

NAVAL AVIATION

NEWS



44th Year of Publication

MARCH 1963

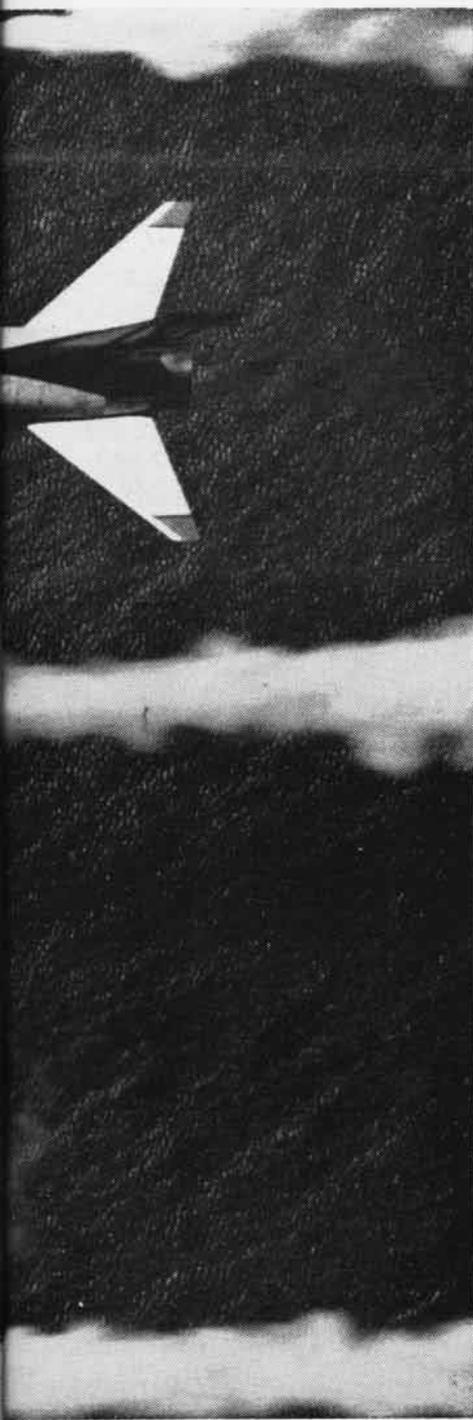
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COMBAT READINESS SPELLS POWER

'Without skilled, dedicated and experienced men in the Navy and Marine Corps, that team could not exist. It was the high state of training and instant combat readiness of these men and those in all our Armed Forces, which gave the President a free hand . . . in the Cuban crisis. The existence and capability of all these fighting forces enabled him to select the time, the place and the method of coping with aggression. . . . He could act from strength.'—Secretary of the Navy Fred Korth.



NAVAL AVIATION NEWS

FORTY-FOURTH YEAR OF PUBLICATION MARCH 1963

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FRONT COVER

Helicopters are a valuable addition to the Navy's support of scientific studies in the Antarctic. Cover helo is operated by VX-6. Above two Crusaders of VF-103 show their power and speed while operating from Forrestal in the Mediterranean. Shown on the back cover is a picture of another Forrestal-class carrier, the USS Constellation, CVA-64.

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NAVAL AVIATION NEWS

President Commends VS-24 Unit Spots Sunken Chlorine Barge

President Kennedy has expressed his personal gratitude to four members of VS-24 who assisted in the recovery of a barge loaded with poisonous chlorine gas. VP-24, using an S-2 (S2F) aircraft equipped with submarine detection gear, located the barge in the Mississippi.

RAdm. Forsyth Massey, Commander Fleet Air Norfolk, gave the crew a "well done" in his office in January and read the President's letter to the group in a special ceremony.

In addition to commending the crew, President Kennedy wrote: "[I] am especially pleased with the prompt and efficient attention and assistance by the United States Navy . . . who participated in the cooperative effort."

In the spring of 1961, the barge struck a jetty and sank in the Mississippi ten miles south of Natchez. A year and a half later, officials became

worried about the effects the chlorine might have if it escaped. By this time, the location of the barge was only roughly known—ten miles below Natchez, where the river is a mile wide, the current strong and shifting, and underwater visibility less than an inch. The Army Corps of Engineers, assigned the task of locating and raising the barge, requested assistance from the Navy.

VS-24, commanded by Cdr. John L. Kent, dispatched an S-2, piloted by Lt. Roy M. Johnsen, to the scene. His crew consisted of Ltjg. Robert A. Coderre, J. A. McQuillen, AT1, and C. E. Butler, AT2, who operated the Magnetic Anomaly Detection (MAD) gear.

Using a field at nearby Vicksburg as a base, they began making passes up and down the river. With the S-2's MAD gear, the barge was located on the first day of operations and later safely raised by the U.S. Army engineers.

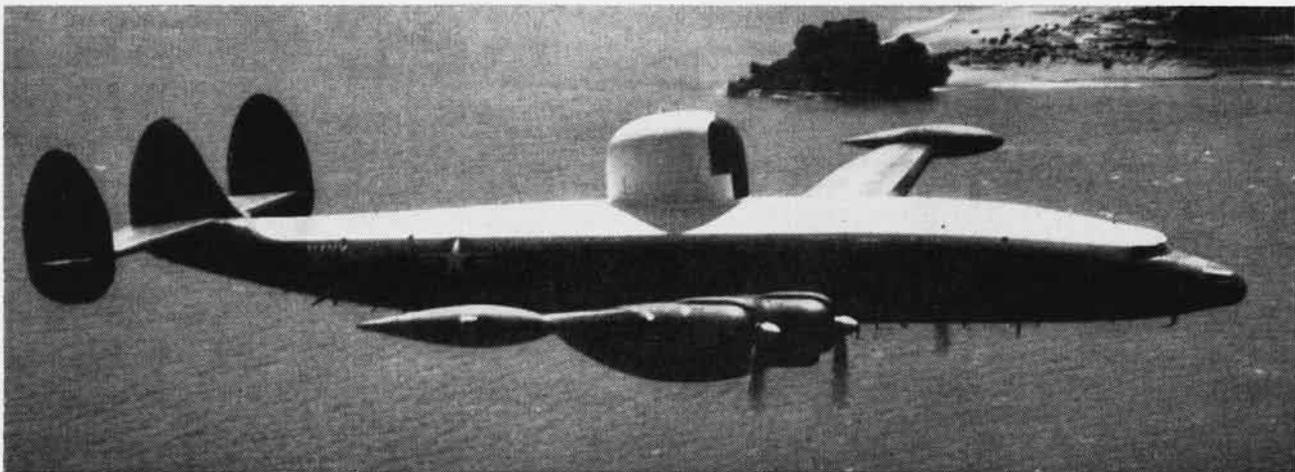
VW-1 Commended for 1962 Typhoon Trackers Flew 332 Recon

The Chief of Naval Operations and Commander in Chief, Pacific Fleet, have both sent a "well done" to the officers and men of Airborne Early Warning Squadron One for their activities during the 1962 typhoon season. The *Typhoon Trackers* flew 332 weather reconnaissance flights in that season, totalling 2180 hours.

The weather information gathered by the squadron's radar-equipped EC-121K *Warning Stars* (WV-2) was passed to the Joint Typhoon Warning Center, Guam, and all WestPac.

The Warning Center credited information provided by EC-121K aircraft as contributing greatly to the low casualties suffered on Guam during *Karen*.

VW-1 aircraft range over an area from the Malay Peninsula to the International Date Line and from the equator, north, while performing missions.



THE TYPHOON TRACKERS of Airborne Early Warning Squadron One, though hard hit at their home base by Typhoon *Karen*, continued to track that destructive lady as she smashed her way across the Pacific. Operating from NAS Atsugi, NAF Naha and NS Sangley Point, squadron aircraft logged 145 hours in 14 flights over a nine-day period. Some

of these flights passed over Guam as the eye of the storm closed with that island, making operations from NAS Agana impossible. With peak gusts to 180 knots, *Karen* proved the most destructive typhoon in Guam's history. However, VW-1 was able to launch a weather reconnaissance flight from NAS Agana within four days of *Karen*'s passing.

Missile System is Named F-111B's Air-to-Air is 'Phoenix'

The Navy has assigned the name *Phoenix* to the missile system being developed by Hughes Aircraft Company as the primary armament for the Navy F-111B (TFX) aircraft.

The long range, air-to-air *Phoenix* is named for a large bird mentioned in Greek and Egyptian mythology. According to myth, the bird always died by setting its nest on fire, but a new young bird would rise from the ashes.

Super Connie is Modified Will be Flying Oceanographic Lab

The Naval Oceanographic Office is putting into operation a flying oceanographic research laboratory in a modified Lockheed EC-121K *Super Constellation* (WV-2) aircraft. The aircraft will be under the direction of the Oceanographic Prediction Division.

