the maneuver. In the jet, more air space is required for the maneuvers taught.

► **Landings:** Prop aircraft seem to be easier to handle in the pattern. Less space is required around the field. Since the prop is slower, the student and instructor have more time to correct errors in the pattern and can almost always wind up with a reasonably good final. In the jet a bad pattern necessitates a wave-off and another approach. In the jet, the student must

keep thinking ahead; when he adds throttle for power, he knows there are a few seconds delay before the effects are felt. With the prop, throttle increases give almost instant power response and the student is less apt to get in trouble near the deck.

► **Formation:** Initially, it is more difficult for the student to stop relative motion in the jet. This is again the result of lag in immediate requirements for more power and in the reduction of power. However, once the student learns formation flying in the jet, I believe he is smoother in any type of formation flying he does in the future.

In less than two years, Basic Training Group Nine has come a long way. They have flown over 20,000 hours in the jet trainer and their monthly average has more than doubled. In July 1958, the group flew 980 sorties for a total of 1260 hours. In July 1959, the group flew 2183 sorties for 2780 hours. And with the arrival of the T2J *Buckeye*, the Navy's new jet trainer, a new section of training within BTG-9 has been created.

During its short existence, BTG-9 has received the Naval Air Basic Training Command Safety Award and the 1959 Chief of Naval Operation's Safety Award. With an impressive record already attained, the search continues for better methods of teaching the precise art of flying jets. BTG-9's fleet-experienced instructor group, which represents more than 150,000 flight hours, skilled support personnel and the combined staffs of the Training Command are all dedicated to one proposition: Better Tigers Guaranteed.



SAFETY SEAT PROVES SAFE

TWO NAVY pilots owe their lives to North American's new rocket-propelled ejection system.

Lieutenants Morris L. Hayes and Clement J. Morissette were flying a T2J *Buckeye* trainer September 9 when the compressor section fire warning light came on. Their altitude was 800 feet and airspeed was 115 knots.

Using the seat's "Command Selection" feature, they ejected in tandem, landed in the water, and were recovered from the water uninjured.

The command selector works on the principle that the senior aviator is best qualified to decide when ejection is necessary and is less likely to panic during an emergency.

If he is sitting in the front seat, the device is set so that only he can eject

himself and the pilot in the rear seat. Should the senior pilot be riding the back seat as an instructor, the controls are adjusted before take-off so that the senior pilot must eject himself from the rear seat before the other ejects.

However, if the senior pilot in the rear seat should lose consciousness during an emergency, the pilot in front may re-position the control switch so as to eject the back-seat pilot, then himself.

The pilot in front cannot be ejected first. The blast from his ejection would strike the back-seat pilot.

While the tandem ejection at Pensacola proved the new system to be 100 percent successful in actual operational use, it was not the first live test of the system. A test pilot at Patuxent River

was forced to eject from a YT2J while the airplane was undergoing tests.

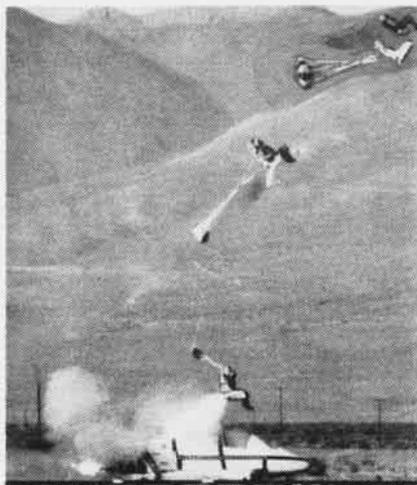
His plane went into an uncontrollable left roll while he was flying at 450 knots, altitude 15,000 feet. The pilot stuck with it and attempted to recover, but finally ejected at a very low altitude. Although seriously injured because of a high rate of descent in the chute, he survived.

Before Navy acceptance, the T2J ejection seat was tested extensively, using man-sized dummies. From these tests it was learned that escape would be possible at speeds ranging from 75 knots at ground level through speeds in excess of 500 m.p.h.

A slightly modified version of the T2J seat will be used in the A3J. Some 50 T2J's are currently in Navy service.



DUMMY IS FIRED IN TEST. NOTE SEPARATION OF MAN AND SEAT, AIDED BY DROGUE



THIS SEQUENCE SHOWS SPEED OF ACTION



MODEL OF SEAT IS ON DISPLAY IN BUAER



FREE OF SEAT, DUMMY FLOATS TO EARTH

1959 FARNBOROUGH REPORT

THE ANNUAL shop-window for Britain's aviation industry is the Flying Display and Exhibition of the Society of British Aircraft Constructors which is held early in September each year at the historic airfield of Farnborough in Hampshire, just 30 miles to the west of London.

However great an expert you may imagine yourself to be on aviation subjects in general, the task of keeping in touch with present day developments in the complex fields of civil aircraft, service aircraft, guided missiles, power plants, and all the auxiliary equipments that go with them, is far too great for anyone who has to do a job of work at the same time. However, a few days spent at the Farnborough SBAC Show each year will go a long way towards keeping you well in the picture with the products of the British Aviation Industry and their current performance.

I was lucky enough to be given a seat in the CNO R5D aircraft which took a team of CNO officers, headed by RAdm. C. S. Cooper, USN, and RAdm. W. E. Ellis, USN, over to the SBAC Show which started on September 7th this year. After a stop in Argentina, where we were greeted with the news that we had brought the finest summer's day that had been seen there for two years, we arrived at Blackbushe Airport which is situated a few miles north of Farnborough late in the afternoon of the 7th.

The first Monday of each Show, in this case the 7th, is reserved for technicians and also acts as a Preview Day for the Press. The next three days are open to invited guests from the Aviation Industry and Flying Services of all the countries of the world, leaving the final long weekend—Friday, Saturday and Sunday—as public days, when anyone can buy a ticket who wants to



see the Show. A sideline on the British character is that ladies are firmly discouraged from visiting the Show on non-public days unless they are directly concerned with the aviation industry itself.

The Display can be broken down into the following separate items:

- (1) Static Exhibition Tent (125,000 square feet)
- (2) Ground and Ancillary Equipment Display
- (3) Guided Weapons Display
- (4) Static Aircraft Display
- (5) Flying Display
- (6) Grandstand Area — tiers of gaily colored tents where each manufacturer dispenses refreshments to likely customers and staunch friends of industry from the world over.

In describing the ground exhibitions and flying display, I will keep to matters of Naval or Service interest, as any attempt to give an over-all cover-

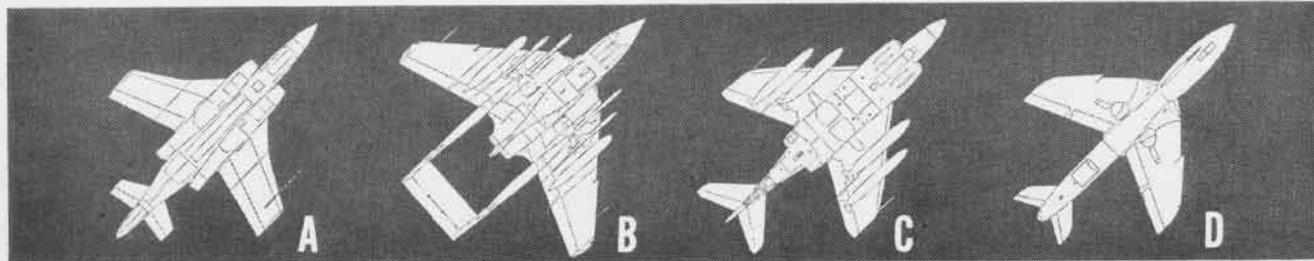
age would require something the size of the Encyclopedia Britannica.

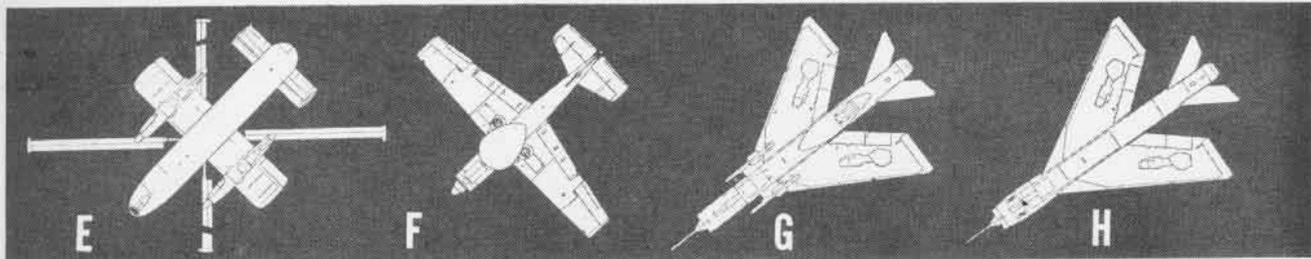
Static Exhibition

New engines form a most interesting part of this display and amongst those of note was the mock-up of the Rolls Royce RB 141. The 141 will be a by-pass engine and will develop a thrust between 10,000 lbs. and 17,500 lbs. It may power later versions of the French *Caravelle* aircraft.

Another mock-up on show was the Bristol-Siddeley B.E.58, weighing 2600 lbs. and delivering 14,500 lbs. thrust with an S.F.C. of .57. This ducted fan engine is believed to be similar to the B.E.53 which is being developed under MDAP funds to power the Hawker P.1127 VTOL strike/fighter. The P.1127 is intended as a third generation tactical aircraft for NATO countries.

The Blackburn A.129 free turbine engine in the 1000 H.P. class was on





static display. It also took part in the Flying Display installed in a Saunders-Roe P.531 Mark 2 helicopter.

The De Havilland *Spectre* rocket engine, which has successfully flown as the power plant for the Saunders-Roe SR.53 experimental jet/rocket powered aircraft has now emerged as a *Double Spectre*, giving 16,000 lbs. thrust. It will be used as the power plant for the Avro *Blue-Steel* standoff bomb.

The Ferranti radar and fire control system *Airpass*, which will be used in the English Electric *Lightning* fighters, was on display and appeared an extremely neat compact unit. *Airpass* is pilot-operated by means of a left-hand, single-control stick. It has two reflector sight glasses, one for radar use and one for conventional aiming. There is a possibility that it will be adopted for use as an air-to-ground fire control system as well.

Auto-Land, the Blind Landing Experimental Unit of the Royal Aircraft Establishment's system, was also on display. It has already carried out 3000 successful landings and is being considered for use by Bomber Command and the Airways Corporations.

Handley-Page gets the prize for the most original display with an exhibit which shows their SBAC display stand as it was years ago. The beautiful girl in the period costume made many a visitor wish for a return to the products of the Gay Twenties.

Ground and Ancillary Equipment

This outside equipment display covered refuellers, starters, auxiliary power



CDR. P. C. S. CHILTON, ROYAL NAVY

Naval Aviation News welcomes the report of a British Naval Aviator, Cdr. P. C. S. Chilton, AFC, RN, Staff Officer (Air) of the British Joint Services Mission. By background and training, Cdr. Chilton is uniquely qualified to interpret the British aircraft show at Farnborough.

A Royal Navy fighter pilot in WW II, Cdr. Chilton flew in the North African campaign and in the Pacific. In 1944 he formed an F4U squadron at NAS BRUNSWICK, Maine. This squadron operated in the Pacific from the British aircraft carrier, *Arbiter*. Later as an exchange pilot, he had duty at Flight Test, Naval Air Test Center, Patuxent River, Maryland. Cdr. Chilton commanded the British *Seabawk* squadron #806, the Ace of Diamonds squadron. He came to the United States after commanding the Royal Navy Test squadron at RAF station, Boscombe Down.

After the Farnborough Show this year, he flew the Blackburn N.A.39 in a flight test trial.

(Identification of aircraft silhouettes will be found on page 40.)

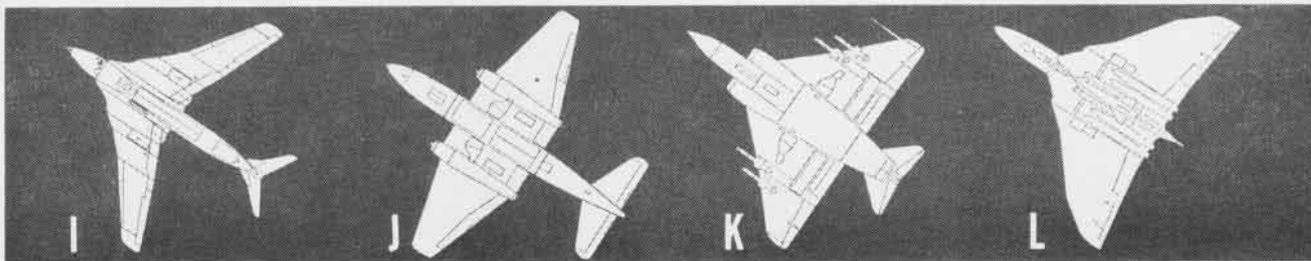
units, cranes, crash wagons and airliner entry and exit stairways. Each year the equipment improves in size, mobility, and speed of operation, and this year was no exception. Also in this display section was the Martin-Baker ejector seat; a loud bang every 30 minutes indicated that another ejection cartridge had fired successfully. The seat was only doing dummy runs to a height of about 25 feet.

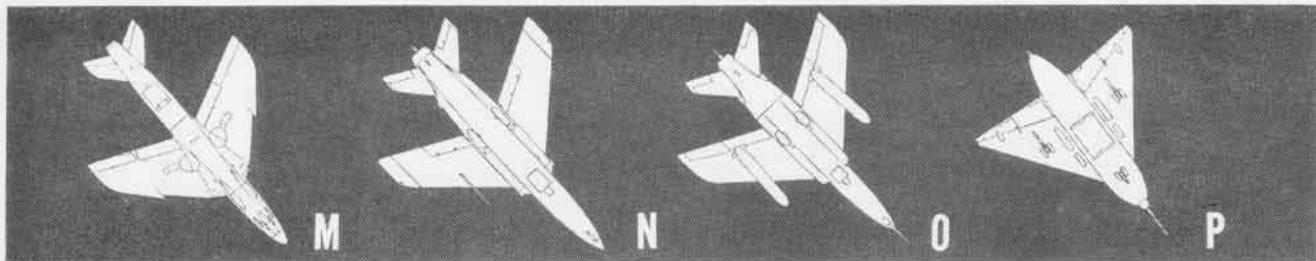
Static Aircraft Display

All the aircraft in the Flying Display were on show in the static Park in the mornings. The biggest crowds of spectators collected around the large new civil aircraft—the Vickers *Vanguard*, the Armstrong-Whitworth *Argosy* and the *Comet IV*. The Saunders-Roe *Hovercraft* and Fairey *Rotodyne* were the centers of attraction in the smaller aircraft class. Amongst military aircraft, the very pugnacious-looking English Electric *Lightnings*, the workmanlike Blackburn NA.39, the Fairey *Gannet* A.E.W. 3 with its matronly radome, and the *Sea Vixen* F.A.W. 1 with its four DH *Firestreak* infra-red missiles under the wings, were receiving a lot of attention.