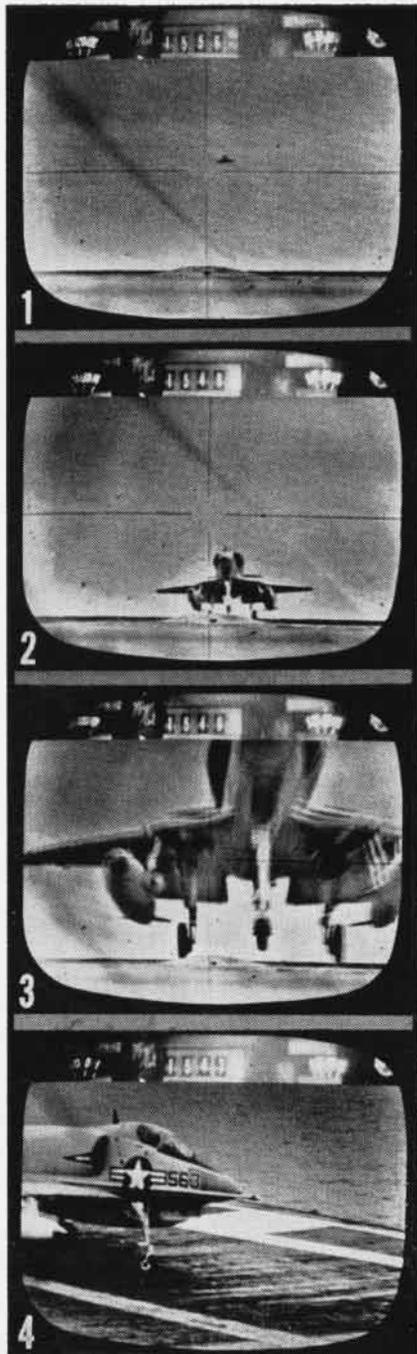
Several research platforms are being instrumented by the Prediction Division for collecting information rapidly over broad ocean areas to be used by the Anti-submarine Warfare Environmental Prediction System.

The *Super Connie* will serve as a platform for evaluation of experimental airborne oceanographic instruments. It will also be used in fleet exercises to provide data on short notice over areas of interest which are not normally covered by surface ships.

The aircraft will be equipped with scientific instruments capable of measuring several physical parameters simultaneously, including radiation thermometers, radiometers, sonobuoys, bathythermographs and hygrometers.

The *Super Constellation* arrived at the NAF Andrews AFB, Md., on January 11, to begin a program of instrument evaluation. Prototype oceanographic instruments will be tested in the vicinity of *Argus Island*, an oceanographic research tower located about 22 miles southwest of Bermuda. The tower is equipped with an oceanographic laboratory which will provide comparative measurements of gravity waves, solar radiation, surface temperatures and temperatures at depth. Similar studies will be made in deep ocean areas.

Upon successful completion of the testing program, the aircraft will participate in actual fleet exercises from its home base, NAS Patuxent River, Md.



PLAT Put in Wide Use Being Installed on Ten Carriers

PHOTOS IN SEQUENCE show jet carrier landing as recorded by Pilot Landing Aid Television (PLAT) system being installed aboard ten Navy carriers. TV camera in center line of deck spots plane in approach and follows it to touchdown. Second camera on carrier superstructure takes over. Cross hairs on monitor assist LSO in talking pilot down to safe landing. Minute-by-minute records are portrayed on dials above the picture.

Twenty Ships for the Med Sixth Fleet Exchange is Made

Twenty Atlantic Fleet ships, including the carrier USS *Enterprise* and the frigate USS *Bainbridge*, both nuclear-powered, left East Coast February 6 to relieve units of the Sixth Fleet in the Mediterranean. This is the first time that two nuclear-powered surface ships are operating together as part of the Sixth Fleet.

In transit, the force was under the command of RAdm. John T. Hayward, ComCarDiv Two, who flies his flag aboard *Enterprise*.

Enterprise will return to Norfolk in late August and *Bainbridge* will return to her home port, Charleston, S. C., the latter part of June.

The Norfolk-based ships, in addition to *Enterprise*, are: the guided missile cruiser *Canberra*, the guided missile frigates *Dablgren* and *King*; the guided missile destroyer *Lawrence*; the destroyers *Dupont*, *Henley*, *Keith*, *Haynsworth* and *Weeks*; and the ammunition ship *Wrangell*.

In addition to these ships and the *Bainbridge*, eight other ships make up the force: the ammunition ship *Nitro*, home-ported at Davisville, R. I.; the fleet oiler *Salamoni*, and the destroyers *John Paul Jones*, *Norris* and *Bristol*, Newport, R. I.; the fleet oiler *Kaskaskia* and destroyers *Fiske* and *Hawkins*, home-ported in Mayport, Florida. The movement involved approximately 11,500 men.

Fastest Ride in 40 Years NORAD Air Marshal in Phantom II

RCAF Air Marshal C. Roy Slemon, Deputy Commander-in-Chief of the North American Air Defense Command, Colorado Springs, Colo., got a demonstration ride in a visiting Navy F-4B *Phantom II* (F4H)—and returned impressed by its performance.

Informed by the tower that "we don't think you can catch that B-52 up there," Cdr. G. L. Tarleton of CVG-12 lifted off on afterburner, climbed supersonically at a steep angle to 41,000 feet and intercepted the B-52 about 72 miles from the base. From lift-off to intercept, the *Phantom II* closed the gap in roughly 3½ minutes.

Upon landing, Air Marshal Slemon said that he was thoroughly impressed. It was the speediest flight in his entire 40-year career in flying.



GRAMPAW PETTIBONE

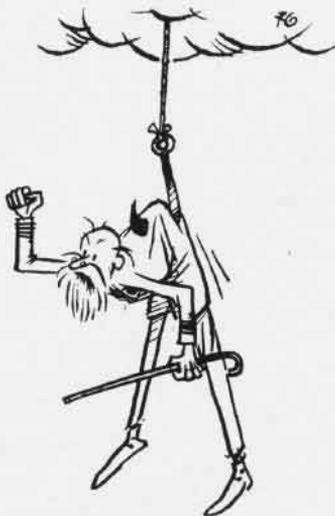
Nightmare

It was a pitch black night at a busy West Coast air station. Ceiling was 1000 feet, visibility six miles, and the overcast solid. The mirror pattern was full, using one of the dual runways, and GCA was bringing the high flyers down on the other runway at regular intervals. All in all, it was a smooth, well-coordinated traffic situation.

An F-4B *Phantom* (F4H) had completed his MLP's and requested clearance to the other runway for final landing. He was cleared No. 2 behind an F-8E *Crusader* on GCA final which had just broken out of the overcast about two miles back of the runway. At the 180, he spotted the F-8E's wing lights and flew a normal pattern to touchdown, taking what he felt was a good interval.

Immediately after touchdown, he lifted the drogue chute handle and raised the flaps, rolling out, holding to the right of centerline. The drogue chute did not deploy, at least the pilot didn't think so, and he decided to roll to 10,000 on the 12,000-foot runway. Passing the 8000-foot marker, he still had 70-80 knots and now figured he'd better go all the way to the end.

Meanwhile the *Crusader* ahead of him, still on GCA frequency and also on the right side of the runway, was slowing down to take the 10,000-foot turnoff. His rotating beacon, turned off during the GCA pass to avoid



flicker vertigo, was still off. From behind, only his steady tail light showed.

The *Phantom* was closing rapidly, and the tower made a fast call to the *Crusader* on both tower and ground control frequencies in an attempt to expedite his clearance of the runway. No luck—he was still on GCA frequency.

The *Phantom* plowed into the *Crusader* at about 50 knots as the F-8E was just starting his turn off, spinning him around three times and sending him into the taxiway backwards. The F-4B stopped about 400 feet after impact, still on the runway but badly damaged. Seems incredible with 12,000 feet of runway 300 feet wide. Fortu-

nately, only the feelings of the pilots were injured.



Grampaw Pettibone says:

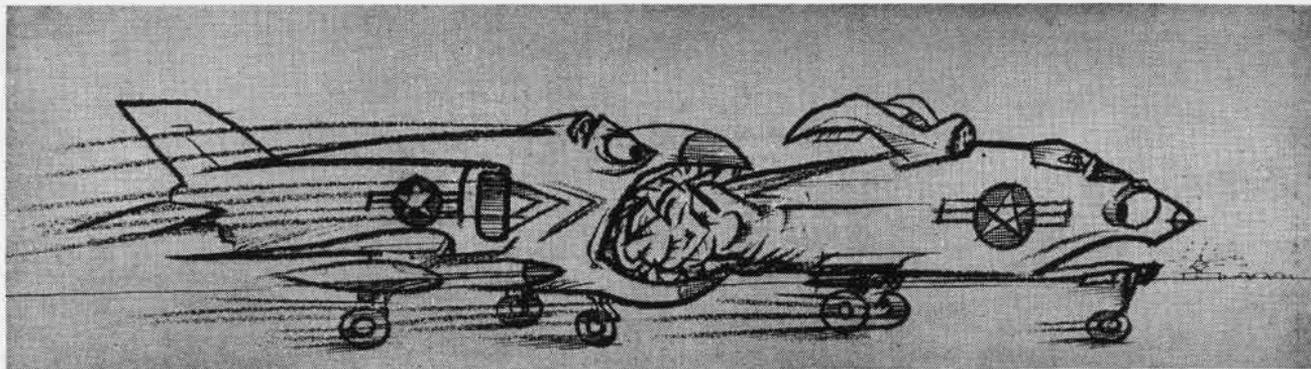
Great shakes! Maybe we make such a fuss over misuse of *GUARD* channel that our control towers hesitate to use it in a real emergency. I dunno—but the only sure way to alert *BOTH* pilots to an impending disaster was to use *GUARD*. I'd personally engage in hand-to-hand combat, whiskers and all, with the man who'd argue agin *THAT* one! This is a *SHARP* tower; they surprised me on this one.

In my day, we took all burner jobs to the bitter end at night and staggered port and starboard. Things have changed?

Tricky Stuff

As an AF-1E (FJ-4B) pilot took off on a VFR night cross-country flight, the weather at his destination, which was also home base, was clear with three miles visibility in smoke and haze. En route, he received current weather broadcasts and found no change at all. Not a cloud in the sky, just some smoke and haze to cut down the visibility a bit.

He started a gentle letdown about 20 miles out and soon had the lighted field in sight. Orbiting overhead at 2500 feet, he could plainly see the entire airfield and the neighboring areas but was informed by the tower that the field was IFR with 1/2-mile visi-



bility and that he would have to contact Approach Control for a GCA landing.