A substantial order for Blackburn N.A. 39's has been placed for the Royal Navy.

A recent merger between Westlands and Saunders-Roe has put the majority of the helicopters on show under the Westland banner. Here the most noticeable trend was towards gas turbine power plants for all. Even the venerable S-55 has re-emerged in a new trim shape with a DH *Gnome*





H 1000 (T58) engine in the nose.

A version of the tiny Folland *Gnat* fighter, which is now in quantity production for the governments of India, Finland, and possibly Yugoslavia, appeared this year as a tandem cockpit trainer aircraft. The Royal Air Force has already ordered 14 of these, and it is most likely that all RAF advanced training for the future will be in *Gnat* trainers.

Guided Weapons Display

Sea Slug, the Navy's medium range ship-to-air guided missile, was well to the fore in this display. The last six firings of *Sea Slug* fitted with warheads have resulted in six kills; in one case where a salvo of two was fired, the first *Sea Slug* hit the target aircraft, and the second hit the largest piece of remaining wreckage.

Sea Cat, a small multiple launcher type missile which will be used as a replacement for the Bofors gun, was also on view. It can be handled easily by two men and has radio command guidance.

The DeHavilland *Firestreak* air-to-air infra-red guided missile, which is standard equipment now for fighters of the Royal Navy and Royal Air Force, was on view for the first time with its infra-red guidance system displayed to the public.

Black Knight, the Saunders-Roe re-entry vehicle, which has had 100% success in recent test firings, was also on exhibit. It will be combined as the second stage to the De Havilland *Blue Streak*; together they will form the



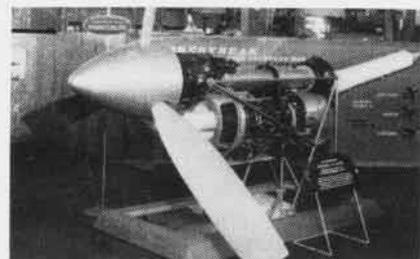
JET SWIFT LAUNCHES FAIREY FIREFLASH

vehicle for the British Space Investigation Programme. The combined range of these two should be enough to allow a successful moon shoot to take place!

Flying Display

The opening of the flying Display was heralded by a *Scimitar* of the Royal Navy aerobatic team which thundered past the crowd at 600 knots at low altitude taking a P.R. photograph of the Exhibition enclosures and spectators.

The salt water had barely cleared from the runway when the Royal Air Force ace aerobatic squadron, *Treble*



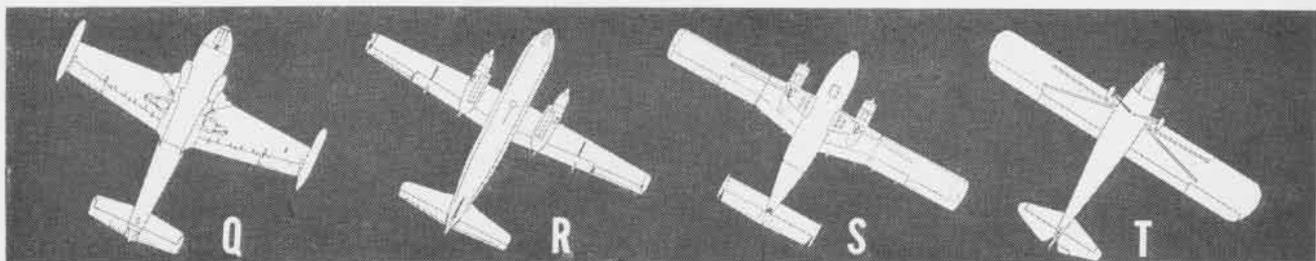
D. H. GNOME OFFERS EASE OF MAINTENANCE

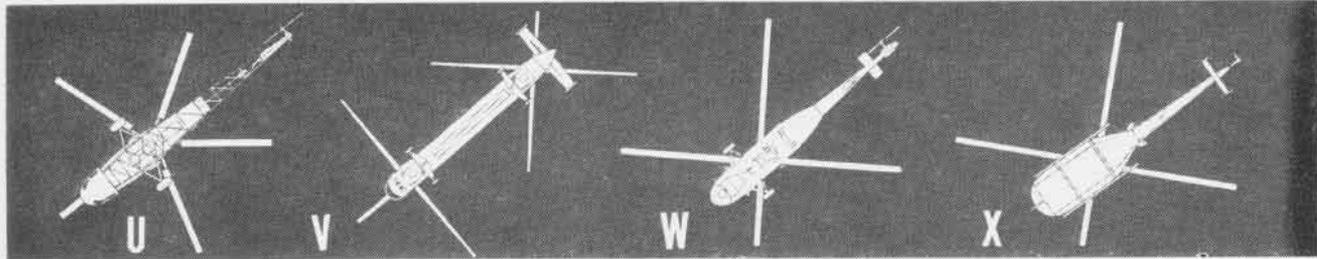
One, flying 16 Hawker *Hunter* fighters with a two-seat *Hunter* trainer in the lead appeared on the scene to give their extremely polished and beautifully timed display of alternate team formation aerobatics. Liberal use of white smoke, which served to paint each maneuver across an unusually blue English summer sky, was a great aid to spectator enjoyment of the aerobatics. The *Treble One* finale, where one team did a downwards bomb shell break closely followed by the second team in an upwards break, just as the next display item—a mixed assortment of Transport Command aircraft—appeared in the middle of the airfield, was a masterpiece of timing.

The large civil airliners and transports were paraded past the crowd in a very stately manner, with the *Comet IV* always taking the prize for cleanliness of line and sheer aerodynamic beauty, and the new Armstrong-Whitworth *Argosy*, with its well-tried Rolls Royce *Dart* engine installation, looking a very useful short haul aircraft.

Of the individual service aircraft displayed by the firms, the *Sea Vixen* and Blackburn N.A.39 gave excellent performances; the latter particularly so as it is a naval bomber-type aircraft and is still in the early stage of its development.

The two English Electric Mach 2.0 *Lightnings* gave an exhilarating display of fast low runs, inevitably followed by what appeared to be nearly square turns, covering a minimum of air space. The announcer assured us that





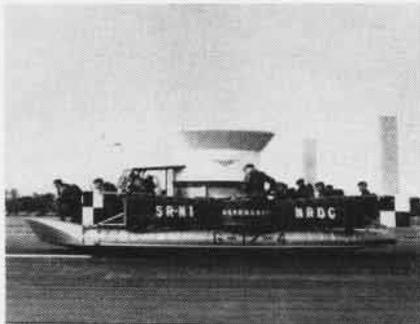
neither pilot believed in wearing an anti-G suit. The Gannet A.E.W. 3 with its twin-engine contra-prop installation flew past changing from one prop to the other. It seemed capable of a good turn of speed and climb.

The other Fairey product on show—the *Rotodyne*—took off as a helicopter, transitioned to auto-gyro flight, flew past the crowd at speed, then landed again as a helicopter and unloaded its passenger complement of 30 nurses.

Later in the show, the writer made a flight as a passenger in the *Rotodyne*. The rear passenger compartment was surprisingly quiet and comfortable in normal flight. Transitions appeared effortless and took place between 80 and 100 knots forward speed; the only noticeable discomfort was the deceleration of the aircraft when the two engine propellers were put to fine pitch following a transition to helicopter flight.

The other notable new craft was the Saunders-Roe SRN-1 *Hovercraft*. "Does it count as flying if you spend your time 11 inches above the ground? If not, what can you call it?" Anyway, *Hovercraft* undoubtedly works. I know because I also flew on this for a short trip down the airfield.

There are two control columns, a right hand one and one in the normal stick position. The right hand one has a twist grip throttle at the top and moves only backwards and forwards, to allow air to exit from the air propulsion ducts at each side in a backwards or forwards sense. The normal



NOVEL HOVERCRAFT WAS A STAR AT SHOW

control column adjusts the trim of the craft. Opening the twist grip throttle lifts the *Hovercraft* off the ground; forward flight is achieved by selecting forward flight on the propulsion ducts, and slightly tilting the craft nose down to give a component of lift as thrust; rudder control is conventional and is by means of rudders in the rear of the propulsion ducts. As it is not possible to bank the craft for turns, these are very sluggish affairs, as also is stopping, which in fact is best achieved by lowering the craft on to the ground or water.

The SRN-1 *Hovercraft* was built in eight months and is purely a research

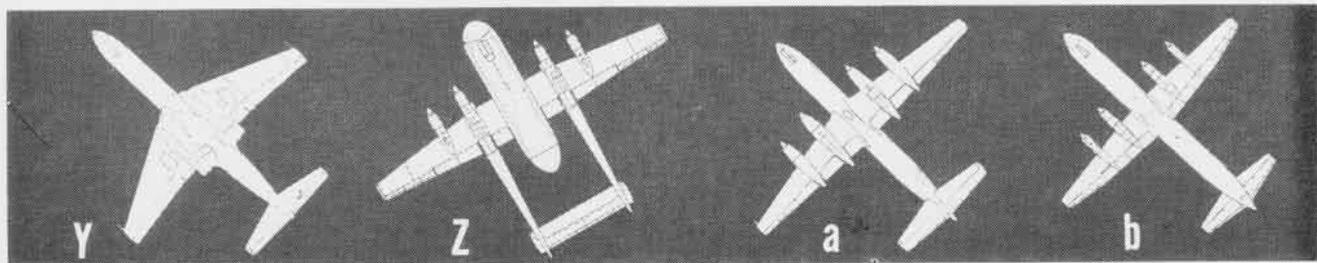


FREIGHTERCOACH MADE FIRST APPEARANCE

vehicle. Much has already been learned from it, and Saunders-Roe have proposals which include a 100-ton cross channel passenger ferry and a 400-ton long-range transport vehicle, according to company spokesmen.

The Navy display came at the end and made up in speed and élan for anything they lacked in numbers and smoke. The five *Scimitars* of 807 Squadron were, like thoroughbred race horses, incapable of a half speed performance. They skillfully displayed formation aerobatics interspersed with such operational tactics as a LABS attack on the airfield, a *Dart* target pick up in front of the crowd, and a precision opposite ends of the runway landing by three aircraft, followed by a formation landing of the remainder.

A description of the Air Display would not be complete without a mention of the 10-turn spin carried out each day by the Hawker Chief Test Pilot in a *Hunter* trainer. He climbed from take-off directly to a height of about 20,000 feet, and whilst trailing white smoke went straight into the 10-turn spin. The *Hunter* pilots were a very clannish group with Bill Bedford, the Chief Test Pilot, testing his nerve by flying with Squadron Leader Peter Latham, the C.O. of *Treble One* Squadron, during their acrobatic show. Not to be outdone, Latham went in the spinning *Hunter* with Bedford at the controls. Just to cap these performances, Group Captain Paddy Hanafin, the Superintendent of Flying at Farnborough, flew with both Latham and Bedford on the following day.



SAN-SAN-ICHI SAYS:

Sayonara



MAN, HOW that bird could fly," said the young Marine pilot softly, as he watched the bent wing of an AD-6 *Skyraider* fold out for the last time at MCAF IWAKUNI.

"Just look at it," he continued, "it could deliver a potent punch, fly longer, do just about anything better. Why, it could almost talk!"

The cause for the nostalgic musings

It was the end of a memorable era. "In its own way," claimed LCol. Earl P. Carey, commanding officer of VMA-331, "the AD had few, if any, equals."

Other squadron members pointed out that the *Skyraider* was one of the most versatile aircraft in the world. It has been used for close air support, day and night attack, antisubmarine search

Korean conflict, in addition to torpedoes, mines, depth charges and napalm bombs.

VMA-331 also claims the distinction of being the last Marine Squadron to fly the F6F *Hellcat* and the F4U-4B *Corsair*. The squadron was originally commissioned on New Year's Day, 1943, as BMSB-331 and equipped with SBD *Dauntless* aircraft. Baptism by fire



ABOARD A CARRIER AND ASHORE, VMA-331 SKYRAIDERS CARRIED OUT THE ATTACK MISSION RELIABLY AND VERY EFFECTIVELY

was the retirement of AD props from the Marine Corps. Marine Attack Squadron 331, known by its Japanese name *San-san-ichi* (three-three-one) was the last Leatherneck outfit to fly the *Skyraider*. Like the 75mm pack howitzer, it has been replaced by more modern weapons of war, A4D *Skyhawks*, smallest of the attack jets.

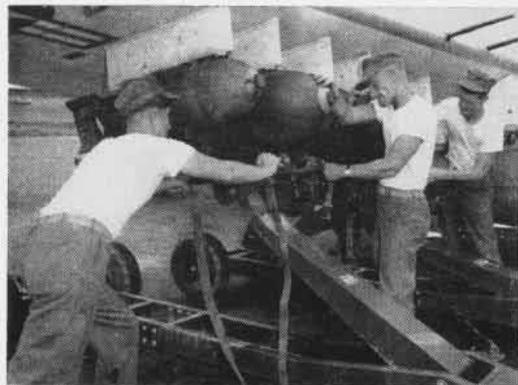
and kill, radar countermeasures and airborne early warning. It could quickly convert into a 2000-pound capacity cargo plane, a long-range bomber, a six-place transport or even a four-litter ambulance.

Originally designed to carry a small bomb load, the AD regularly carried 4000-8000 pound loads during the

came during the bloody battle of Tarawa in the Gilbert Islands campaign.

The unit was decommissioned in 1946, but re-activated in 1952. First Sgt. E. D. Vaughn, the Sergeant-Major, was one of the first men to join the outfit in 1952.

Plankowners and newcomers alike felt sad at bidding the AD *sayonara*.