Proceeding to a radio beacon some eight miles from the field and orbiting there, he had no success in contacting Approach Control and finally got a clearance using the control tower as a relay. All this time he had the airfield in sight. It didn't seem possible the field had only 1/2-mile visibility. It was a real puzzler.

After being assigned a GCA frequency, he made contact immediately and was given a vector for a dog-leg approach to the runway. GCA cleared him down to 1000 feet, had him dirty up for landing and informed him the arresting gear was not rigged for this runway. The wind was calm, and visibility was now 1/4 mile and deteriorating rapidly. The pilot rogered, said he had the field in sight and shortly after this touched down right on the centerline, but just a little fast and about 500 feet past the normal GCA touchdown point. He had about 5500 feet of runway remaining for the roll-out.

The pilot had the sensation of being in a ball of cotton. Only the runway lights to either side of him were dimly visible. Visibility ahead was absolutely zero! He braked as hard as he felt he could do safely for what seemed an endless time. Suddenly the threshold lights on the bitter end loomed up close ahead! Shutting the engine down, he jammed both feet hard on the brakes, heard the right tire blow and then hurtled off the end into the shallow waters of the bay which virtually surrounds the airfield. He had about 50 knots when he hit the water and went some distance out before stopping.

His radio was still running, for he heard GCA calling him, so he answered up, saying he was in the water, not injured, but to come quickly.

The first man on the scene was the pilot's GCA final controller who illuminated the wreck with his truck's headlights then waded out and assisted him into shore.



Grampaw Pettibone says:

Sufferin' catfish! There's **nothing** more treacherous than ground fog, for it usually suckers you in with an apparently good view of the runway and surrounding area and then smothers you in a white blanket right at flare or touchdown points. And, that

landing roll-out can be sheer horror, kinda like fallin' into quicksand!

Once you touch down and that old fuel state forbids any further excursions into the blue, you've pretty well had it. The only solution is to go to an alternate before trying a letdown and while fuel permits. When temperature and dewpoint are hangin' close together and the wind is calm, you can expect ground fog, especially in coastal areas, and plan accordingly. There's more to a weather broadcast than just ceiling and vis.



Cool Headed

After a normal preflight, start and turn-up, with no discrepancies of any kind noted, a Marine pilot released the brakes on his F-8B *Crusader* (F8U-1E) and started his takeoff, using burner early in the roll.

After takeoff he climbed in burner, droops in, at 450 to 500 knots. As he passed through an altitude of 21,000 feet, without warning, there was a tremendous explosion which momentarily stunned and confused him! Quickly scanning the instrument panel, he checked RPM, TPT, oil pressure, fuel flow and hydraulic gauges. All instruments were in normal ranges, but the wind blast in the cockpit was terrific. He realized the canopy was missing and was the source of the explosion. He came out of burner, reduced power to 80 per cent, extended speed brakes, started a descent, and switched his radio to GUARD channel to be ready for an emergency transmission.

Still somewhat dazed yet realizing that the aircraft was responding normally, he took time out to evaluate the situation. His helmet visor was broken; two pieces of it were dangling, one near each eye. He removed and discarded the glass fragments and re-scanned his instruments. All normal, but there were blood spots all over them and the entire right cockpit area. Checking the mirrors, he saw his right cheek was bleeding quite a bit, but the cut didn't look serious, just messy.



He broadcast MAYDAY on GUARD channel and told a nearby Air Force base tower which answered that his canopy was missing, there was blood in the cockpit, his position was northeast at 30 miles and he was descending through 15,000 feet trying to reach their field. The tower's reply was almost unreadable owing to the shriek of the wind around him. He continued to press on for the airfield.

At 10,000 feet and 215 knots, he placed the gear handle down and checked all down by the wheel indicators. At 190 knots, he unlocked and raised the wing. A visual check in the mirrors verified the wing up and droops extended, so he added power to 92 per cent and tried a few easy S turns to check the *Crusader's* control response. She flew fine.

He now called the airfield tower and advised that he would make a modified downwind entry and engage their arresting gear.

His landing and arrestment were normal and, after taxiing clear, he had landing gear pins installed and shut down the engine before leaving the aircraft unassisted.



Grampaw Pettibone says:

Great horned toadies! When it comes to pickin' a cool-headed man, this one wins hands down! Losing a canopy at high speed is a mighty nerve-wrackin' experience. Some people have pulled the curtain with lesser inspiration and quite a few, mostly Marines, have brought 'em home safely. One pilot was ejected involuntarily at Mach 1.3 when the slipstream pulled the curtain after a similar canopy loss. It can get real hairy!

Cracks in the canopy glass or heat crazing can get mighty serious in a high speed machine. Best to change 'em when in doubt. One thing to consider: you **COULD** lose the whole bird!

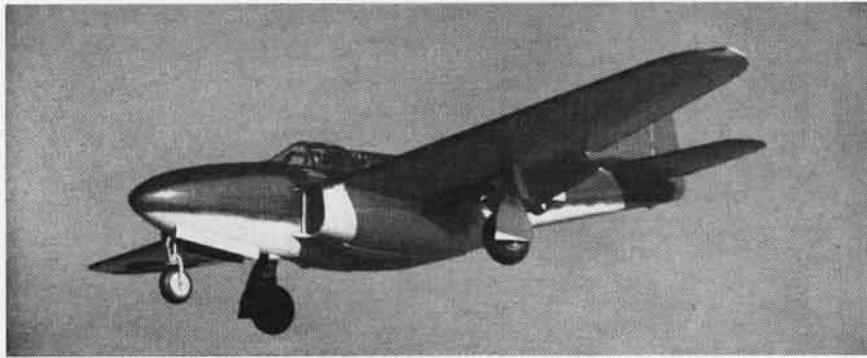
THEY FLEW THE U. S. NAVY'S FIRST JETS

By Adrian O. Van Wyen

THE FIRST FLIGHT in a turbojet aircraft in the United States was made at Muroc, Calif., on 1 October 1942 by Robert M. Stanley, chief test pilot of the Bell Aircraft Corporation. The next day Col. Lawrence C. Craigie of the U.S. Army Air Forces, took up the same plane for its first flight by a military pilot. The first jet flight by a Naval Aviator was made in the same plane at the same location on 21 April 1943 by Capt. Frederick M. Trapnell of Flight Test, NAS ANACOSTIA. In each instance, the plane was a Bell XP-59A powered by two General Electric 1A turbojet engines. It was the first jet aircraft built in the United States and a prototype of the first jet aircraft acquired by the United States Navy.

Before the end of the war, the Navy had acquired three of the Bell *Airacomet*s and in the first year after the war acquired two more. All were obtained from the Army Air Forces; all were assigned to Patuxent. They served two main purposes by providing a means of testing the adaptability of jet aircraft to naval requirements and a means of training pilots to fly a new aircraft type. They were used for these purposes through 1947.

Even before their acquisition, the Navy's interest in jet propulsion had been made evident. It not only mon-



FIRST JET of Naval Aviation, the Bell Airacomet YP-59A. Obtained from the Army Air Forces in late 1943 and tested at Patuxent, it carried many Naval Aviators on first jet flights.

itored the progress of jet programs in the Army Air Forces and took part in certain joint studies, but also initiated a study contract which led to the development of the first Westinghouse jet engines. As early as 1943, two carrier fighter designs employing jet engines were initiated. The first with Ryan Aeronautical Company had the immediate objective of developing a fighter capable of operating from escort carriers as a replacement for the FM. It resulted in the XFR-1 *Fireball* which was powered by a Wright *Cyclone* engine in the nose and a General Electric 1-16 in the after section of the fuselage. Its development and production were handled on a crash basis and the first model flew in June 1944. Within a year it was assigned to a fleet squadron. Limited operations from escort carriers for

short periods in the immediate post-war period uncovered numerous bugs and by July 1947 the decision to withdraw them from service had been made and carried out. A similar concept of composite power, carried out in the XF15C, was abandoned after experimental models had been evaluated at Patuxent.

The second contract of 1943 authorized the McDonnell Aircraft Corporation to design a twin-jet carrier fighter. To avoid disrupting wartime production and to meet the not so urgent objective of using the plane to explore the feasibility of jet operations on carriers, progress was intentionally slow. Even so, the airplane took to the air for the first time on 26 January 1945. It was the XFD-1 *Phantom*, powered by two Westinghouse 19B jets. After another year and a half of flight testing, a pro-



CAPT. F. M. TRAPNELL, first jet pilot of the U.S. Navy, flew original Bell jet in 1943.



CDR. PAUL H. RAMSEY, jet pilot number two, prepares for flight in YP-59A at Patuxent.



CAPT. A. P. STORRS and **LCdr. Noel Gayler**, numbers ten and three, at Patuxent, 1944.

duction FD-1 was taken on board the USS *Franklin D. Roosevelt*, and on 21 July 1946 the first jet operations from a U.S. carrier were conducted. A year later, the *Phantom* became the first jet aircraft assigned to a fleet squadron when two FD's were delivered to VF-17A at NAS QUONSET POINT.

In the meantime, studies and contracts had been let for other jet aircraft which were to become operational. One of these, made in January 1945 with North American Aviation, produced the FJ-1 *Fury* equipped with a single Allison/GE jet. Claimed by some to be the hottest, straight-wing jet ever built, this airplane made its first flight in September 1946 and, in November of the next year, was delivered to VF-5A at NAS SAN DIEGO. On 10 March 1948, the squadron Commanding Officer and Executive Officer took the *Fury* on board the USS *Boxer* for carrier suitability tests, conducting a number of takeoffs and landings. Shortly after, VF-17A completed carrier qualifications in the *Phantom*, by then redesignated FH, on board the USS *Saipan*. The Navy's transition to jet aircraft had definitely begun.

By 1948 the number of Naval Aviators qualified to fly jets had assumed fairly generous proportions. Because it appeared desirable to have a list of the men who pioneered the Navy's effort in this field in the historical record, a project to obtain their names was initiated in October 1961.

It soon became apparent that there was no ready-made list and, further, that no official records had been kept from which one could be compiled. Even the flight logs from Patuxent, where the first jet aircraft has been assigned, seemed to have disappeared. It was then that a general appeal for help was made through a letter in *Naval Aviation News*. It appeared in the March issue, just one year ago.

Help came from many sources. Twenty men in all answered this call, giving not only the particulars of their first flights but also the names of others who had flown in the early period. One pilot sent a list of 73 men awarded Phantom Jockey Certificates by McDonnell Aircraft Corporation commemorating their flights in the *Phantom* jet. Perhaps the most unexpected, but no less useful, was a report from an officer assigned to the Aviation Safety Center listing all men involved in acci-



PHANTOM, FD-1, built by McDonnell, was the first jet assigned to an operating squadron.

dents in jet aircraft through 1948. From these replies and from other sources, a list was made up of another 80 men who had probably qualified in the period 1943-48. Each was sent a letter asking for the particulars of his qualification as well as for the names of



FURY FJ-1 by North American was first jet operated from carrier by a fleet squadron.

others who should be questioned. The project developed quickly into a letter writing campaign as almost every third answer added more names which in turn spawned yet other possibilities.

When these leads had been exhausted, the project seemed about complete and preparations were made to



GLOSTER METEOR was first flight vehicle for several Naval Aviators who flew in England.

put the list in order for publication. It was then that the earlier search for the Patuxent Flight Logs produced results. They were found at the Federal Records Center in Alexandria. With some interest but only a little expectancy of finding any more than confirmation of what was already known, a few were called over for leisurely perusal. The first one dispelled all dreams of the project being finished.

About two months and 31 logs later, another 200 names had been added to the probables list. But what names! Almost without fail, the log entries identified the pilot by last name only, giving no initials, no rank and no indication of service affiliation. This should have presented no difficulty with the more unusual names but experience proved quickly that no names are unusual. Reference to unit rosters and Navy Registers helped some, and the Bureau of Personnel contributed its share, but when all available sources had been used, there were still about 100 names lacking identity.

Some of these were cleared up by a day spent at NATC PATUXENT and the follow-up assistance of RAdm. P. H. Ramsey's staff. Some remain only names, some of those identified could not be found, many are not yet heard from. Several are no longer living. Others were separated from their logs by vacation or change of duty and could not give exact information. Still others reported their logs as lost or destroyed by fire and had no means of confirming their recollections. In spite of these difficulties, the list was compiled and because publication might resolve some still unanswered questions, it appears here in print for the first time. In its present state, however, it is unfinished and its order of precedence is purely tentative.

Tabulation of the replies revealed interesting elements of history. The early date at which many qualified was perhaps most surprising, but under the circumstances should not have been surprising at all. All aspects of early jet aircraft were highly classified. During the war years, the interests of security dictated that early jet engines be called superchargers. Even the XP-59A designation for the first jet airplane had a security angle. The original XP-59 was a conventional experimental fighter, and it was thought that use of the same designation with a suffix letter would

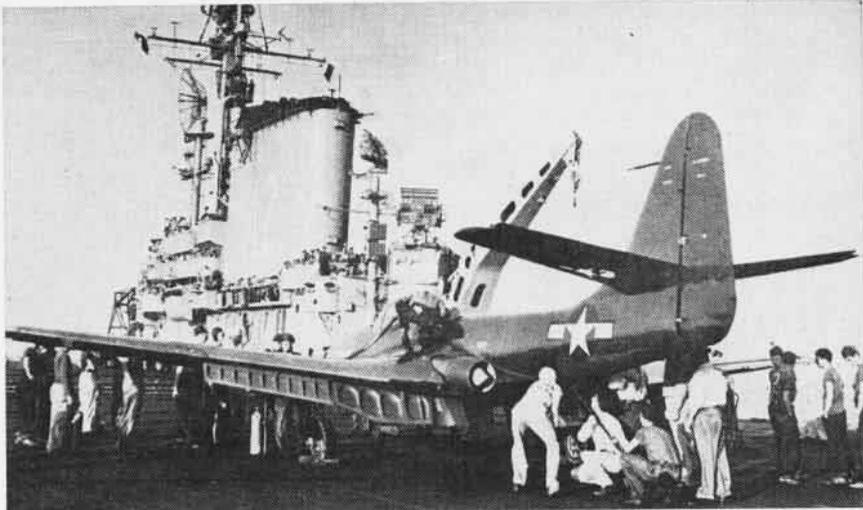


LCDR. J. J. DAVIDSON was the first to operate jet aircraft from the deck of U.S. carrier.

hide the true identity of the new model. Its early operations at Muroc were also conducted under the veil of secrecy—if jet flight can be kept a secret. Adm. Trapnell wrote: “When flown, this aircraft was towed well out onto the lake bed, with tarpaulins covering most of the fuselage and with a fake wooden propeller on the nose. This, of course, was removed prior to run-up.”

This airplane, relatively unknown even today as the Navy’s first jet, was for obvious reason the one in which most Navy pilots made their first jet flights. In the period of its use through 1947, by which time 222 flights are listed, 176 were in the P-59. Because Patuxent was the center of flight testing and the first station to which jet aircraft were assigned, it topped all other locations as the scene of first flights through 1948, scoring 220 out of a possible 266 listed. A number of pilots received their first indoctrination from the Army Air Forces and made their first flights at AAF bases in the southwest. Others attended RAF schools at Hullavington and Cranfield, England, and made their first flights there. When delivery of the *FD Phantoms* and *FJ Furies* began in 1947, the location of first flights extended to St. Louis, Quonset Point and San Diego.

The first Navy pilot to qualify in jets was also the first Navy pilot to fly seven post-war jets which he listed as the XFJ, XF2H, XF9F, XF3D, XF6U, XF-86 and the XF7U. Five men of the first 266 qualified in Flag rank; only



PREPARING the *FD-1 Phantom* for takeoff from the *USS Franklin D. Roosevelt* in July 1946. Takeoffs and landings on the 21st were the very first jet operations from a U.S. carrier.

three more qualified as Ensigns. The majority qualified as Lieutenant Commanders and Lieutenants with the former leading the pack. The pilots of VF-5A and VF-17A, on board at the time the squadrons were being equipped with jets, are all members of this early group although some not heard from do not appear on the present list.

The replies included many interesting comments supplementing the basic information. The somewhat naive attitude of the historian was rudely jolted very early in the project. Under the assumption that some training was necessary to fly a radically different airplane, he provided a place on the questionnaire to report the extent of training received. The answers, when they were given at all, were unanimously in the vein of one report which stated: “In contrast to present practice, training consisted of looking at handbook, cockpit checkout, then go.” Its elaboration by another qualifier was: “Your request for information on training is amusing. Training was very informal, to put it politely. It consisted of: ‘This is the low pressure fuel cock; this is the high pressure fuel cock; it flies real easy.’” Even in the later period when the first squadrons were being equipped with jets, the training does not appear to have been extensive. One pilot reported, “VF-17A trained itself. Checkout consisted of reading the handbook and watching a movie on compressibility.”

One pilot told of winning third place in the 1948 Bendix Trophy Race

from Long Beach to Cleveland, in which he “landed at Cleveland dead stick, out of fuel the last 50 miles.” Another reported ferrying an *FH-1* from Patuxent to Pensacola in 1948 with the comment: “I daresay the only jet ever to use Station Field.” In similar vein, one told of his work with another pilot on chase flights out of Point Mugu in which they, “operated P-80’s off a 5,000-foot Marston mat with full ammo and fuel, for two years without incident. The P-80 was not supposed to be landed in this configuration (we later found out).”

The men who qualified in Flag rank had some toppers. The first of these, Adm. A. M. Pride, gave us the following account of events leading to his qualification:

I had been ordered to relieve Sallada as Chief and to report a month before the turnover date of 1 May. That gave me considerable time to look around. It then dawned on me that I would be up to my neck in jet procurement and that I had better find out a little about them at first hand. Furthermore, since no flag officer seemed to have soloed the things, it seemed appropriate that the Chief of the Bureau set the pace. So I went down and asked for a McDonnell but the Patuxent boys were not taking any chances with their new pet, I guess, and were ‘so sorry, but it was out of commission.’ I looked around and saw the P-59 sitting there and asked how about that one. They admitted it was ‘up’ and so I said that I would take it. It worked fair enough except that one engine gave out after I got out over the Bay and I had to yell

for a clear runway and come on home. Never did find out what the trouble really was.

Adm. D. V. Gallery reported: "RADms. Apollo Soucek, Bat Cruise and I checked out in *Phantoms* and flew a section formation at the opening of Idlewild and also at the Cleveland Air Races. Called ourselves the Gray Angels." To that somewhat noncommittal statement, Adm. E. A. Cruise provided a footnote quoted here in full. He wrote:

For your information Admirals Soucek and Gallery flew with me, with Gallery leading, as the Gray Angels in both the Idlewild dedication and later

Idlewild was directly involved in the subsequent installation of a positive cross connection which would prevent future flame-outs from the same cause.

As might be expected, this list of early jet pilots includes several men who later achieved other prominence in flight. Turner Caldwell set a world speed record in the D-558 1 in August 1947, the first held by the Navy since Al Williams' record in 1923. Marion Carl broke that record one week later in the same plane and later soared to a new altitude record for research aircraft in the D-558 II. Carl and Caldwell were also the first of their respective services to fly faster than sound in level flight. Larry Flint took the *Phantom II*

explanation and caution are necessary. In explanation of the order, flights made on the same day are in the order of time of day when known, and alphabetical when not known. When only the month and year could be given for date, the flight appears after all others made during the month. Rank is that held at the time of first flight. With the exception of one Chief Aviation Pilot, all are Naval Aviators on active duty at the time; Marines are indicated by #. Designations for the McDonnell *Phantom* appear as FD initially and as FH after the change made 21 August 1947.