ORDNANCEMEN UNLOAD BOMBS FROM AD-6 WINGS. RIGHT, LCOL. CAREY ILLUSTRATES PROP-PLANE TACTICS TO JUNIOR OFFICERS

ALL THE COMFORTS OF HOME

A NAVY family is a traveling family. This has certainly been true for the past nine years in the case of Capt. Ronald W. Hoel, a Naval Aviator, as he alternated tours between the East and West Coast.

Since their seven children range in age from sixteen to two, Capt. and Mrs. Hoel might well regard a cross-country journey as an ordeal. Instead, the entire family looks forward to each transfer.

Imagination, ingenuity and industry found a unique solution to the transportation problem—a 33-foot long bus. Once used to accommodate 29 passengers, it now has a very special interior completely designed and built by the Captain. All the comforts of home are provided—a shower with hot-and-cold running water, a stove, refrigerator, head, bunks and tables. Power is provided by a 1500 watt generator; water from a 130-gallon tank is instantly heated by gas. Sleeping and eating facilities are flexibly arranged to give maximum living space.

The bus was christened "His 'n Hers" and the name appears in the direction box on the front. "We think it's better than a trailer," said Capt. Hoel. "It's illegal to occupy a trailer while in motion. In the bus, we can all do what we want to en route.

"And," he chuckled, "think of how many stops we'd normally have to make on a long trip with such a troop! But this way, if someone is thirsty, he goes to the sink and gets a drink. If he's hungry, he whips up a sandwich. All the while we're rolling along to where we're going.

"I do all the driving—my wife is kept busy with the children," he continued. "If I feel like getting a real early start, I just shove off while everyone is sleeping."

Journeys are geared to getting the most in the way of sightseeing and recreation. Capt. Hoel's most recent change-of-duty trek is a good example. Last spring he reported to the Progress Analysis Group under Adm. James S. Russell, VCNO, where he works as the surface warfare evaluator. When school was finished for the year, he picked up the family at Coronado, their home when he was executive officer

of All Weather Fighter Squadron 35 at NAS NORTH ISLAND.

On the 13-day trip from California to the Capital, the Hoels visited Carlsbad Caverns and, each day, found a



DRIVER'S SEAT was not altered. Mrs. Hoel really lets the Captain do all the driving.



NAP TIME? Camera caused curiosity. Note added convenience of pegboard partitions.



TIME OUT for family ball game at Carlsbad Caverns on latest cross-country trip.

swimming pool for the young ones to get exercise and work off excess energy. They avoided a terrific heat spell by spending several days in the cooler climate of the Blue Ridge Mountains. Total cost, less than \$150 for fuel.

Arrival in Washington marked the completion of the second trans-continental round trip in "His 'n Hers." It has also been used for innumerable side junkets on weekends and leaves.

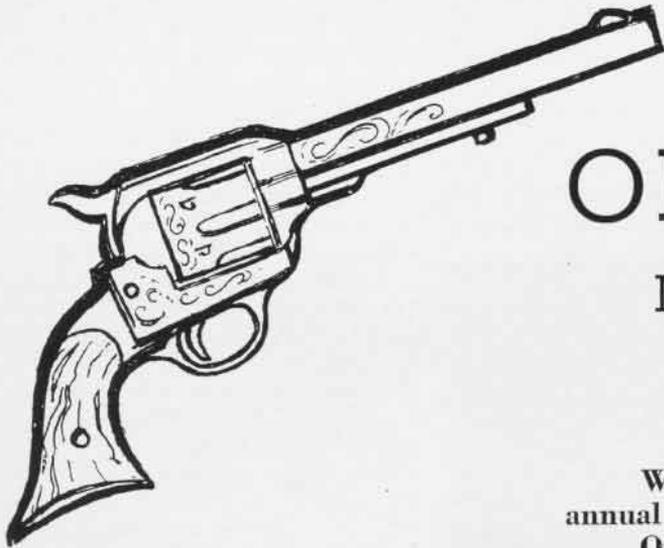
The name is usually good for a double take, but there have been several irate bus travelers who have tried to flag it down, and failed. The Hoels are used to such incidents. "His 'n Hers" is the second bus they have owned. The first, a smaller model, was purchased in 1950 at the instigation of Mrs. Dolores Hoel. Her husband had always been an outdoor man, interested in hunting and fishing, but she didn't like roughing it. When she saw an ad in the local paper that a bus was for sale, she called her husband at work. The transaction was quickly executed and the Hoels have been camping out in style ever since.

All the children are completely sold on the idea. A chorus of dissents greets even the faintest suggestion of selling the bus. It's good for them, too, since meal and nap routines are not interrupted.

Capt. Hoel was designated Naval Aviator in 1939. During WW II, he served with Fighter Squadron 8 aboard USS *Bunker Hill*. In the period from 31 March to 14 October 1944, he is credited with shooting down six enemy planes and four possibles. For this action and for the completion of 45 missions, he was awarded the Distinguished Flying Cross with two gold stars and the Air Medal with nine gold stars.

In 1957, as commanding officer of the Naval Air Development Unit (Project Lincoln) at NAS SOUTH WEYMOUTH, he was aboard, as navigator and co-pilot, the ZPG-2 which set new endurance and distance records for airships. The blimp was aloft for 264 hours, 14 minutes and 18 seconds, travelling 8,278 miles.

LTA, fixed wing aircraft, or six-wheel bus, Capt. Hoel can add to his other titles, "transportation expert."



OPERATION "T

November 30—December 4, 195

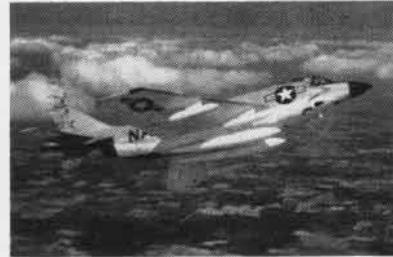
THE "LOWDOWN"

Why a Weapons Meet? A "Top Gun" needs a sharp s
annual Naval Air Weapons Meet—to keep all the "Heroe
Our "Ramrod," the Chief of Naval Operations, figures
a year, we can be sure of increasing the over-all effectiveness

To enter a team in the meet, the entire squadron must r
meet actually begins. And you just know that every outfit in



THE "TRUSTY MOUNTS"



THE "HEROES"

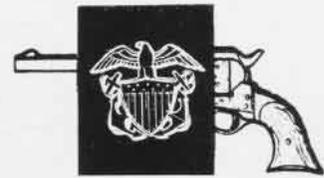
During this five-day round-up at Yuma, all
of the "Heroes" from the Atlantic and Pacific
Fleets, the Naval Air Training Command, and
the U. S. Marine Corps, will be on hand,
primed and ready and real eager to shoot for
the title — "Top Gun" in Naval Aviation!!!

'TOP GUN''

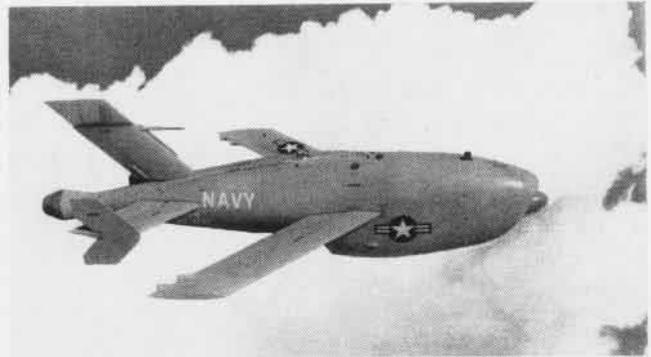
59 at Yuma, Arizona

N''

shooting eye. That's the main purpose of the
es of Naval Aviation'' practicing their trade.
es that by holding a showdown such as this once
es of weapons delivery in the Fleet.
make a top-notch showing months before the
n Naval Air shot up a storm to do it.



THE "RAMROD"

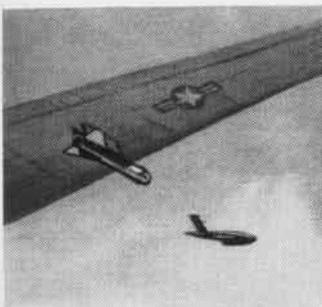


THE "VILLAIN"

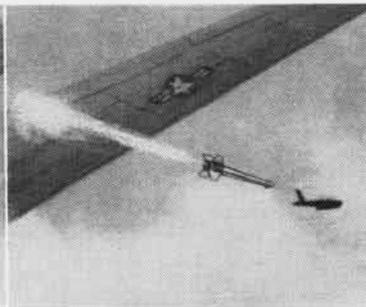
S''



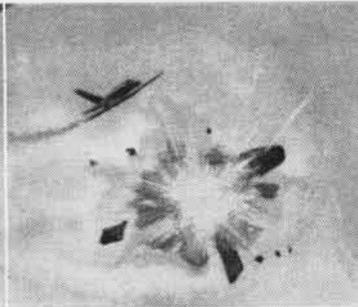
HOW IT'S DONE AT "TOP GUN"



THE DRAW



THE SHOT



THE HIT



THE END

USS KEARSARGE PUTS TO SEA

By Robert E. Meriwether, J02

DID YOU ever consider how much it costs to deploy one aircraft carrier with its accompanying squadrons of aircraft for six months? The amount of preparation required for getting underway for an extended cruise? How the cost and trouble are justified?

This fall, one aircraft carrier, one antisubmarine squadron and one anti-submarine helicopter squadron departed North Island Naval Air Station in San Diego for six months deployment in the western Pacific.

On board the carrier, *USS Kearsarge*, were 2300 officers and men who will be responsible for operating the ship, maintaining the ship and the embarked aircraft. The aircraft squadron was VS-21; the helicopter squadron, HS-6.

Purpose of the deployment is to keep open the sea lanes to America and the avenues of the free world free.

During the deployment, the ship will steam some 60,000 miles, and the total cost of her operations will be in the neighborhood of \$3-million.

On these pages are scenes showing how the deployment began taking shape more than three months before the departure date. Aircraft had to be conditioned and made ready for the task ahead. The carrier's crew had to be trained. The ship, planes and men had to become accustomed to working together. Men had to have inoculations for overseas duty and last shore



52F TRACKER COMES IN FOR LANDING ABOARD USS KEARSARGE AS DEPLOYMENT BEGINS

leaves were given to men of all units.

These and a thousand and one other important items were accomplished.

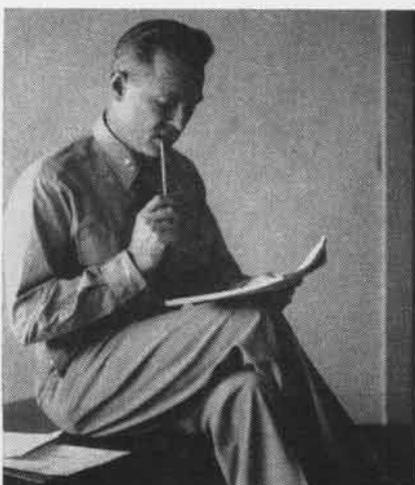
In the final days before departure, all the important packing up of the squadrons had to be done. Supplies and parts had to be ordered and loaded, last minute checks to aircraft and ship had to be completed. Finally everything had been done. All was ready and the ship departed on schedule.

Why is it so important for this or any other carrier to deploy to the far-flung oceans of the world? What purpose is served?

The United States is committed to the assistance of some 64 nations of the



ATHLETIC GEAR IS PACKED ON MOVING DAY



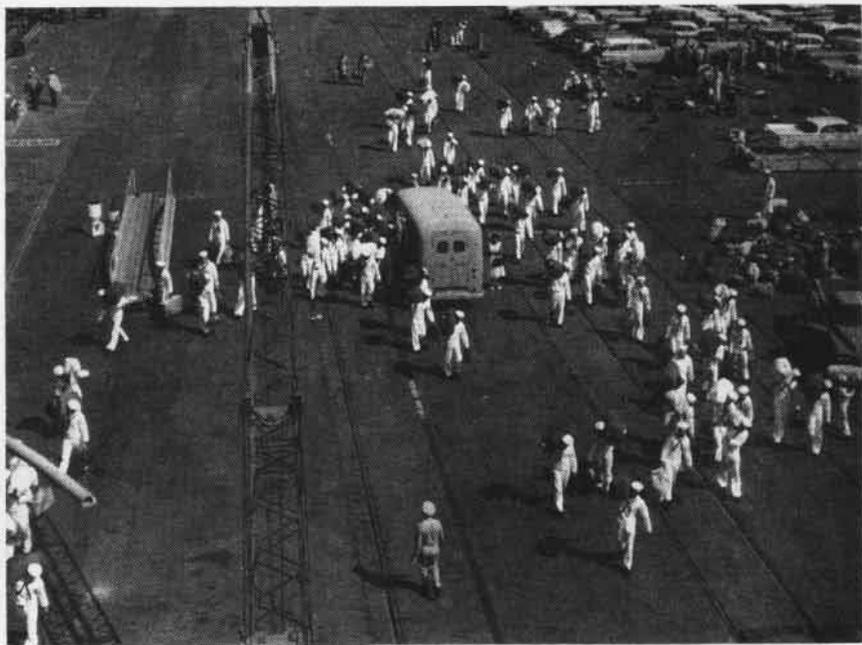
VS-21 C.O. SCANS CHECK LIST FOR MOVE



HS-6 HELICOPTER BOARDS THE KEARSARGE



HERE'S FRACTION OF GEAR NEEDED AT SEA



CARRYING SEABAGS, SAILORS OF AIR UNITS SWARM UP DOCK TO BOARD THE CARRIER

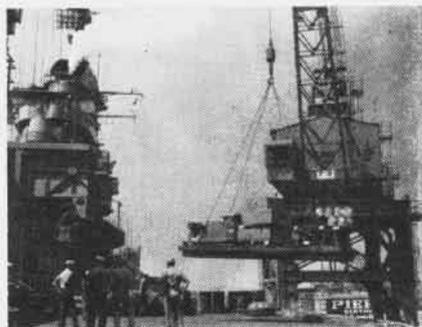
world. These nations span six continents and three oceans, constituting about 54 per cent of the world's population. Sea lanes and sea communications must remain free and open in these areas. If they are closed, the entire free world would be in danger.

Supplies, equipment and men could not be transported safely or adequately.

Moving sea bases, such as the *Kearsarge*, have great versatility and usefulness. In the event of attack by enemy forces, these ships are difficult to pin-

point and destroy. They are ready to fight back in case of war or attack on any point in the world.

The carrier's ability to move rapidly to the point of aggression and launch her aircraft makes her indispensable in maintaining control of the seas. So long as control of the seas is necessary to world peace, it is imperative that ships and men of the Navy be deployed to the four corners of the earth. By so doing, America and the free world will remain free.



PIER CRANE HOISTS CARGO ABOARD SHIP



MEN OF VS-21 TIE PLANES DOWN FOR LAST NIGHT ON THE BEACH



ON OVERCAST DAY, PILOTS FIND KEARSARGE STEAMING OFF COAST

SKYWARRIOR EAGLES ON PARADE



RAF MARSHAL CONSTANTINE GETS WORD FROM CDR. TULLY, VAH-5



LT. CRETTINGER SHOWS ADM. ULUSAN, TURKEY, THE READY ROOM

Is there anything in particular that you would like to see while you are aboard our carrier, General?"

"Well, I've heard a lot about these A3D's. I would like to get a good look at them if I can."

"We thought you would, and the VAH squadron from Sanford, Florida, is standing by to show you their aircraft and have you present during the briefing for the next flight. If you wish, we'll set up a flight for you."

That is the way the conversation goes with almost every admiral and general of the NATO nations who visit such attack carriers as the *Forrestal* and *Ranger*. The smiles when they learn they will be taking an A3D flight from the ship express their delight.



AIR MARSHAL HENDRICKS, RCAF, IN A3D

Every phase of preparation for an A3D mission interests them: navigation and target planning, the pre-flight briefing and last minute instructions on pilot's launch and recovery order.

Two things have impressed the flag officer passengers in the A3D's. One is the thrill of that fast ride on the steam catapult. The other is the precision of the Heavy Attack crews. One air marshal said, "Everything they do is calm, cool and correct."

Each of these NATO VIP's is given a memento of his flight. Usually it is a certificate making them honorary members of the squadron. Already there are over 40 who are honorary *Savage Sons* of VAH-5, *Hoot Owls* of VAH-9 or *Checkertails* of VAH-11. They are now back at their regular work in the military headquarters of the NATO nations. You can be sure that they occasionally tell their friends about their day on the U.S. carrier and the A3D ride.



HENDRICKS (L) COMES ABOARD SARATOGA



CDR. HARRIS (R) GIVES VIP A 'MEDAL'



AIR MARSHAL (R) IS READY FOR JET FLIGHT

Blimp Units Quit Glynco ZP-2, ZTG will be Disestablished

Two lighter-than-air units based at NAS GLYNCO, Brunswick, Ga., will be disestablished 30 November. Units are Airship Patrol Squadron Two (ZP-2) and Airship Training Group (ZTG). The only remaining airship operation in the U.S. Navy will be concentrated at NAS LAKEHURST.

ZP-2 arrived at NAF Glynco in August 1951 following the outbreak of the Korean war. Commissioned at NAS LAKEHURST 2 January 1942, it made an outstanding WW II record.

On 1 July 1953, the U. S. Naval Airship Training Group (formerly the Airship Training Unit) was transferred to NAAS GLYNCO from NAS LAKEHURST. The only airship pilot training school in the Navy, the Airship Training Group (ZTG) has provided all the airship squadrons with its LTA pilots.

Although there are no plans for replacing either of the two airship units, NAS GLYNCO will maintain a lighter-than-air facility capable of handling and providing service to airships.

Mechs Get Shop Training Will Stay with Specific Aircraft

NAS ALAMEDA has inaugurated an enlisted training program which involves the shore duty rotation of selected career personnel to the station's Overhaul and Repair Department by rate.

Men selected are assigned to the specific type of aircraft—A3D or A4D attack planes—they will be working with when their shore duty is completed.

Rates involved are AD, AE, AM and AT. The men will receive six months of on-the-job training. On completion of the program, they will report to squadrons, not to ready air group units.

A spokesman in the training division, Office of DCNO(Air), said the program at Alameda is in keeping with a Navy-wide effort to wed specific maintenance men to specific aircraft types. But, he pointed out, it does not modify that portion of the Replacement Air Group concept, (NANews, January 1959) in which rated AD's, AE's, AM's, AO's AT's and PR's are sent with their squadrons' pilots to CVG-4 and CVG-12 for intensive training before deploying to a carrier.

EXCHANGE OF EXPERIENCE



EXCHANGE PILOTS, WITH CDR. HANKS, ARE INTERVIEWED BY NANews' MISS SULLIVAN

FROM THE four corners of the globe, eight young Naval Aviators reported to Washington, D. C., for a two-day briefing session before going on to their next assignments—18 months of duty with the Air Force.

In the past 10 years more than 500 Naval Aviators have served not only with the USAF, but also with the Royal Navy and Air Force, and the Royal Canadian Navy and Air Force. An equal number of pilots from these services have had duty with the USN.

The purpose of this exchange program is to further better understanding of operational doctrines, training techniques and administrative practices at the working level. The officers selected must have demonstrated an ability for higher command and staff duties to take maximum advantage of the experience in the future.

At the present time, selectees must be volunteers from the Regular Navy, fully qualified in the aircraft type of current assignment, and strongly recommended by their commanding officer. Rank must be Lieutenant or below, with the exception of some SAC duty and the Empire Test Pilots School in Farnborough, England. Records are fully screened by the Bureau of Naval Personnel before any orders are written.

The briefing period is coordinated by Cdr. E. R. Hanks in the Fleet Air Training Section of DCNO(Air). Top-level rundowns are given on all

phases of Naval Aviation, including Attack and Defense Weapons Systems, Sea Based Air Striking Forces, Air Launched Missiles, the Aircraft Carrier, and the Naval Helicopter.

Periodic progress reports are required of the exchange pilots. Useful information is excerpted and forwarded to interested fleet commanders. Naval Aviators must maintain their standard flight requirements, logs and annual qualifications reports.

The officers appearing in the picture above are the most recent group to go through the Washington briefing. Back row, left to right: Ltjg. P. M. Hoff, Jr., from VF-41 aboard USS *Independence*, all-weather qualified in the F3H-2, to Truax Field, Madison, Wis.; Ltjg. W. C. Diehm, III, from COD unit, Jacksonville, to Seymour Johnson AFB, N. C.; Lt. H. M. Chapman, Jr., from VAH-3, flying P2V's and F9F-8's, to George AF Base, Calif.; Lt. R. U. Morrison, from NAAS CHASE FIELD as F9F-8/8T instructor, to Perrin AFB, Texas; Lt. W. I. Lewis, Jr., from BTG-9 in the first T2V training unit, to Craig AF Base, Ala.; Lt. Z. J. Kowalsky, Jr., from VF-114 in WesPac aboard *Sbangri-La*, to Wurtsmith AFB, Michigan.

Front row, left: Lt. R. E. White, from BTG-9 as T2V instructor, to James Connally AFB, Texas; second from right: Lt. T. J. Cassidy, Jr., also from BTG-9, Pensacola, as T2V instructor, to Moody AF Base, Georgia.

Weekend Warrior NEWS



ADMIRING CNO Safety Award to VS-861 are, l to rt, LCdr. John Washburn, Capt. Carl W. Brown, LCdr. Campbell and LCdr. Raymond Kling.



BANSHEE PILOTS of Oakland's VF-876 inspect target for hits scored during gunnery exercises when squadron underwent annual training.

Sub-hunting Brothers Hailed

Brothers Philip, James and Dabney Townes are sub-hunters with VS-662 at NARTU ANACOSTIA. Philip is a PH2, James is a PN3, and Dabney is a maintenance Airman.

When their squadron went to Norfolk this summer for its annual 14-day training cruise, it was so rainy that many of the squadron's S2F flights were cancelled. So they all helped to perform the squadron's semi-annual verification of records.

All three were familiar with records, inasmuch as they are all civil servants. Philip is a photographer with the Army Signal Corps. Dabney is an accounting clerk in the Federal Aviation Agency,

and James is with the Army Transportation Corps.

When Maryland state senator John T. Parran, Jr., learned that all three brothers are Weekend Warriors, he wrote a letter to their parents, commending the men for the "fine job" they are doing in the Naval Reserve.

"When so much of the country is having trouble with its young people, it is a pleasure to have families like yours in the community," he declared.

VS-861 Wins CNO Safety Award

NARTU NORFOLK's Air Antisubmarine Squadron 861 received the Chief of Naval Operations Safety Award for fiscal 1959 at Norfolk.

RAdm. Thurston B. Clark, ComFAirWingLant, made the address and presented the CNO plaque to LCdr. Charles N. Campbell, squadron C.O.

The CNO citation and bronze plaque are given to top squadrons selected from the major Naval and Air commands, both regular and reserve in recognition of the importance of accident prevention to economy, morale and combat readiness.

Officers and men from Virginia, North Carolina, Pennsylvania and Ohio comprise VS-861. During the fiscal year, the squadron flew 2957 hours

without an accident, flying on weekends the year around, plus a two-week training cruise. The total figure divides out to about 125 hours per pilot.

VF-876 Trains at Home Base

Oakland's VF-876, commanded by Cdr. Richard J. Scagliotti, took its annual two-weeks training at home. Twenty pilots, five ground officers and 18 men took part.

Each pilot flew an average of 40 hours in F2H-3 *Banshee* jets, concentrating mainly on defense exercises. An example of the squadron's combat readiness was proved when interceptor flights were launched within three minutes after an "alert" was sounded.



A DOZEN Weekend Warriors of VF-876 line up for photo after making a formation flight.



VA-892 PILOTS from Seattle pose before AD-5 they used to break rocket record at Fallon.

VP-671 DELIVERS THE BEANS

By E. M. Presley, J01

A NEW ROAD in the President's people-to-people program has been built by Church World Service and paved with 8000 pounds of beans and clothing.

Emergency relief goods were flown from St. Louis direct to the starving people of Oriente Province in Cuba by Reservists in *Operation Beanlift*.

To thousands of thankful Cubans, LCdr. P. T. Bankston is the real Santa Claus. He was responsible for delivering the emergency relief supplies, the first of about \$360,000 worth of food and clothing destined for Cuba by the church organization.

Master of his own sleigh, a P2V *Neptune* patrol bomber, LCdr. Bankston helped to solve a perplexing problem faced by the Service. The church group had several million pounds of beans, powdered milk, corn meal and clothing for an estimated 52,000 persons in dire need.

LCdr. Bankston, a Weekend Warrior pilot attached to VP-671 at NAS ATLANTA, became familiar with the work of the Church World Service through church affiliations in his hometown of Tennille, Ga. He offered an aviator's approach to the problem: Why not airlift an advance shipment?

He relayed his request to higher authority and, after considerable planning, the request was cleared by the Navy for the use of two P2V aircraft to fly the goods to Cuba on a combined training and mercy mission, giving pilots and crewmen a chance to bone up on their overseas navigation.



BEANS, CLOTHING, VITAMINS ARE UNLOADED FROM RESERVE P2V AT NAS GUANTANAMO

The squadron was based temporarily at NAS KEY WEST.

The two *Neptunes* left Key West, one piloted by LCdr. Bankston and the other by Lt. P. M. Winters. They flew to St. Louis where the relief cargo was waiting. Pilots and crewmen loaded the planes with 5000 pounds of beans, 3000 pounds of clothing, and a million vitamin pills.

Once loaded, the plane took off for NAS GUANTANAMO BAY, Cuba, with a stopover at Atlanta for refueling.

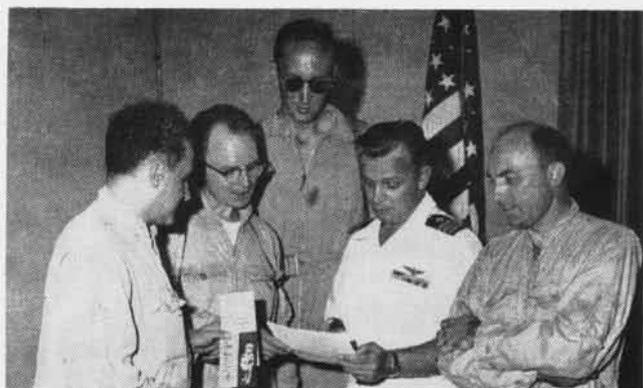
It was nearly midnight when the

two planes taxied to the ramp at Guantanamo. Early the next morning, unloading of the relief cargo began. The Right Rev. Hugo Blankinship of the Cathedral of Holy Trinity, Vadado Havana, several Cuban Church officials, and representatives of Christian Rural Overseas Program were on hand to receive the relief shipment.

A volunteer working party of NAS GUANTANAMO sailors unloaded the planes and trucked the goods to the air station's gates where it was turned over to duly certified distribution groups.



LCDR. BANKSTON CONFERS WITH CHURCH LEADERS BEFORE FLIGHT



ATLANTA PILOTS READ WRITTEN PROOF OF MISSION'S SUCCESS

BuAer Announces New Unit To Advise on Design Requirements

The Bureau of Aeronautics has created a standing BUAER-Industry Advisory Board on Reliability and Operational Design Requirements of Aeronautical Material. RAdm. L. D. Coates, Assistant Chief for Research and Development, is the chairman.

At the first Navy-Industry Conference on Aeronautical Reliability, held at the Naval Aviation Safety Center, Norfolk, Virginia in 1957, the 200 conferees unanimously agreed that such an advisory board was needed. Its function would be to funnel advice and recommendations from industry and BuAer field activities to the Chief of BUAER on matters concerning aeronautical material reliability.

The wheels were set in motion, and with the assistance of industry, the board was set up and began operations in April, 1959. Its functions are in an advisory capacity only. With Adm. Coates as chairman, the board is comprised of a vice chairman (usually Director of BUAER's Maintenance Division), and ten members drawn from industry and five from BUAER. At his discretion, the chairman is free to invite participants from other than regular membership to consider specific problems.

The areas in which the board is

most active are: (1) reliability, maintainability, and safety requirements for maximum operational integrity; (2) methods of analysis, test, demonstrations, and maintenance procedures; and (3) feedback and dissemination of technical information from field activities, operating forces, and industry.

RAdm. R. E. Dixon, Chief of BUAER, says he considers this board primarily as an organization of engineers from industry who have a professional interest in the Navy's problems and personally wish to assist the Navy in arriving at the best solution. They receive no government remuneration.