The cautions are particularly important. First, qualification as a jet pilot



THE LOCKHEED P-80 *Shooting Star*, modified for catapulting and arrested landings, was tested for carrier suitability on board the USS *Franklin D. Roosevelt* (CVB-42) in November 1946.

at the National Air Races in Cleveland in September 1948. In Idlewild on one flight I ran out of fuel on one tank resulting in a flame-out. Inasmuch as our formation was only at 2600 feet and directly over the field, I elected to land dead stick on Idlewild. I never made a more precise approach and landing in my whole life.

At Cleveland the Gray Angels caused some consternation by passing the reviewing stand simultaneously with, but in the opposite direction from, a 90-plane Air Group. The Air Group leader was flying low (about 4-500 feet) which forced us down to 75-100 feet. Needless to say flying wing, I was somewhat perturbed.

Adm. Cruise, who was Head of the Air Warfare Division in DCNO (Air) when he was making the above flights, also reported that his forced landing at

to a new world altitude record in 1959 and F. Taylor Brown set a time to climb record to 20,000 meters in 1962, also in the *Phantom II*. T. H. Miller set a new speed record for 500 kilometers in the *Phantom II* in September 1960. The first U.S. Navy jet operations on a carrier were flown by J. J. Davidson; Marion Carl flew tests of the P-80 on the same ship later in the year. Najeeb Halaby, present head of the FAA, was the first to fly a jet on continuous flight across the United States from Muroc to Patuxent, which he did in a P-80A on 28 June 1945. On the other side of the ledger, the list also includes the first pilot to bail out of a jet and the first to crash-land a jet in the water, both of whom shall be nameless.

In regard to the list itself, words of



LT COL. MARION E. CARL, USMC, was test pilot for the *Shooting Star* on its carrier trials.

was defined loosely. For this purpose, it was considered simply as the first flight on which complete command of the aircraft was held. Whether the first flight was also the last made in a jet by a particular pilot or the beginning of a whole career of jet flying, it was accepted as meeting the requirement. Second, only flights in pure jet aircraft were considered. The question of what to do about the Ryan *Fireball*, FR-1, came up early in the project. Several facts of its early existence give weight to its importance in the Navy's transition to jet aircraft. Yet the fact, that it was equipped with a reciprocating engine for use in normal operations and with a turbojet engine for use as a booster during takeoff and maximum performance flights, removes it from the jet aircraft class. For this reason,



AN FJ-1 FURY of VF-5A on board the USS Boxer off San Diego during March 1948, the first jet carrier operations by a fleet squadron.



PILOTS OF VF-5A at Cleveland Air Races (L to R): Ensigns Pierozzi, Oeschlin, Lt. Capriotti, Cdr. Anrand, Lt. Hanks, LCdr. Elder, Ens. Brown.

justified or not, flights in the FR were not included.

Thirdly, only those men with whom we could make contact or about whom we could gain specific knowledge appear in the list. Those found in log books or otherwise reported as having flown jets in the early period who could neither be identified nor found had to be omitted. Those who died after their first jet flight (indicated by *) could be included only if the necessary information was available from another source. Their flight dates are generally the earliest found in Patuxent Flight Logs and may not be the actual first flight. Others deceased, reported as having flown in the period but for whom no specific information was found, had to be omitted from the

order of precedence. They are: John E. Darden, Jr., Ralph Fuoss, Bud B. Gear, John Magda, Alfred E. Nauman, Jr., Albert D. Pollock, Jr., Horatio G. Sickel, Warren P. Smith and Conrad J. Wigge.

Fourth, research in flight logs was limited to those from Patuxent; no reference was made to flight records from other stations. As a result, coverage for the years 1947-48, when jet flight was on the increase, may be assumed to fall off from that of earlier years. This tendency was offset to some extent, however, by reference to rosters of squadrons operating jets in the period as is evident in the drop-off of potential omissions noted below.

For the above reasons, the list is admittedly incomplete and its order of

precedence is subject to change as more information is received. On the basis of evidence up to this point, it is our conclusion that the completeness and accuracy of the list is best at the beginning and decreases as the precedence numbers increase. The 22 men yet to be heard from and the 45 unidentified names, of which at least half are believed eligible for the list, represent potential omissions ranging from none in 1943, 2 in 1944, progressively increasing to 26 in 1947, and dropping to 17 in 1948. Although no official source that will resolve the implied problems appears to exist, work toward their resolution is in progress. A more definite order of precedence through 1948 must await its completion. Suggestions and data toward this end are invited.



MGEN. C. F. SCHILT, USMC, qualified as BGen. Visits Capt. W. A. Schoech in Korean War.



THE GRAY ANGELS, also known as the Flying Admirals, flew at the Idlewild dedication and at the Cleveland Air Races. Rear Admirals E. A. Cruise, D. V. Gallery and Apollo Soucek.