Vice Chairman of the committee is Capt. F. E. Rogozienski, BUAER. Members are Mr. C. L. Cahill, Aircraft Radio Corp.; Mr. J. de S. Coutinho, Grumman Aircraft; Mr. G. C. Covington, McDonnell Aircraft; Mr. G. R. Gehrken, North American; Mr. W. L. Gorton, Pratt & Whitney; Mr. T. J. McLaughlin, Loral Electronics Corp.; Mr. F. H. Robbins, Westinghouse Electric Corp.; Mr. C. M. Ryerson, RCA; Mr. W. L. Whittier, Douglas Aircraft Co.; Mr. O. J. Schaefer, Martin; Captains T. M. Adams, A. E. Allemand, H. R. Badger, E. A. Lohmann, and Mr. F. M. Gloeckler, all of BUAER.

Mr. F. W. Snyder is serving as secretary of the new organization.

Sparrow Parts Delivered Hazeltine Cuts Time by 2 Months

Hazeltine has made final delivery on the initial phase of its contract for electronic launching and guidance equipment for the *Sparrow III* air-to-air guided missile, eight weeks ahead of schedule, according to a company statement.

In addition to *Sparrow* components, Hazeltine is designing, developing, and producing equipment and systems in the ASW, radar, IFF, missile and AEW fields at its research facilities.



NAVY PILOT, LCdr. T. M. Smyer (left) gets ready to fly AF's fastest, the F-104 Starfighter at Eglin Air Proving Ground. Crew Chief, TSgt. H. D. Grizzle, is ready to remove protective covering on 7-foot wing.

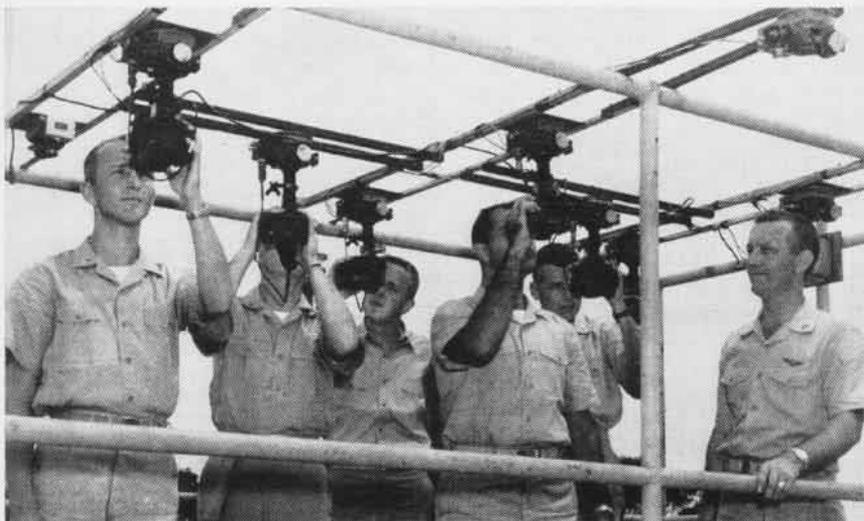
Neptune Has Hairy Flight Limping 1065 Miles on One Engine

Ten crewmen of a Patrol Squadron One P2V *Neptune* experienced seven hours and 56 minutes of anxious flight when their plane lost an engine at the point of no return between Alameda and Hawaii.

Ltjg. Braden R. Briggs, the pilot, had just made a routine radio contact with Coast Guard ocean station November and had 1065 miles to go when the engine went out.

He feathered the ailing engine, then, using the auxiliary jet engines, climbed to 4000 feet altitude. Another P2V in the four-plane formation dropped back to help him. It remained until an R5D search and rescue plane arrived from Hickam to help with navigation.

Limping along on one engine, Ltjg. Briggs reached Oahu, flying as low as 65 feet above the water on occasion.



BOMBARDIER-NAVIGATORS are being trained at Naval Air Advanced Training Command, Corpus Christi. At present the program is open on a volunteer basis only to students who have been disqualified from the flight program owing to minor physical defects. They must have a better than average academic record to qualify for the new program. Those successfully completing the program will receive their commissions and probably a special type of wings to signify their specialty.



TOP-RANKING OFFICIALS of NATO countries visited ships of the Sixth Fleet and witnessed operations for several days in August, to obtain first hand knowledge of this powerful force for peace. Left, the Honorable Antonio Segni, Premier of Italy, is received aboard the USS Franklin D. Roosevelt (CVA-42). He was accompanied by the Italian Minister of National Defense, Giulio Andreotti, and the



Italian Chief of Naval Operations, Adm. Corso Pecori Giraldi. Right, West Germany's Defense Minister, Franz Josef Strauss, receives honors on the FDR flight deck. On his left is RAdm. W. A. Sutherland, Jr., ComCarDiv Two. Behind him are VAdm. Friedrich Ruge, Chief of West German Naval Forces, and VAdm. C. E. Ekstrom, ComSixthFlt. Adm. Ekstrom was host to the dignitaries.

Indoctrination at Alameda Terms and Paperwork are Clarified

A four-week school now established aboard NAS ALAMEDA, acquaints mechanics with clerical procedures and yeomen with maintenance terms.

The aircraft maintenance course was set up to keep pace with the increased technical complexity of aircraft. It includes classes in publications, maintenance systems, aircraft logs, record aircraft accounting, engine accounting, aircraft service changes and directives, material reliability and overhaul and repair services.

Classes are open to junior officers and enlisted maintenance personnel in the pay grades of E-5 and above. They must have a combined GCT-ARI score of 100 and at least a year of duty left with their present units.

The course is four weeks for enlisted personnel and five weeks for officers. The additional week of instruction for officers includes principles of organization and management.

The program is the brain child of Cdr. H. P. Buergey, assistant maintenance officer, Commander Fleet Air Alameda staff. Dr. H. R. Hutchinson, overhaul and repair training superintendent at the Naval Air Station supervises the program.

Six classes have been offered since 16 February 1959. Thus far, 80 petty officers and 15 junior officers have completed aircraft maintenance course,

Improper Marking is Cited New Slogan: 'Mis-marks Can Kill'

The Aviation Supply Office has launched a campaign to eliminate mis-marked and improperly stored material which, in some cases, can result in fatal accidents.

Investigations following several recent aircraft accidents indicated that improper identification of material was a possible or contributing factor. One



THE RUSSIAN publication, "Soviet Fleet," carried this picture of a Hen helicopter preparing to land on a destroyer. The article stated that these copters are for search and destruction of submarines by bombing.

fatal accident was caused primarily by mis-identification of a carrier arresting gear cross deck pendant.

A pilot was killed and a new million-dollar jet aircraft was lost.

Subsequent investigation revealed that an additional quantity of mis-identified cross deck pendants were on board the carrier involved.

A fleet commander said: "Marking and identification, as well as inspection requirements for material delivered under contract, are provided in military specifications. Similarly, instructions for marking and identification of materials re-packed at Navy supply activities are provided in the Navy Packing Manual, the BuSandA Manual, and other Instructions.

"The reported instance in which materials had been received aboard ship with the external containers improperly marked . . . indicates that these instructions are being violated."

ASO's slogan: "Mis-marks can kill."

J-58 Work is Authorized P&W Gets \$11.2-million Contract

The Navy has awarded a \$11.2-million contract to Pratt & Whitney for further development of the J-58 engine. The J-58 is a single-spool turbo-jet in the 30,000 pound thrust class, capable of operating in the Mach 3 speed range.

Work will be done at Pratt & Whitney's R&D Center at West Palm Beach.

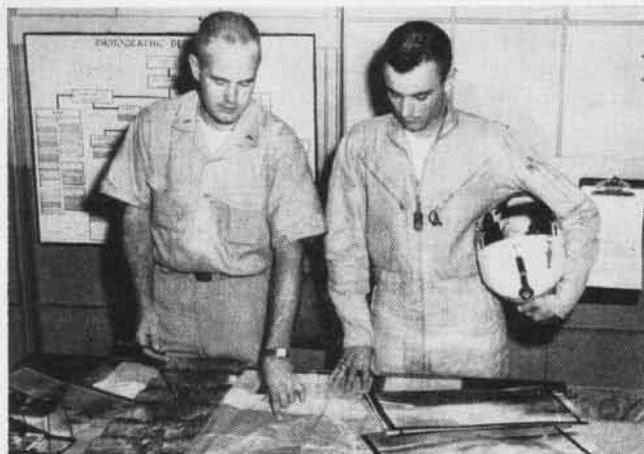
VERSATILE '62' GETS A3D-2P AIRCRAFT



TRAINING IS CONDUCTED BEFORE A NIGHT PHOTOGRAPHY MISSION



PLANE'S FLIGHT LINE IS STUDIED AS MOSAIC IS CONSTRUCTED



DAY'S PHOTO OBJECTIVES ARE EXPLAINED TO PHOTO-NAVIGATOR



K. THOMPSON, PH3, COMPLETES MOSAIC THAT USED 100 PHOTOS

PILOTS and crewmen of Heavy Photographic Squadron 62 have undergone training with Heavy Attack Squadron Three at Sanford and have received further training at the Douglas plant in preparation for receiving A3D-2P *Sky-warriors*.

Delivery of the all-jet photo planes has begun and they will replace the AJ-2P *Savages* formerly flown by VAP-62.

Based at Jacksonville, VAP-62 is the only long range photographic squadron stationed in the United States. However, to refer to VAP-62 as a "stateside outfit" is an injustice, for the squadron's detachments have operated in the air above five continents of the world.

Sixty-two's task encompasses both day and night photography, including reconnaissance work, cartographic mapping and radar photography. The fact has been established that a significant portion of all intelligence comes from aerial photographs. VAP-62, along with VFP-62, satisfies most of the Atlantic Fleet's aerial photographic requirements.

The squadron's stateside activity is devoted primarily to projects for the Coast and Geodetic Survey, the Navy Hydrographic Office, the Army Map Service, the Corps of Engineers, and the Department of Agriculture. Miscellaneous projects are flown for other government agencies.

To accomplish all its missions, VAP-62 has a complement of 32 officers and more than 300 men. Up to now, the squadron has flown seven AJ-2P's for training and operational flights and has used a photo-configured Beechcraft for training and limited photographic work.

Flight crews of four are able to operate, in any combination, the 11 camera stations of the heavy aircraft.

The squadron was commissioned at Jacksonville in 1952, moved to Sanford, then to Norfolk, and back to Jacksonville. Cdr. C. W. Hollinshead is current commanding officer.



MAZE OF REQUIRED CAMERA GEAR IS INVENTORIED FREQUENTLY

TEN PHOTOGS DO CHORES OF 45 AT IWAKUNI

OPERATING a 45-man photographic laboratory with only 10 men is not an enviable situation, but the results produced by Marine MSgt. Michael A. McKinney and his nine-man crew at MCAF IWAKUNI, Japan, are enough to provoke envy.

Sailors and marines operating the darkrooms there turn out an average of 28,000 pieces of work monthly, taking assignments from every squadron on the base except Marine Composite Reconnaissance Squadron Three which has its own photo processing facilities.

Called upon for every photographic service from making portraits to filming aircraft accidents, members of McKinney's team are all qualified to process photos from the click of a shutter to the drying of prints.

The photo staff is comprised of photographers from several squadrons. They work as a unit at Iwakuni, then deploy with their own squadron when it leaves Japan.

All identification work for military and civilian employees on the air facility is handled by the lab, in addition to aerial reconnaissance and scouting; public information; construction progress; aircraft accidents; investigative evidence; experimental research analysis; and motion pictures.

When a visiting ship or squadron arrives at Iwakuni, the photo lab is also responsible for giving any photographic support that may be required.

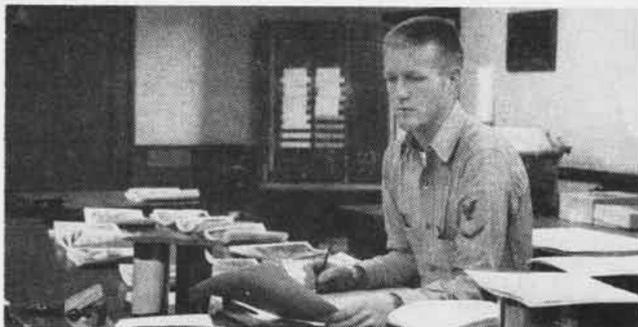
An example of the work load placed on the lab occurred when 2850 prints were produced for investigative study as a result of a single aircraft accident.

Negatives vary in sizes from 16-mm to 8x10 aerial roll film. Prints range from 35-mm contact to 40x80-inch maps.

On the pleasant side of the working ledger, however, is the fact that cameramen work in air-conditioned spaces.



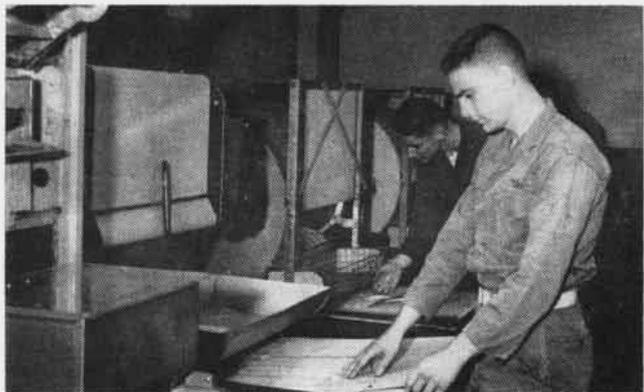
SERGEANTS MCKINNEY AND NARDOLILLO CHOOSE BEST NEGATIVES



L. L. WILSON, PH3 OF VP-19, ASSEMBLES COMPLETED JOB ORDER



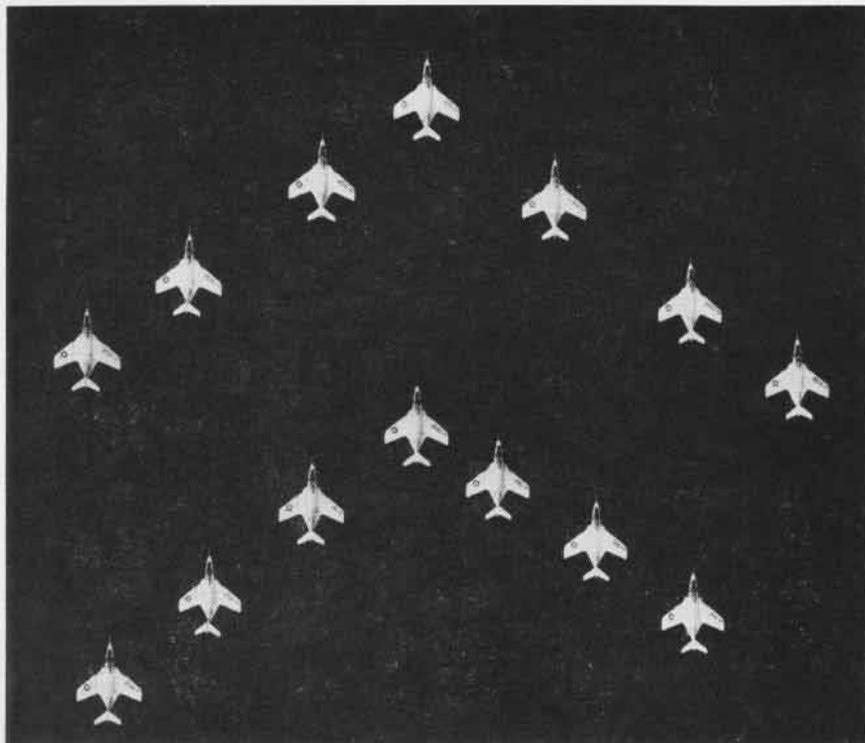
CAMERA REPAIRMAN NORMAN H. HYATT KEEPS SHUTTERS WORKING



PRINTS ARE DRIED BY PFC. RICHMAN (FRONT) AND CPL. NELSON



GURULE AND GREEN OF VP-19 DEVELOP (XL) AERIAL ROLL FILM



CDR. J. R. ILER, former commanding officer of VF-43, presents this unusual shot of his old squadron as a possible "first" in the realm of 100% airborne musters. Led by Iler, the 14 Cougars were operating near NAS Jacksonville at the time. Photo was taken by VFP-62.