TENTATIVE PRECEDENCE OF JET PILOTS AS OF FEBRUARY 7

No.	Name	Rank	Date	Plane	Place	No.	Name	Rank	Date	Plane	Place
1	Trapnell, F. M.	Capt	21 Apr 43	XP-59A	Muroc	65	Callan, Allie W. Jr.	Lt	2 Jan 46	P-59B	Patuxent
2	Ramsey, Paul H.	Cdr	29 Jul 43	XP-59A	Muroc	66	Myers, Raymond F.	LCdr	5 Jan 46	P-59B	Patuxent
3	Gayler, Noel A. M.	LCdr	13 Jan 44	YP-59A	Patuxent	67	Friesz, Robt. P.*	LCdr	11 Jan 46	P-59B	Patuxent
4	Booth, Charles T.	Cdr	14 Jan 44	YP-59A	Patuxent	68	Leonard, Wm. N.	Cdr	23 Jan 46	P-59B	Patuxent
5	Halaby, Najeeb E.	Ltjg	21 Jan 44	YP-59A	Patuxent	69	Martin, William I.	Cdr	28 Jan 46	P-59B	Patuxent
6	Ferguson, John A.	Lt	14 Feb 44	YP-59A	Patuxent	70	Bolt, Wm. H. Jr.	LCdr	7 Feb 46	P-59B	Patuxent
7	Drewelow, Robt. W.	Lt	21 Apr 44	YP-59A	Patuxent	71	Morrison, Jack W.	Maj#	8 Feb 46	P-59B	Patuxent
8	Owen, Edward M.	LCdr	15 May 44	YP-59A	Patuxent	72	Umphres, Donald E.*	Lt	9 Feb 46	P-59B	Patuxent
9	Brown, Ira W. Jr.	LCdr	28 Jun 44	YP-59A	Patuxent	73	Holley, Edward B.	LCdr	11 Feb 46	P-59B	Patuxent
10	Storrs, Aaron P.	Capt	17 Jul 44	YP-59A	Patuxent	74	Quilter, Charles J.	LCol#	13 Feb 46	P-59B	Patuxent
11	Canavan, Desmond E.	LCol#	18 Jul 44	YP-59A	Patuxent	75	Davis, Leslie D.	LCdr	19 Feb 46	P-59B	Patuxent
12	Rozamus, Michael J.	LCdr	20 Jul 44	YP-59A	Patuxent	76	Jorgensen, John B.	LCdr	19 Feb 46	P-59B	Patuxent
13	Runyon, Donald E.	Lt	21 Jul 44	YP-59A	Patuxent	77	Reedy, James R.	Cdr	20 Feb 46	P-59B	Patuxent
14	Gerberding, Jas. H.*	LCdr	30 Aug 44	YP-59A	Patuxent	78	Sim, Vincent M.*	LCdr	21 Feb 46	P-59B	Patuxent
15	Elder, Robert M.	Lt	28 Sep 44	XP-80	Dayton	79	Sollenberger, Robt. L.	LCdr	21 Feb 46	P-59B	Patuxent
16	Milner, Robert M.	LCdr	24 Oct 44	YP-59A	Patuxent	80	Burnett, Robert G.	LCdr	26 Feb 46	P-59B	Patuxent
17	Soule, Ernest D.	Lt	24 Oct 44	YP-59A	Patuxent	81	Somerville, Henry B.	LCdr	27 Feb 46	P-59B	Patuxent
18	Kelly, William W.	Lt	30 Oct 44	YP-59A	Patuxent	82	Pugh, Paul E.	LCdr	1 Mar 46	P-59B	Patuxent
19	Flint, Lawrence E.	Lt	30 Oct 44	YP-59A	Patuxent	83	Smith, James W.	LCdr	1 Mar 46	Meteor	England
20	Harrington, Daniel J.	LCdr	1 Nov 44	YP-59A	Patuxent	84	Fleming, Francis M.	Lt	9 Mar 46	P-59B	Patuxent
21	Davidson, James J.	Lt	2 Nov 44	YP-59A	Patuxent	85	Hey, Richard J.	Capt#	20 Mar 46	P-59B	Patuxent
22	Christofferson, F. E.	Lt	2 Nov 44	YP-59A	Patuxent	86	Clarke, Robert A.	Lt	21 Mar 46	YP-59A	Patuxent
23	Caffey, Kenneth W.	LCdr	7 Nov 44	YP-59A	Patuxent	87	Murray, Thomas O.	Cdr	22 Mar 46	YP-59A	Patuxent
24	Miller, Kenneth W. Jr.	Lt	8 Nov 44	YP-59A	Patuxent	88	Hanks, E. Ralph	Lt	23 Mar 46	YP-59A	Patuxent
25	McNeely, Henry E.	LCdr	8 Nov 44	YP-59A	Patuxent	89	Jackson, Mercer L.	Ltjg	27 Mar 46	YP-59A	Patuxent
26	Wood, Charles R. Jr.	LCdr	8 Nov 44	YP-59A	Patuxent	90	Guillory, Troy T.	LCdr	27 Mar 46	YP-59A	Patuxent
27	Tuttle, Magruder H.	Cdr	8 Nov 44	YP-59A	Patuxent	91	Kunz, Melvin M.	Lt	27 Mar 46	P-59B	Patuxent
28	Palmer, Fitzhugh L. Jr.	Cdr	9 Nov 44	YP-59A	Patuxent	92	Kanze, Robert F.	Lt	27 Mar 46	YP-59A	Patuxent
29	Andrews, Clyde C.	Lt	9 Nov 44	YP-59A	Patuxent	93	Mehle, Roger W.	LCdr	27 Mar 46	YP-59A	Patuxent
30	Gough, William V. Jr.	LCdr	9 Nov 44	YP-59A	Patuxent	94	Tracy, Lloyd W.	Lt	28 Mar 46	P-59B	Patuxent
31	Hollar, Frank E.	Maj#	9 Nov 44	YP-59A	Patuxent	95	Rodenburg, Eugene E.	Lt	28 Mar 46	P-59B	Patuxent
32	Bauer, Louis H.	Cdr	11 Nov 44	YP-59A	Patuxent	96	Thoms, Joseph I.	Ltjg	28 Mar 46	P-59B	Patuxent
33	Sutherland, John F.	LCdr	24 Nov 44	XP-80	Palmdale	97	Weaver, Victor H.	Lt	1 Apr 46	P-59B	Patuxent
34	Carl, Marion E.	Maj#	14 Feb 45	YP-59A	Patuxent	98	McHenry, Robert E.	LCdr	1 Apr 46	P-59B	Patuxent
35	Wheatley, John P.	Lt	15 Feb 45	YP-59A	Patuxent	99	Hoerner, Helmuth E.	LCdr	1 Apr 46	P-59B	Patuxent
36	Kenna, William E.	Cdr	15 Feb 45	YP-59A	Patuxent	100	Alford, William L.*	Lt	2 Apr 46	P-59B	Patuxent
37	Connolly, Thomas F.	Cdr	24 Feb 45	YP-59A	Patuxent	101	Cain, Mahlon E.	LCdr	3 Apr 46	P-59B	Patuxent
38	Neeffus, James L.	LCol#	10 Mar 45	YP-59A	Patuxent	102	Deitchman, Richard P.	Ltjg	5 Apr 46	YP-59A	Patuxent
39	Sallenger, Asbury H.	Lt	14 Mar 45	YP-59A	Patuxent	103	Colvin, Louis E.	Ltjg	9 Apr 46	P-59B	Patuxent
40	Cleland, Cook	Lt	— Mar 45	YP-59A	Patuxent	104	Westover, Roland W.	Lt	9 Apr 46	P-59B	Patuxent
41	Schickel, Norbert H.	Lt	25 Apr 45	YP-59A	Patuxent	105	Fitzgerald, Jos. W.	Ltjg	9 Apr 46	YP-59A	Patuxent
42	Brown, Robert M.	Lt	5 May 45	YP-59A	Patuxent	106	Valencia, Eugene A.	Lt	19 Apr 46	P-59B	Patuxent
43	Schreffer, John F.	LCdr	9 May 45	YP-59A	Patuxent	107	Adair, Robert F.	Lt	23 Apr 46	P-59B	Patuxent
44	Ellenburg, George W.	LCdr	23 May 45	YP-59A	Patuxent	108	Alley, C. John	LCdr	23 Apr 46	P-59B	Patuxent
45	Bakutis, Fred E.	Cdr	11 Jun 45	YP-59A	Patuxent	109	David, Edmonds	LCdr	23 Apr 46	P-59B	Patuxent
46	Schroeder, F. J.	LCdr	12 Jun 45	YP-59A	Patuxent	110	Hickburn, John T.	Cdr	13 May 46	YP-59A	Patuxent
47	Larsen, Leif W.*	Lt	12 Jun 45	YP-59A	Patuxent	111	Miller, Thomas H.	Capt#	17 May 46	YP-59A	Patuxent
48	McClelland, T. G.*	Lt	27 Jun 45	YP-59A	Patuxent	112	Foley, Walter A.	Ltjg	17 May 46	YP-59A	Patuxent
49	Schiller, James E.	Lt	27 Jun 45	YP-59A	Patuxent	113	Candler, Wm. R.	Lt	17 May 46	YP-59A	Patuxent
50	Beveridge, Richard A.	LCdr	18 Jul 45	YP-59A	Patuxent	114	Mechling, Wallace B.	Capt	21 May 46	P-59B	Patuxent
51	Thomas, John M.	Lt	19 Jul 45	YP-59A	Patuxent	115	Matthews, Herbert S.	Ltjg	22 May 46	YP-59A	Patuxent
52	Hannegan, Edward A.	Capt	21 Jul 45	YP-59A	Patuxent	116	Aurand, Evan P.	Cdr	7 Jun 46	P-59B	Patuxent
53	Billett, Dudley S. Jr.	LCdr	23 Jul 45	YP-59A	Patuxent	117	Empey, Robert E.	Lt	12 Jun 46	P-59B	Patuxent
54	Thawley, Charles B.	Ltjg	8 Aug 45	YP-59A	Patuxent	118	Shryock, Wm. A.	LCdr	13 Jun 46	P-59B	Patuxent
55	May, Richard H.	Lt	20 Aug 45	YP-59A	Patuxent	119	Giblin, Robert B.	Lt	20 Jun 46	Meteor	England
56	Houck, Herbert N.	Cdr	27 Oct 45	P-59B	Patuxent	120	Giese, Carl E.	Capt	28 Jun 46	P-59B	Patuxent
57	Rees, Joseph R.	Lt	27 Oct 45	P-59B	Patuxent	121	Metsger, Alfred B.	Cdr	10 Jul 46	P-59B	Patuxent
58	Tavernetti, Thos. F.	LCdr	29 Oct 45	P-59B	Patuxent	122	Griffin, Edwin C.	Lt	11 Jul 46	P-80A	Inyokern
59	Mooty, Alfred F.	Lt	30 Oct 45	P-59B	Patuxent	123	Hyland, John J.	Cdr	15 Aug 46	P-59B	Patuxent
60	Franks, John M.	Lt	30 Oct 45	P-59B	Patuxent	124	Pearce, James L.	Lt	15 Aug 46	P-59B	Patuxent
61	Earnest, Albert K.	LCdr	31 Oct 45	P-59B	Patuxent	125	Cram, Jack E.	LCol#	19 Aug 46	P-59B	Patuxent
62	Standing, Frank E.	Lt	— Oct 45	Meteor	England	126	Ruefle, Wm. J.	LCdr	— Aug 46	YP-59	Patuxent
63	MacGregor, Robt. A.	LCdr	3 Nov 45	P-59B	Patuxent	127	Rembert, John P. Jr.	Capt	4 Sep 46	P-59B	Patuxent
64	Hackett, Hugh J.	Lt	29 Nov 45	P-59B	Patuxent	128	Larson, Vernon H.	LCdr	25 Sep 46	P-59B	Patuxent
						129	Vatcher, Walter W.	1stLt#	26 Sep 46	YP-59A	Patuxent