Telephone Line Satisfactory Pilot, Tower Easily Communicate

Marine Air Group 24's Headquarters and Maintenance Squadron, with help from Station Communications, Air Traffic Control and the FAA, has set up a flight line device designed to keep pilots cool while waiting to take off.

The device, born of an idea of LCol. Joe L. Warren, H&MS-24 commanding officer, is called the Pilot's Hot Line. It places a common telephone receiver in the cockpit for the pilot's use in contacting the tower without fear of interruption by other transmissions.

Before the installation of the Hot Line, a pilot went to the tower to file his flight plan, then returned to his flight line, sat in the cockpit and waited for the tower to call him back so he could copy his flight plan. During the cockpit wait, a mobile flight line generator was used to keep his radio operating in anticipation of the Tower call.

When the radio call did come, there was a possibility of a garbled transmission (thereby making re-

peated messages necessary) and interruptions by transmissions from other aircraft.

Sometimes the delay lasted as long as 45 minutes, thus placing an above normal strain on the generator and a shortening of temper of the pilot seated in the 120-degree plus heat of the cockpit.

With the Hot Line, the generator



BGEN. THARIN USES LINE FOR A CALL

is no longer required and pilot has a direct line to the tower. There is one more advantage, Col. Warren pointed out.

"The hard hat," he said, "is one of the hottest items of flight clothing. With the 'Hot Line' a pilot is able to remove the hat while he listens and waits for the Tower call."

The Hot Line was officially tested when BGen. F. C. Tharin, Assistant Second Wing Commander, visited the H&MS-24 flight line, climbed aboard the F3D and called MGen. A. F. Binney, Second Wing Commanding General. The message went through loud and clear. The device was successful.



TOP HAT BOMBERS is name given this all-enlisted bombardier/navigator class at VAH-3, NAS Sanford. They are J. S. York, AEC, W. R. Koblrusch, AQ1, F. W. Lasater, AT1, G. E. Setchfield, AM1, B. J. Sandefur, AM1, and G. W. Mitchell, AM1.

Aircraft Taxi Signal Poster Revised Chart being Distributed

General distribution is now being made of "Standard Aircraft Taxi Signals" to all Naval Aviation Units. Issued by the Aviation Training Division of the Office of the Chief of Naval Operations, the new poster supersedes the one issued in 1951.

The poster is a series of illustrations which covers the signals for pilots and plane handlers afloat and ashore.

Distribution has been general, but in case more posters are needed, they can be obtained by ordering them in accordance with NAVAER 00-500 directly from appropriate Publications Supply points. Prominent display of the poster is anticipated, for it is attractive, and the drawings depicting the signals are clear and definite.

"Catapult Signals" are being redistributed. If more copies are needed, address requests to CNO (Op. 561).



CDR. A. B. CONNER, after making his 500th landing, accepts CAG-6 baseball cap from Cdr. Jack James as he takes over the air group aboard the USS *Interpid*. CAG deployment relief was first under level readiness concept.

Hi Fi Used for Deep Stuff Sonar Signals Are Put on Tape

High-fidelity tape-recordings—acoustic histories of the Navy's submarine hunter-killer squadrons on the high seas—are being used in a new training device to help sonar operators distinguish the difference between false signals and tell-tale blips of actual submarines.

Installed at Navy training schools in Key West, Florida, and San Diego, California, the Sonar Operators' Target Classification Training System is linked side-by-side with actual sonar equipment, allowing trainees to monitor all the situations they may encounter while at sea.

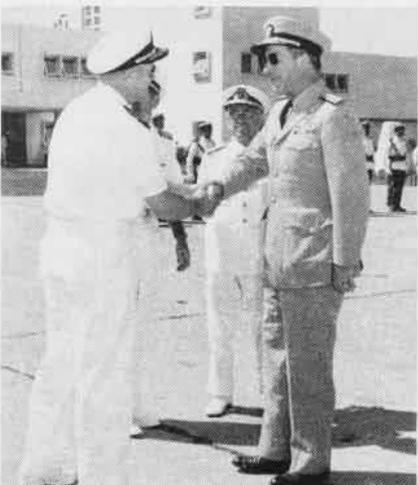
In addition to schools of fish, which can cast an electronic "shadow" on sonar scopes, underwater mountain peaks, old wrecks and even masses of floating plankton or kelp tend to produce a confusing picture for the sonar operator, it was pointed out.

Using principles similar to radar, sonar sends out an electronic pulse and, by identifying the return echo and measuring the elapsed time from transmission to reception, permits operators to detect the presence of under-sea or surface vessels in the area.

Developed under a \$1,500,000 contract from Naval Training Devices Center, Port Washington, N. Y., and the International Telephone and Telegraph Laboratories, Nutley, N. J., the sonar trainer incorporates all types of sonar-received sounds, enabling seamen to distinguish actual or real targets from probable or artificial ones.



CAPT. M. J. STEINBERG, test pilot in O&R at Cherry Point, demonstrates new method of attaching lip mike boom to H-5 helmet. His invention permits leaving chin strap on helmet, while using mike or oxygen mask.



ACNO(AIR), Rear Admiral C. S. Cooper (R), is met upon arrival at Rota, Spain, by Capt. Thomas Robinson, USN. He was also met by RAdm. Eduardo Gener, Spanish Commandant of the Rota Base, and Capt. J. A. Smith, USN.

Marines Believe in Signs Golfers, Kids, Customers Chided

MCAS KANEHOE BAY, Hawaii, bears evidence that all of the clever wartime sign painters were not mustered out into the civilian world.

Golfers there must remember to keep their heads down and their eyes on the ball, but a sign warns: "Caution, low flying helicopters!"

Then there is the sign at the station's stables which points out the splendid cooperation between civilian employees at the nursery school and military personnel at the stables: "We have an agreement with the station nursery.



CAPT. E. G. SCHWAB, new C.O. of Composite Photo Squadron 63 at Miramar, turns up F8U-1P Crusader engine prior to first 1000 mph hop. He commanded Air Group 11 at Miramar. He's flown 5500 hours.

They don't take care of horses and we don't take care of children."

Also near the nursery there is a strong, cyclone-type fence, bearing the legend: "Do not remove."

And in the staff NonCom club there is the sign which reads: "This is a non-profit organization. We're sorry but that's the way things turned out."

Bail-out but Stay-on Chance Vought Tests New Helmet

A new-type helmet designed to stay on a pilot's head during bailout at supersonic speeds is being tested by Chance Vought.

Chance Vought's experimental test pilot was fitted with the new helmet by its developers, Protection, Inc., a California firm. The new helmet is worn with an ordinary flight suit.

The custom-made equipment features a built-in oxygen mask replacing the stiff rubber mask used with the conventional helmet. Oxygen enters the mask at one side, flows across the face plate to keep it from fogging up, and is exhausted on the other side of the helmet. Earphones are set into the helmet padding for greater comfort. A small port near the chin permits the pilot to take nourishment. Instead of a flip visor, the new helmet has a hinged face plate which locks shut for greater protection during bailout.

Once the pilot has donned the helmet, it stays in place to protect his face against strong wind blast.

Prototypes, placed on dummies riding high-speed sleds, have stayed on at speeds well in excess of Mach 2.

TRIPLE-THREAT ROCKET

USS Ranger is 'Cover' Ship Adds Glamour to Phone Directory

The perfect "cover" ship may be the boast of the USS *Ranger* whose portrait graces the cover of the San Francisco Telephone Directory.

Using a striking view of the *Ranger* for the 1864-page directory was the idea of Mr. Roy Buell, San Francisco Division Manager.

Below, Miss LaVerne Holtzman of the telephone company, displays a copy of the directory. With her are Cdr. A. Lewis, of the carrier, Mr. Buell, and C. Finzel, QM1, aboard the *Ranger*.



AN F9F-8 COUGAR FIRES A PAIR OF ZUNI ROCKETS DURING NOTS CHINA LAKE TESTS

ZUNI, Navy's triple-threat, extremely dependable, solid propellant rocket which was developed by the Naval Ordnance Test Station, China Lake, is now being mass-produced. Many Naval activities and private industries are involved in manufacturing and loading the components.

The rocket can use several types of warheads and has both air-to-ground and air-to-air capabilities. A general purpose warhead can defeat targets by blast or by penetration with internal explosion. Another can pierce the thickest known tank armor, and can also deliver thousands of steel fragments over an area the size of a football field. A third can be used against fast fighter and attack jet aircraft.

Zuni will function efficiently at temperatures ranging from 165° F. to

65° below zero, and at all altitudes from sea level to the highest attainable by today's planes. Its speed is in excess of Mach 2. High speed, accuracy and versatility give it a greater kill probability than any rocket previously developed.

Information on reliability is classified, but a veteran pilot has said that it is "consistently fantastic." Some of its dependability stems from its simplicity. The five-inch folding fin rocket has only four moving parts. It is 110 inches long, weighs 107 pounds, and is powered by a China Lake-developed, high energy, solid propellant.

The unique launcher holds four rockets, and can fire them singly, in pairs, or in rippled salvos. The FJ-4B *Fury*, F4D *Skyray* and A4D *Skyhawk* can pack sixteen.

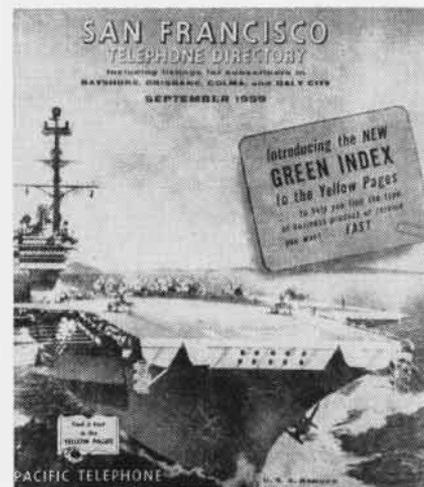
The motor is loaded in the launcher at an ammunition depot, transported, stowed and fired from the aircraft without any additional handling of the individual rocket motors. Fuzed heads can be quickly attached before firing.

Savings are effected in personnel and pilot training. *Zuni* crews can be trained in an afternoon. Fire control equipment in the plane tells the pilot when to fire at his designated target. After firing, the empty launcher can be jettisoned, giving the jet greater speed and range.

RAdm. P. D. Stroop, Chief of the Bureau of Naval Weapons, said: "*Zuni*'s versatility provides the Task Force Commander a weapon that can attack a wider range of targets than is possible with a single purpose weapon."



RANGER COVER OF DIRECTORY DISPLAYED



DIRECTORY GOES TO 541,000 CUSTOMERS



CDR. N. J. SMITH, VX-4, STEADIES ZUNI



C. E. WALL, PH1, TOOK SELECTED SHOT

EIGHT LIVES SAVED IN 11 MONTHS



PARACHUTE PACKING REQUIRES SKILL AND CLOSE SURVEILLANCE



HARD HATS COME IN FOR THEIR SHARE OF EXPERT ATTENTION

WHITING parachute riggers practice "eternal vigilance." Their parachutes have saved the lives of eight pilots in 11 months.

The eight successful bailouts were made by six Whiting flight students and two instructors. Four jumps were executed by students flying solo.

The last bailout occurred after a mid-air collision over the Gulf of Mexico. Two students were flying gunnery runs at the time of the accident. One was able to fly his aircraft back and land safely, but the other was forced to ditch his crippled T-28. Other survival gear also played an important role in saving the pilot's life.

During the 11-month period in which eight lives were saved, 150,000 hours were logged at Whiting in teaching student aviators to fly. Not one fatality during that time occurred as the result of a faulty parachute.

Such a record is eloquent testimony to the expert, conscientious work done by the riggers. Every 60 days, parachutes are unpacked and their canopies and shrouds are hung in air-conditioned spaces for a period of 24 hours to dry and fluff while the cases and harness are cleaned. A visual inspection is held on each parachute every 10 days. Life jackets are given a thorough going-over every 90 days.

A number of Whiting riggers hold plaques which cite the individual for packing the chute which saved a life.



CANOPIES AND SHROUDS MUST BE DRIED



EACH RAFT IS CHECKED EVERY SIXTY DAYS

The surviving pilot gains membership in the renowned Caterpillar Club. Almost as old as aviation itself, the club is made up of pilots whose lives have been saved by chutes. It had its beginning in October 1922 when Lt. Harold R. Harris made a successful parachute escape from an aircraft over McCook Field, Dayton, Ohio, a predecessor of the present Wright Field.

Shortly afterwards, another test pilot at McCook saved his life by an emergency parachute jump. After the second emergency jump, the idea of having a club composed of members who had been forced to use a parachute in an emergency was developed by the group in the parachute section at McCook Field.