No.	Name	Rank	Date	Plane	Place						
130	Rand, Herbert C.	LCdr	27 Sep 46	P-59B	Patuxent	197	Davis, William V.	Capt	10 Aug 47	P-59B	Patuxent
131	Harris, Floyd L.	Lt	3 Oct 46	P-59B	Patuxent	198	Taylor, Donald C.	Lt	12 Aug 47	P-59B	Patuxent
132	Byng, John W.	Cdr	7 Oct 46	P-59B	Patuxent	199	Genta, John L.*	LCdr	12 Aug 47	P-59B	Patuxent
133	Arnold, James T.	Lt	22 Oct 46	P-59B	Patuxent	200	Jensen, Alvin J.	Capt#	19 Aug 47	P-59B	Patuxent
134	Deasy, Charles J.	Ltjg	22 Oct 46	YP-59A	Patuxent	201	Heath, Thomas W.	LCdr	23 Aug 47	FH-1	Patuxent
135	Puckett, Ronald G.	Lt	19 Nov 46	P-59B	Patuxent	202	Ellis, Paul B.	LCdr	23 Aug 47	FH-1	Patuxent
136	Lee, Earl C.	Ltjg	21 Nov 46	P-59B	Patuxent	203	Kimak, Charles	Maj#	26 Aug 47	P-59B	Patuxent
137	Chapman, Melvin L.	Lt	29 Jan 47	FD-1	St. Louis	204	Newell, James H.	Cdr	29 Aug 47	FH-1	Patuxent
138	Garton, Norman F.	Capt	29 Jan 47	FD-1	St. Louis	205	Fox, Frank A.	Lt	10 Sep 47	FH-1	Quonset
139	Kneeland, Kenneth P.	Ltjg	31 Jan 47	FD-1	St. Louis	206	Laird, Dean S.	Lt	10 Sep 47	FH-1	Quonset
140	Turner, Frank	Capt	6 Feb 47	P-59B	Patuxent	207	Wiktorski, Peter A.	CAP	16 Sep 47	FH-1	Patuxent
141	Caldwell, Turner F.	Cdr	15 Feb 47	P-80	Muroc	208	Turner, Frederick C.	Ltjg	18 Sep 47	FH-1	Quonset
142	Weems, George T.*	LCdr	4 Mar 47	P-59B	Patuxent	209	Roberts, Carson A.	Col#	1 Oct 47	P-59B	Patuxent
143	Mulvihill, Francis*	LCdr	17 Mar 47	P-59B	Patuxent	210	McElroy, Richard S.	LCdr	2 Oct 47	P-59B	Patuxent
144	Pahl, Herschel A.	Lt	21 Mar 47	P-80A	Chandler	211	Werner, Ralph L.	LCdr	10 Oct 47	P-59B	Patuxent
145	Bauman, John F.	Lt	27 Mar 47	P-59B	Patuxent	212	James, George S. Jr.	Cdr	14 Oct 47	FH-1	St. Louis
146	Nelson, Robert J.	Lt	29 Mar 47	P-59B	Patuxent	213	Torry, John A. Jr.	LCdr	14 Oct 47	P-59B	Patuxent
147	Doerflinger, Carl	Cdr	31 Mar 47	P-59B	Patuxent	214	Parker, Chester A.	Lt	16 Oct 47	FH-1	Quonset
148	Crocker, John A.	Lt	31 Mar 47	P-59B	Patuxent	215	Blackmun, Arvid W.	Maj#	23 Oct 47	P-59B	Patuxent
149	Provost, Thomas C.*	LCdr	31 Mar 47	P-59B	Patuxent	216	Barnett, Marvin E.	LCdr	4 Nov 47	FH-1	Quonset
150	Danbury, William T.	LCdr	1 Apr 47	FD-1	St. Louis	217	Sedaker, Thomas S.	Lt	4 Nov 47	FH-1	Quonset
151	O'Connor, Harry N.	Ltjg	1 Apr 47	P-59B	Patuxent	218	Sells, Warren H.	Ens	4 Nov 47	FH-1	Quonset
152	Thompson, Harley F.	LCdr	3 Apr 47	P-59A	Patuxent	219	Crouch, Eugene	Ens	7 Nov 47	FH-1	Quonset
153	Whillans, Jack E.*	Lt	4 Apr 47	P-59A	Patuxent	220	Conner, Andrew B.	LCdr	19 Nov 47	P-59B	Patuxent
154	Wood, Robert B.	LCdr	7 Apr 47	P-59A	Patuxent	221	Gordon, Donald	LCdr	19 Nov 47	P-59B	Patuxent
155	Krantz, William F.	LCdr	10 Apr 47	Vampire	England	222	Tate, Hugh J.	Ltjg	7 Dec 47	P-59B	Patuxent
156	Reeves, Roy S.	LCdr	10 Apr 47	P-59B	Patuxent	223	Schilt, C. Frank	BGen#	9 Dec 47	FH-1	St. Louis
157	McKinley, Charles E.	Lt	10 Apr 47	P-59B	Patuxent	224	Ramsay, Thomas W.*	LCdr	16 Dec 47	FH-1	Patuxent
158	Coats, Robert C.	LCdr	15 Apr 47	P-59B	Patuxent	225	Bosee, Roland A.	Cdr	29 Dec 47	FH-1	Patuxent
159	Hamilton, Chas. B. Jr.	Ltjg	17 Apr 47	P-59B	Patuxent	226	Kibbe, Richard L.	Cdr	29 Dec 47	FH-1	Patuxent
160	Pride, Alfred M.	RAdm	24 Apr 47	YP-59A	Patuxent	227	Rockwell, John H.*	LCdr	29 Dec 47	FH-1	Patuxent
161	Clifton, Joseph C.	Capt	1 May 47	P-59B	Patuxent	228	Speirs, Carl L.	LCdr	30 Dec 47	FH-1	Patuxent
162	Ballinger, Richard R.	Capt	1 May 47	P-59A	Patuxent	229	Morton, Wilbur Y.	LCdr	31 Dec 47	FH-1	Patuxent
163	Bott, Alan R.	Ltjg	8 May 47	P-59B	Patuxent	230	Stefan, Karl H.	LCdr	11 Jan 48	FH-1	Patuxent
164	Franger, Marvin J.	LCdr	9 May 47	FD-1	Patuxent	231	Beatle, Ralph H.	Lt	15 Jan 48	P-59B	Patuxent
165	McGinty, William G.	Lt	19 May 47	P-80	Williams AFB	232	Vail, Malcolm E.	Ens	15 Jan 48	P-80A	Williams AFB
166	Cousins, Ralph W.	Cdr	20 May 47	P-59B	Patuxent	233	Brown, F. Taylor	Ens	16 Jan 48	P-80A	Williams AFB
167	Simpler, Leroy C.	Capt	21 May 47	FD-1	St. Louis	234	Pierozzi, C. Nello	Ens	18 Jan 48	P-80A	Williams AFB
168	Timmes, Francis X.	LCdr	12 Jun 47	P-59B	Patuxent	235	Davis, Donald C.	Lt	19 Jan 48	P-80A	Williams AFB
169	Neddo, Donald N.	LCdr	13 Jun 47	P-59B	Patuxent	236	Schoch, Edwin F.*	LCdr	29 Jan 48	FJ-1	Patuxent
170	Stapler, Charles R.*	LCdr	16 Jun 47	YP-59A	Patuxent	237	Firebaugh, Gordon E.	LCdr	30 Jan 48	FH-1	Patuxent
171	Bates, Richard S.	Lt	18 Jun 47	YP-59A	Patuxent	238	Nifong, James M.	Lt	31 Jan 48	FH-1	Patuxent
172	Smith, Joseph G.	LCdr	24 Jun 47	YP-59B	Patuxent	239	Bayers, Edward H.	LCdr	2 Feb 48	FH-1	Patuxent
173	Nester, Robert G.	LCdr	30 Jun 47	YP-59A	Patuxent	240	Cotariu, Alan R.	Ens	2 Feb 48	FH-1	Patuxent
174	Dibble, Edgar J.	Lt	30 Jun 47	YP-59A	Patuxent	241	Stetson, Thomas H.	LCdr	2 Feb 48	FH-1	Patuxent
175	Minter, Chas. S. Jr.	Cdr	2 Jul 47	YP-59B	Patuxent	242	Folsom, Samuel B.	Capt#	3 Feb 48	FH-1	Patuxent
176	Campbell, Robert K.	LCdr	3 Jul 47	YP-59A	Patuxent	243	Roach, Walter Jr.	Lt	9 Feb 48	FH-1	Patuxent
177	Gates, Clark H.	LCdr	9 Jul 47	P-59B	Patuxent	244	Capriotti, Anthony	Lt	11 Feb 48	FJ-1	San Diego
178	Weymouth, Ralph	LCdr	11 Jul 47	P-59B	Patuxent	245	Ritchie, James	Lt	11 Feb 48	FJ-1	San Diego
179	Collins, Francis L.	Ltjg	12 Jul 47	FD-1	St. Louis	246	Wehmeyer, Wilbur J.	Cdr	17 Feb 48	FH-1	Patuxent
180	Russell, Hawley	Cdr	15 Jul 47	FD-1	Patuxent	247	Nemoff, Alfred J.	Ens	20 Feb 48	FJ-1	San Diego
181	Brehm, William W.	LCdr	17 Jul 47	FD-1	Patuxent	248	Oeschlin, Robt. E.	Ens	24 Feb 48	FJ-1	San Diego
182	Miller, Charles G.*	Lt	17 Jul 47	P-59B	Patuxent	249	Pettiet, Rudolph L.	LCdr	24 Feb 48	FH-1	Patuxent
183	Dace, Carl C.	Ltjg	17 Jul 47	P-59B	Patuxent	250	Coppola, Earnest J.	Ltjg	25 Feb 48	FH-1	Patuxent
184	Perry, Adrian H.	Cdr	18 Jul 47	FD-1	Patuxent	251	Bell, William R.*	LCdr	6 Mar 48	FH-1	Patuxent
185	Clasen, William E.	Maj#	25 Jul 47	P-59B	Patuxent	252	Ellis, James W.*	Lt	13 Mar 48	FH-1	Patuxent
186	Glover, John W.	Ltjg	26 Jul 47	FD-1	Patuxent	253	Gibson, Charles E.	Cdr	5 Apr 48	FH-1	Quonset
187	Greenslade, John F.	Capt	5 Aug 47	P-59B	Patuxent	254	Durand, Paul H.	LCdr	6 Apr 48	FH-1	Patuxent
188	Raposa, William C.	Ltjg	6 Aug 47	FD-1	St. Louis	255	Houser, William D.	LCdr	15 Apr 48	FH-1	Patuxent
189	Mayo, Robert A.	LCdr	7 Aug 47	FD-1	Patuxent	256	Spiess, Morris K.	Ltjg	16 Apr 48	FH-1	Patuxent
190	Bicknell, John R.	Ltjg	7 Aug 47	P-59B	Patuxent	257	McNeil, Wilfred J.*	Lt	26 Apr 48	FH-1	Patuxent
191	Payne, Paul E.	Lt	7 Aug 47	FD-1	Patuxent	258	Soucek, Apollo*	RAdm	1 Jun 48	FH-1	Patuxent
192	Buxton, Elliott A.*	Lt	8 Aug 47	FD-1	Patuxent	259	Gallery, Daniel V.	RAdm	9 Jun 48	FH-1	Patuxent
193	Sullivan, John*	Lt	8 Aug 47	FD-1	Patuxent	260	Peterson, Harry W.	Lt	18 Jun 48	FJ-1	San Diego
194	Long, John O. Jr.*	Ens	8 Aug 47	FD-1	Patuxent	261	Cruise, Edgar A.	RAdm	2 Jul 48	FH-1	Patuxent
195	Cauble, Lawrence M.	Lt	8 Aug 47	P-59B	Patuxent						
196	Biggers, William D.*	LCdr	9 Aug 47	FD-1	Patuxent						