Because canopies and lines were then made of silk, someone suggested that parachute jumping might be symbolized by a caterpillar lowering itself to earth on a silken thread. And so, Caterpillar Club! Thousands of airmen, including Jimmy Doolittle and Charles Lindbergh, belong.

All who complete the Parachute Riggers School at Lakehurst, N. J., have made at least one jump with a chute they packed themselves.

Whiting boasts nine rated riggers. They have seven airmen working under their supervision. This small crew accounts for the inspection, repair, cleaning and repacking of the approximate 800 parachutes in use there.



PEOPLE-TO-PEOPLE understanding is advanced by the wife of R. N. Kerper, AEI, in their home on Okinawa. The teen-agers are making progress in conversational English which they have asked the Kerpers to teach them.

Food 'Round the Clock' Shangri-La Initiates New Schedule

The USS *Shangri-La* (CVA-38), like the USS *Bon Homme Richard*, has initiated a "round-the-clock" feeding program for enlisted men. Meals are served 21 hours each day at sea, instead of the usual six (two hours for each meal).

Cdr. William W. Hobgood, supply officer, says, "We are saving 315 man days each day by abolishing meal lines. Previously, each man averaged one hour a day standing in line. When multiplied by 2526 (the approximate number of enlisted men) this constitutes quite a saving. The new system also improves the efficiency of the ship".

Division officers may now send their men to eat whenever it least interferes with their work schedule, instead of being forced to send them at a fixed time which may be inconvenient.

The quality of the food has also improved. No longer is it necessary to



VADM. C. E. EKSTROM, Commander Sixth Fleet, (R) is greeted by RAdm. Emmet O'Beirne, ComCarDiv 20, upon his arrival aboard USS *Lake Champlain*. Adm. O'Beirne was host to Sixth Fleet conference.



FIRST NAVAL pilot to make actual low-level ejection, LCdr. R. H. Fielding meets the man who packed life-saving chute, J. R. Etzler, PRAN. Ejection was made from F9F-8T flying at 140 knots at an altitude of only 150 feet.

prepare a large volume of food at one time. Smaller quantities are prepared at various times, enabling the cooks to more carefully control the quality of each serving.

The ship, attached to Task Force 77, is commanded by Capt. J. P. Preston.



TOGETHER! To celebrate same birthday and age, Col. James Moore, left, and LCol. James A. Feely, MAG-11 C.O. and X.O., took hops in all aircraft types in the group. Included were R4D-8, FJ-4, F4D, jet trainer.

Seven Safe Years Honored FASRon 106 Earns a Commendation

FASRon-106 has been awarded a seven-year aviation safety certificate for fiscal years 1953-1959. During that period the squadron conducted operations without a major aircraft accident.

RAdm. William I. Martin, Commander Fleet Air Argentina, presented the award and relayed VAdm. W. L. Rees' congratulations to the squadron.

RAdm. Martin said: "It is an honor and a privilege to present an award such as this. To merit such an award, both officers and men have to be diligent and have pride in their squadron. It requires an all hands effort."



BRONZE REPLICA of Liberty Bell given USS *Independence* 4 July by copper industry: (L to R) Thomas Maxwell, Norfolk city manager; Paul Jessup, who presented gift; Capt. R. Y. McElroy, C.O.; RAdm. R. L. Johnson.

Sailors Earn Their Keep Alertness Saves \$100,000 Damage

Two Chase Field sailors, through their alertness as wheel watchers, have saved the government enough money to pay their salaries for 42 and 48 years respectively, leaving the government \$497.72 in change.

John T. Ardanowski, AA, was standing the wheel watch in the 95-degree Texas sunshine when he saw an F9F-8 *Cougar* jet preparing to land with its wheels up. He fired a red flare quickly to warn the pilot who climbed, worked the gear down and made a safe landing.

Henry Eggie, AN, was on wheel watch when a formation of four jets entered the landing pattern. Number three plane had its gear up. The red flare he fired sent the jet around and brought a sheepish radio call from the embarrassed pilot, inquiring as to Eggie's favorite beverage.

Together, the overhaul damage saved by the wheel watches, when divided by their current salaries, revealed that they had saved many a year's wages.



WHICH HAS THE TONI? Identical twin brothers, Ens. David A. Martin and NavCad Hall A. Martin, are both connected with BTG-3 at NAAS Whiting Field. David is an instructor and Hall (R) a student with Squadron 6.



INVENTORS DEMONSTRATE THEIR PRODUCT

More Tax Dollars are Saved Chase Men Build a Probe Cleaner

Navy men turned inventors are again saving tax dollars.

Latest to join the inventors' list at NAAS CHASE FIELD are H. R. Mills, ABC, and G. E. Thomas, AE1, of Advanced Training Unit 303. They came up with a fuel quantity probe cleaner for the base's F9F-8 *Cougar* jets.

The cleaner is a 2 1/4" x 5' steel pipe with aluminum spray tube inside. The fuel probe is inserted into the tube and cleaned under high pressure air with soap, then rinsed. Salient feature of the apparatus is that the fuel probe does not have to be dismantled, thus saving many hours of work.

Appropriate recognition of the invention occurred soon after it was completed. RAdm. Joseph C. Clifton, Chief of Naval Air Advanced Training, sent the staff F9F-8T to Beeville to be cleaned by the men's invention.



WHAT appears to be a "Take Me to Your Leader" rehearsal is actually four Marines at the Atomic-Biological Chemical Section at MCAS Kaneohe demonstrating the latest in radiation detection equipment and techniques.

'Stash Kan' is Employed Keeps Nuts, Bolts and Tools Safe

A missile worker at Cape Canaveral has come up with a simple idea that could save his company, the government, and the taxpayers millions of dollars. No bigger than a bread box, which it is, the device has been nicknamed a "Missile Killer Stash Kan."

It is nothing more than a container which can be clipped to the side of a missile to hold a workman's tools, metal shavings, screws, bolts or any other small items which might be dropped from the worker's pocket inside the missile engine or inadvertently left where it could vibrate into a critical area during flight.

Relative value of such a device to aircraft maintenance men is obvious.



BALKENHOL EXHIBITS HIS NEW INVENTION

Robert F. Balkenhol, a senior quality engineer for the Martin Company's Cocoa Division at Cape Canaveral, got the idea when he saw a workman crawling into a compartment of a missile with a handful of screwdrivers.

Balkenhol and his boss, Russ Brooks, made a trip to a nearby plastics firm in search of a ready-made container of some sort that would serve the purpose. He was given a plastic breadbox.

Back at the Titan complex on the Cape, Balkenhol devised a metal bracket which, when attached to the bread box, enables it to be hooked onto the side of the missile.

Now, when a technician is working inside a missile he can deposit his tools, any nuts, bolts or other small items in the "Stash Kan," thereby eliminating the possibility of these items doing damage inside the missile.



EXPERIMENTAL TWIN JET SEAPLANE SAVED

Tracker is Floated to O&R Time and Money Saved in Transit

A twin-engine S2F *Tracker* from ATU-611, which had nosed over at NAS CORPUS CHRISTI, Texas, during a landing and was put out of flying condition, was put aboard the floating derrick *Maryann*, which hauled it to Pensacola for overhaul and repair.

Shipping the aircraft aboard the *Maryann*, instead of dismantling it and sending it by rail freight saved time and money.

The freight would have cost \$1336.

Night Solos are Made in Jet Saufley Students Score a 'First'

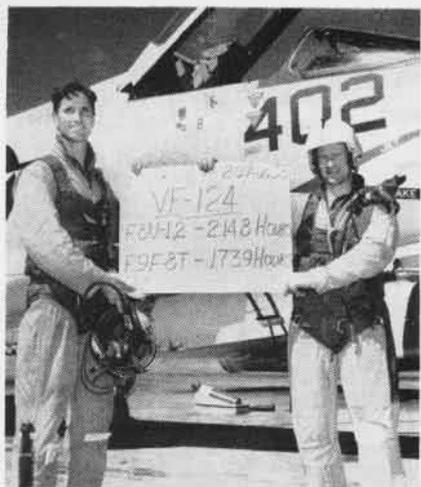
NAAS SAUFLEY FIELD claimed a Naval Aviation "first" when two primary students soloed in jets at night, August 27.

Second Lt. Charles A. Brunt and NavCad Fred A. Gayer, each with only 55 hours total flying time, made the accomplishment.

Before their history-making flight they had completed pre-solo, precision formation and basic instruments in the TT-1. They will finish basic in T2V's.



OSCAR DING, ADC, third from left, maintenance chief of VF-64, shows his skipper, Cdr. W. R. Eason, second from left, caliber of work that enabled F3H squadron to record 832.8 hours in April at NAAS Fallon, Nevada.



PRESENT, FUTURE SKIPPERS HOLD BANNER

Moffett Squadron Hustles VF-124 Logs 388.7 Hours in a Day

Fighter Squadron 124 claimed three flight time records in a single day when squadron planes flew nearly 400 hours to demonstrate mobilization capability.

The squadron's F8U *Crusaders* accounted for 214.8 hours. Six *Crusaders* on a gunnery deployment at NAAS FALLON, Nevada, flew 55.2 hours, while 12 F8U's at Moffett flew 159.6 hours.

Split-second timing of the line crews and trouble shooters enabled aircraft to be turned around in as little as nine minutes.

VF-124's Instrument Training department flew 173.9 hours in the F9F-8T. Many of the instrument flights were cross-country in IFR conditions. Of 62 instrument approaches, 24 were "actual," with some reporting "solid soup" from 34,000 down to 400 feet.

Every flight made by Cdr. F. X. Timmes' pilots was a syllabus training flight. They included gunnery firing, night familiarization, day and night instruments, ground controlled intercepts, broadcast controlled intercepts, high altitude dummy gunnery, tactics, and combat radius flights.

Awards for 12 AirPac Ships Navy 'E's' for Fiscal 1959 Given

Twelve Navy ships have been awarded the Navy "E" for excellence for the fiscal year 1959 by the Commander Naval Air Force Pacific.

The USS *Shangri La*, USS *Hornet*, USS *Kearsarge* and the USS *Salisbury Sound* won two each of the 16 awards.

Battle Efficiency "E" winners were the aircraft carriers USS *Hancock* and USS *Hornet* and seaplane tender *Onslow*.

The *Shangri La*, *Kearsarge* and *Pine Island* won the Operations Excellence Awards.

Communication Excellence winners were the USS *Bennington*, *Yorktown*, *Kearsarge* and *Salisbury Sound*.

The Engineering "E" was won by USS *Midway*, *Hornet* and *Salisbury Sound*.

Awards for outstanding Supply Departments were made to USS *Shangri La*, USS *Orca* and USS *Norton Sound*.



ADM. PAUL D. STROOP, Chief of new Bureau of Naval Weapons, visits Naval Missile Facility at Point Arguello. Entering Range Operations Building for inspection, he is accompanied by Capt. William J. Scarpino, facility C.O.

Ranger Ends Yard Period First Overhaul After Year at Sea

USS *Ranger* has completed her first yard period after a year of operations. In six weeks, 524 workers at the San Francisco Naval Shipyard spent 80,000 man-hours on repairs and alterations.

One of the most difficult projects was the adapting of *Ranger's* numerous magazine spaces to hold the latest 2.75 rocket launchers.

Certainly the most spectacular was replacing the ship's No. 1 propeller, the largest of any in the world. It measures more than 22 feet, or the height of a two-story house. The giant propeller had three gashes in it, one of them 18 inches long.

Also included in the job was the shifting of signal flag bags from the 08 to the 09 level to improve the overall efficiency of operations from the signal bridge.

Repairs under the waterline con-

sisted of sand blasting and repainting any area of the hull that needed a touching up after the 52,600 miles of cruising in WestPac.

All catapults had their water breaks checked and No. 1 was peened to bring the expanded cylinder back to its proper size. Both the flight deck and hangar bays were chipped and resurfaced with a coat of "non-skid."

20,000 Safe Hours Flown T-28 Unit Claims CNABaTra High

Squadron Six of Basic Training Group Two at NAAS WHITING FIELD has passed the 20,000th accident-free hour of flight instruction. Ens. L. R. Crawford, a student flying an acrobatic hop, logged the final hour toward the high mark. It is believed to be a new achievement for any T-28 squadron in the Naval Air Basic Training Command.

LCdr. W. R. Turner, the squadron leader, attributes the fine safety record to the application of good common safety sense on the part of instructors, students and line crewmen. The safety officer is Ltjg. R. Daleke. W. E. Lewis,



CRAWFORD HONORED BY LCDR. TURNER

AD1, and S. R. Cason, AT2, are in charge of the 15-man line crew.

HS-9 Bats One Thousand All Inspections Rated Outstanding

Since its commissioning in June 1956, Helicopter Antisubmarine Squadron Nine has stood two Operational Readiness Inspections and three Administrative and Material Inspections. With an average mark of over 95.00, HS-9 has earned the coveted grade of "Outstanding" on each, thus making a perfect record.

The most recent was received this summer from ComCarDiv-18 for an ORI aboard the USS *Randolph*. Cdr. J. S. Moore, Jr. heads the squadron.

CVG-1 Returns to Cecil Flew 5987 Sorties on Med Cruise

Carrier Air Group One has returned to Cecil Field for a brief training cycle after a Mediterranean cruise.

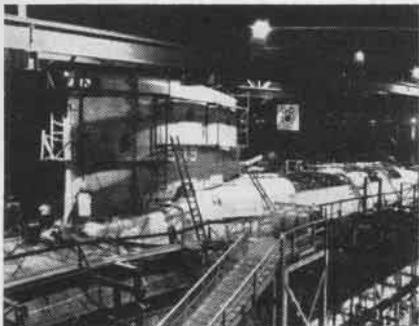
The group left Mayport in February on the *Franklin D. Roosevelt* with this unit composition: VF-14 (F3H-2 *Demons*), VMF(AW)-114 (F4D-1 *Skyrays*), VA-172 (A4D *Skyhawks*), VA-15 (AD-6 *Skyraiders*), VAH-11 (A3D-2 *Skywarriors*), and VFP-62 Detachment 37-59 (F8U-1P *Crusaders*).

Intensive operations and participation in such exercises as *Big Deal*, *Tuner Up*, *Top Weight*, *Green Swing*, *Chicken House* and *Aswex* gave CVG-1 the opportunity to cooperate with and demonstrate power for allied nations.

During the deployment, the group flew 5987 sorties for 12,917 hours.

Two More SSBN's Launched Completion Dates Set for 1960

The second *Polaris*-equipped submarine, USS *Patrick Henry*, SSBN-599, was launched September 22nd at



599 WAS LAUNCHED IN RECORD 15 MONTHS

the Electric Boat Division of General Dynamics at Groton, Conn. The lead ship, USS *George Washington*, was launched 9 June 1959.

Number 3 in the class, the *Theodore Roosevelt*, SSBN-600, left the ways of Mare Island Naval Shipyard on October 3rd. It was christened by TR's daughter, Mrs. Alice Longworth.

The 5400-ton, 380-foot long, nuclear-powered ships will serve as mobile bases for firing *Polaris* ballistic missiles. In addition, they will be able to fire torpedoes. The most modern navigational aids, including the Ship Inertial Navigation System (SINS), will be installed, enabling the submarines to determine their exact position while remaining submerged for long periods.



LTJG. PAUL M. REITER of VF-53 climbs from cockpit of F3H *Demon* after making 40,000th landing aboard USS *Oriskany*. Ship was operating off the California coast. *Oriskany* is commanded by Capt. James Mahan Wright.

Marines Landed on Kauai British LCDr. Heads U.S. Helo Unit

Three thousand Marines of the First Brigade made a successful amphibious assault on the island of Kauai, Hawaii, supported for the first time by helicopters from MAG-36.

The action was part of Operation *Clear Ridge*, a joint Navy-Marine Corps training exercise.

Operating from the LPH *Princeton*, HUS aircraft from HMR-361 were augmented by HR2S-1's from HMR-462. They carried supplies and men from ships to the beaches of the island.

The maneuver also marked the first time Marine helicopters from the Santa Ana facility operated under the command of an allied officer. LCDr. Roi E. Wilson, British naval officer and exchange pilot with HMR-462, served as officer-in-charge of the detachment.

Mach 20 Tunnel Announced Used for Advanced Speed Research

Grumman Aircraft Engineering Corporation is conducting "shake-down" trials on a new hypersonic shock tunnel which will produce air speeds greater than 20 times the speed of sound.

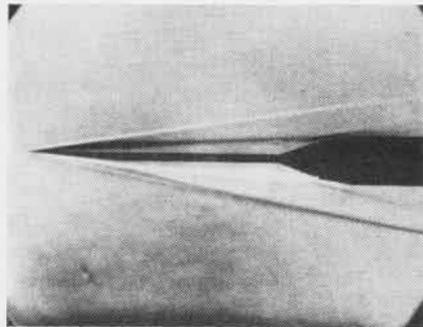
Technically called a "tailored interface shock tunnel," it is among the first of this type to be developed by an aircraft company.

The tunnel is expected to be invaluable in the study of how vehicles, such as re-entering satellites, would react in the earth's atmosphere as they travel at various hypersonic speeds.

The 48-foot long tunnel is currently producing velocity and temperature conditions comparable to those ex-

perienced by a vehicle traveling at Mach 10. The tunnel is to be enlarged to a length of 150 feet in about five months. The additional length will enable members of the Fluid Mechanics Section of the Research Department to produce air speeds above Mach 20.

Air flows created by Grumman's hypersonic tunnel last for less than four milliseconds (four one-thousandths of one second). "Even though



SHOCK WAVES ARE CLEARLY INDICATED

the duration is short, it is more than enough time to produce the steady state of flowing air necessary to carry out aerodynamic studies," said Dick Scheuing, leader of the Fluid Mechanics Research Section. "Unlike most standard hypersonic wind tunnels, our tunnel also simulates temperatures produced at hypersonic speeds."

Grumman began to investigate the construction of a hypersonic tunnel in the spring of 1957 with a survey of such facilities. Design of the tunnel was begun in December 1957. Funds for the project were approved in August 1958, and by April 1959, the first tests had been completed.

26 New Neptunes Ordered P2V Production Enters 17th Year

The Navy has awarded Lockheed Aircraft Corporation a \$19,110,000 contract for 26 new P2V-7 *Neptune* patrol planes. The contract will extend production of the versatile long-range plane into 1961.

Seven successive models of the basic *Neptune* design have been standard ASW aircraft since the first model was built in 1944. Models of the P2V also are flying in operational squadrons in the navies of Canada, France, the Netherlands, Australia, Japan, Brazil and Argentina.

The P2V-7 is powered by two Wright turbo-compound engines with additional power from two J-34 engines.

LETTERS

SIRS:

I normally don't nit-pick small errors . . . However, I'm afraid that the summary of air changes in September's issue, unless corrected, may cause more confusion than already exists regarding the location of VCP-61 and VCP-63.

Former Light Photographic Squadron 61 (VFP-61), located at NAS MIRAMAR, was redesignated as Composite Photographic Squadron 63 (VCP-63).

Former Heavy Photographic Squadron 61 (VAP-61), located at NAS AGANA, Guam, was redesignated as Composite Photographic Squadron 61 (VCP-61).

CDR. J. A. DUNCAN, USN
Executive Officer, VCP-63

SIRS:

Your article, "There, But for the Grace . . ." September issue, was received with interest. VR-7's Training Devices Division is to be congratulated on its effort (191 hours per month for period Oct. 58 to Sept. 59).

This command utilizes the 2F58, WV-2 Operation Flight Trainer, in training pilots of AEW Squadrons, in essence the same as the MB-13 described. During the period September 1958 to September 1959, this trainer has averaged 238 hours per month. During this period, 2859 trainer hours were flown with only 48.0 hours of down time.

This record was established through the efforts of Lt. R. V. Robey, Training Devices Officer, Mr. W. Modery, Curtiss-Wright Corp., Field Representative and FAETU-Lant crew of six Trademen, four radio operators and G. W. Roberts, TDC, CPO-in-charge.

D. S. BUTLER
C.O., AEW Training Unit
NAS PATUXENT RIVER

SIRS:

The following facts have been substantiated at the Beechcraft plant in Wichita:

1. No. 4711 came off the line on 19 May 1941.
2. Accepted by a Navy pilot (we are still trying to find out his name) on 26 May 1941. No. 4711 was the first Navy Beech.
3. Returned to Beech in fall of 1951 for overhaul.
4. Accepted by Navy on 22 January 1952.
5. In May 1941, it was a JRB-2.
6. After overhaul in January 1952, it was an SNB-5.
7. Navy number 4711 remained the same.

When I find the name of the first Navy pilot to fly it, I'll bet you a B-52, it was F. E. Bardwell, my old shipmate on the USS *Antietam*.

ARTHUR M. ERSHLER
CAPTAIN, USN (RET.)
WICHITA, KANS.

SIRS:

Op-501 maintains aircraft history cards from the present back to N3N Bu. No. 1759.

Our records show that JRB-1 Bu. No. 2543 was accepted into the Navy inventory in October 1940. Bu. Nos. 2544, 2545, 2546, and 2547 were accepted in December 1940. The information contained on the early cards was rather sketchy, therefore, it is impossible to determine which activity accepted the aircraft.

RAdm. Brandley's claim to accepting the original JRB-1 Bu. No. 2543 for the Navy appears valid since we have no record of a JRB with a lower Bu. No. or earlier acceptance date.

G. K. EBBE, CDR., USN



JRB-1, #2543, 8 NOVEMBER 1940 FLIGHT



JRB-2, #4711, IN FLIGHT, 26 JUNE 1941

SIRS:

May I nurture the JRB/SNB rhubarb in your 40th Anniversary Issue, grown from seed planted in July by NATTC-JAX?

Bu. No. 2543, a humpbacked JRB-1, was the Navy's first twin-engined Beechcraft (2543 to 2547 ordered 12 June 1940). Bu. No. 4711 (not 04711), a standard Beech 18, was the first JRB-2—facilitated to SNB-5 status in 1952. The Navy acquired 1423 Beech 18's with Bureau numbers ranging to 134717. A Brewster-built F3A-1 *Corsair* carried Bu. No. 04711.

The enclosed official views show the pioneer "18's" on hops out of NAS ANACOSTIA, #2543 on 8 November 1940; #4711 on 26 June 1941—the day before Admiral Brandley took her up.

With congratulations on NANews 40th Anniversary and best wishes,

JAMES C. FAHEY

† On this note we bid farewell to 4711, 2543 and the Great Beechcraft Mystery. Our sincere thanks to the many kind readers of NANews who took time to clarify and correct, and to Mr. Fahey, whose *Ships and Aircraft* volumes are well thumbed and highly respected in these and other parts.

SIRS:

Inside the front cover of your August 1959 issue we were happy to see an artist's view of carrier operations aboard the *Intrepid*. Since the *Intrepid* is VA-66's home while we are at sea, we felt a little slighted in that the picture in the upper right hand corner of the spread depicted accurately a VA-66 aircraft (easily identified by the distinctive paint scheme and Bu. No.) but labeled inaccurately as a VA-86 bird.

We appreciate the extent of artistic license but for the edification of your readers and the morale of the squadron we thought a correction was in order.

LT. P. R. SCHOEFFEL
LTJG. K. H. MISAR
LTJG. G. E. MATT, JR.

VA-66

British Aircraft Identification

The silhouettes of British aircraft on pages 14-17 are identified as follows: (A) Blackburn N.A. 39, (B) DeHavilland *Sea Vixen* F.A.W.1, (C) Supermarine *Scimitar* F.1, (D) Hawker *Hunter* Mk. 66A, (E) Fairey *Rotodyne*, (F) Fairey *Gannet* A.E.W.3, (G) English Electric *Lightning* F.A.W.1, (H) English Electric *Lightning* Trainer;

(I) Handley Page *Victor* B.2, (J) English Electric *Canberra* P.R.9, (K) Gloster *Javelin* F.A.W.9, (L) Avro *Vulcan* B.2, (M) Hawker *Hunter* F.R.10, (N) Folland *Gnat* Mk.1, (O) Folland *Gnat* Trainer, (P) Short S.C.1, (Q) Hunting Jet *Provoost* T.3, (R) Handley Page H.P.R.7 *Herald*;

(S) Scottish Aviation *Twin Pioneer*, (T) Auster *Aiglet*, (U) Westland *Westminster*, (V) Bristol 192 Series II, (W) Westland *Wessex*, (X) Saunders-Roe P.531 Mk.2, (Y) De Havilland *Comet* 4B, (Z) Armstrong Whitworth A.W. 650 *Argosy*, (a) Vickers *Vanguard* 951, and (b) Bristol *Britannia* 253.

Barrier Pilot Logs 100 Flies 1400 Hours, 280,000 Miles

Ltjg. Pete J. Theodoresos of Airborne Early Warning Squadron 12 became the first member of the Pacific Barrier force to complete 100 missions during the barrier's first year of operation when he landed his *Super Constellation* at Midway.

CREDIT

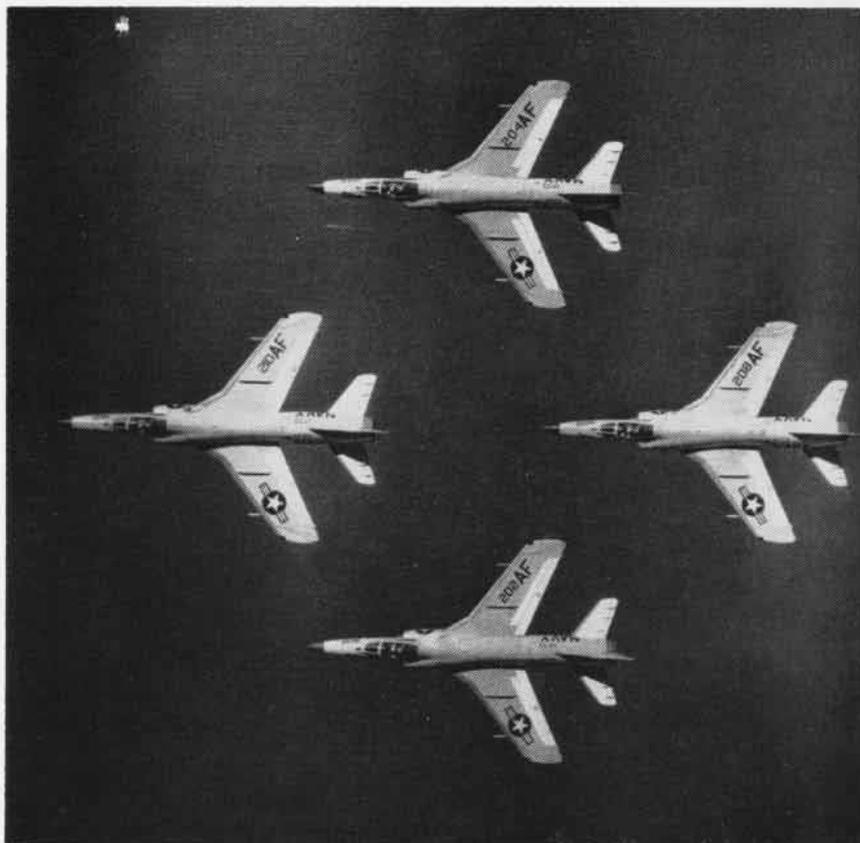
■ The "Top Gun" spread on pages 21-22 is a condensation of brochure printed by the Ryan Aeronautical Co. of San Diego, providers of the "villian" of the Weapons Meet, the KDA target drone.



VF-33



SQUADRON INSIGNIA



When USS Intrepid (CVA-11) left Norfolk last February for deployment to the Mediterranean, she carried an innovation in fighting power to the Sixth Fleet. The F11F Tiger, flown by Fighter Squadron 33, made its first operational appearance in that area. In the intervening months, the aircraft with the men that fly and maintain them have proved a valuable asset to the team. Cdr. C. R. Sawyer relieved Cdr. A. R. Seiler as the C.O. of VF-33 in July. The creature on the patch is a tarsier, a small, ferocious mammal with a fox-like muzzle, which symbolizes deadly strength.





NAVAL AVIATION

NEWS

Reconnaissance cameras grinding, this Navy Crusader pilot looks down on the eye of hurricane 'Gracie.' Whether you're flying early warning missions, being catapulted into midnight skies from a carrier's deck to intercept a bogie, or delivering the payload that counts, as a Naval Aviator you can be sure your airplane was built to get the job done. See your nearest Navy recruiter today for details on Naval Aviation, or write for information to NAVIATOR, Glenview, Illinois. Do it TODAY!

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