No.	Name	Rank	Date	Plane	Place						
262	Beebe, Marshall U.	Cdr	12 Jul 48	FH-1	Patuxent	271	Widhelm, Wm. J*	Cdr	19 Aug 48	FH-1	Patuxent
263	Mueller, Richard C.	LCdr	22 Jul 48	FH-1	Patuxent	272	Ingalls, Chas. E. Jr.	Cdr	22 Sep 48	FH-1	Patuxent
264	Spears, Paul H. A.	Lt	— Jul 48	TO-1	Burbank	273	Russell, Allard G.	LCdr	4 Nov 48	TO-1	San Diego
265	Smith, Stanley E.	Ltjg	5 Aug 48	FH-1	Quonset	274	Sears, Harry E.	Cdr	5 Nov 48	FH-1	Patuxent
266	Wolfe, Ted E. Jr.	LCdr	9 Aug 48	FH-1	Atl. City	275	Logan, Thomas B.	Lt	1 Dec 48	TO-1	Patuxent
267	Parker, Elwin A.	LCdr	12 Aug 48	FH-1	Patuxent	276	Wattenburger, Robt.	Ltjg	6 Dec 48	TO-1	Patuxent
268	Moro, Albert J.	Ltjg	16 Aug 48	FH-1	Quonset	277	Adams, Allan M. Jr.	Ltjg	6 Dec 48	TO-1	Patuxent
269	Furney, Maynard M.	LCdr	17 Aug 48	FH-1	Patuxent	278	Campbell, Donald L.	Ltjg	15 Dec 48	FH-1	Quonset
270	Macomber, Brainerd	LCdr	18 Aug 48	FH-1	Patuxent	279	Davis, Judson C.	Lt	15 Dec 48	FH-1	Quonset
						280	Funk, Harold N.	Cdr	22 Dec 48	FH-1	Patuxent
						281	Hill, John S.	LCdr	23 Dec 48	FH-1	Patuxent

Suggestion Wins \$1000

New Orleans Men Receive Award

Two civilian mechanics in the NAS NEW ORLEANS Aircraft Maintenance Department shared a \$1000 award recently, the result of a Beneficial Suggestion program submission.

The two recommended relocating the J-65 fuel pump drain. The drain, located at the three o'clock position, allows trapped fuel to reach the center line of the drive splines. Their suggestion to move the drain to the six o'clock position prevents fuel seepage which washes the lubricant from the full pump drive splines and causes excessive wear and failure of the fuel pump. The designers suggested a special, low profile fitting to relocate the drain and, upon trying it out, it worked.

A BUWEPs Bulletin stated, in part, "This configuration will prevent a fuel reservoir from building up and washing grease from the fuel pump and accessory gear box splines, thereby reducing spline wear owing to loss of lubrication. The relocated part provides a low point drain in the fuel pump adapter drain cavity."

The two, John W. Kothe and Usher W. Camp, were also commended by the Chief of Naval Air Reserve Training.



AN A-5A VIGILANTE (A3J-1) is readied for delivery to NASA's Flight Research Center, Edwards, Calif., to support studies of projected supersonic transport. Pilot is Cdr. Nick Smith, Flight Test, NATC Patuxent River.



'WATCH THE BIRDIE,' says Ralph Houston, PH3, Naval Missile Facility, PMR. He captured California goshawk, which has a 4 1/2-foot wingspan, near the copter pad at Point Arguello. The injured or ill bird has recovered.

Points for CD Service DOD Approves Past Duty Credit

Department of Defense has authorized retroactive point credit for standby reserve officers who assist their community civil defense programs. Point credits will include one point for each inactive duty training period of not less than two consecutive hours of civil defense work with a maximum of two points per day, three points per week, six points per month and 13 points per quarter. Service may be with a local, state or regional office engaged in civil defense work.

IAS and ARS Consolidated Union Means Membership of 36,000

At simultaneous meetings in New York in December, the Institute of Aerospace Sciences and the American Rocket Society voted formally to consolidate. The new technical society is known as the American Institute of Aeronautics and Astronautics (AIAA).

The combined society began operation on February 1. Its approximately 36,000 members comprise the nation's principal scientists and engineers in

aeronautics, rockets, missiles and space flight. The AIAA's headquarters are in New York and it also has facilities in Los Angeles.

Members of both societies voted strongly for the consolidation. Approximately two-thirds of each society voted, and the vote was over 85 per cent in favor of consolidation.

The first president of AIAA is Dr. William H. Pickering, president of the ARS in 1962 and Director of the Jet Propulsion Laboratory of the California Institute of Technology.

C.O. of VP-44 Recognized Designated as First Orion PPC

Cdr. Andrew Serrell, C.O. of VP-44, NAS PATUXENT RIVER, was recently designated as the Navy's first Patrol Plane Commander (PPC) of a P-3A Orion (P3V-1).

In a special ceremony, RAdm. G. P. Koch, Commander of Fleet Air Wings, presented the skipper with a PPC certificate. The certificate states that Cdr. Serrell is a fully qualified pilot to command the officers and men of his crew, day or night, in any part of the world within range of his aircraft, and carry out any mission assigned to the P-3A.

To earn this new status, the veteran Naval Aviator amassed almost 300 pilot hours in the Lockheed Orion.



RADM. G. P. KOCH, Commander Fleet Air Wings, Atlantic Fleet, pins Aircrewman Wings on F. G. Burton, RM1, of VP-24. It is believed that he is the only general service Radioman in the Atlantic Fleet to be so qualified.



END OF VFR, by end of 1963, for all flights above 24,000 feet in continental U. S. will be practical effect of Area Positive Control. Designed to prevent collision, APC will require flight plan on each affected flight, continuous FAA IFF/SIF track and radio contact.

AREA POSITIVE CONTROL, READY OR NOT

APC MAY BRING to mind a small white pill, and perhaps the thought of a headache. APC now has a second meaning—Area Positive Control. It can be safely predicted that unless Naval Aviators prepare themselves for the new APC, they will have headaches the old APC will never cure.

Already in effect in several areas, by September 1963 Area Positive Control is slated, like a giant patchwork quilt, to cover almost the entire continental United States.

APC is new and coming on fast. Like the first model of a complex new plane in the test program, it has many bugs to be worked out. The system is in such a state of constant change and adjustment that no comprehensive manual has yet been issued.

What is APC? Basically it is a system for providing separation between aircraft through continuous ground control. Employing radar surveillance, APC virtually eliminates any real difference between IFR and VFR for all flights. Even a local jet test flight will be subject to positive control under APC. The FAA, under APC, will endeavor to ensure separation between all air traffic in the positive control area—presently selected areas above flight level 240.

Basic tools with which FAA hopes to provide this separation are: (1) knowledge of a pilot's intentions through detailed flight plans on every flight, (2) full use of center radar and aircraft SIF (Selective Identification Feature on the aircraft IFF) and (3) continuous radio contact with flights. With these tools FAA hopes to provide APC throughout the continental United States at flight levels 240 to 600. By January of 1965, the floor of APC is slated to be lowered to 18,000 feet.

Why do we even need APC? Let's face it, at jet speeds, it just isn't feasible for pilots to ensure separation through "see and avoid." A few years back there were just a few military jets flying through a relatively vast amount of airspace. Now there are not only more military jets, but also hundreds of jet transports—up to a 100 or more "souls" each.

Since there just isn't enough airspace to provide each flight its own private reservation, the obvious answer is to try to make more efficient use of the airspace available. APC, in theory at least, makes it possible to pack more planes into a given amount of airspace without sacrificing safety.

First tests were made in the Indianapolis-Chicago area beginning October 15, 1960. After the kinks were worked out in that area, APC was extended to the Detroit-Cleveland area, then to Oakland last October.

How does APC work? Controllers in an Air Route Traffic Control Center control or monitor every flight in the center's area between flight levels 240 and 600. A center's area is divided into sectors with one or more controllers working each sector.

A sector controller sits before a radar scope tuned to display only SIF marks. He has flight strips showing the intended movements of each plane in his area and maintains radio communications—with some exceptions to be discussed below—with each plane. Armed with knowledge of the plane's intentions, radar display of SIF, and two-way communications, the controller becomes a CIC intercept officer in reverse.

When will APC come to your home-field area? If you haven't had a taste of APC yet, you will soon—unless you are out of the continental U.S. Jacksonville, Memphis and Atlanta areas went into effect February 7. Minneapolis area is scheduled to go under APC this month (March), followed by San Antonio and New Orleans some time in April, Los Angeles in May and Washington and Norfolk in June. The rest of the U.S., with the exception of Montana, and the Dakotas, is slated to be included by the end of September.

FAA urges all Naval Aviators now involved in APC, or soon to be involved, to accept the standing invitation to visit the center for their area. By becoming familiar in advance with FAA APC procedures, installations and prob-

lems, pilots may be able to head off future problems.

How is APC affecting the Navy? With the official establishment of APC in the Oakland area in October 1962, APC became a matter of urgent concern to Naval Aviation. Even though NAS GLENVIEW and NAS GROSSE ILE lie beneath the previously implemented APC's, the reserve jet squadrons at those bases elected to conduct most of their high-altitude operations outside the positive control area. But with the advent of APC at Oakland, NAS MOFFETT, NAS ALAMEDA, NAS LEMOORE and, to some extent, NAAS FALLON became inescapably involved with APC.

Implementation of APC at Oakland brought Navy pilots into an all-pervasive relationship with FAA controllers. If anyone claimed this new intimacy was one big happy honeymoon, there would be good reason to suspect he just didn't know the facts—or was trying to give a "snow job." There were plenty of problems. However, hard work and a willingness to cooperate on both sides has solved most of them. Hopefully, the remaining difficulties will be solved with the same formula.

The attempt to provide continuous positive control of Navy operational and training flights presented FAA controllers with a new and unfamiliar problem. APC procedures trace their ancestry to instrument flight procedures. They are thus oriented around point-to-point flight. Control of tactical, familiarization and aerobatic flights of naval aircraft—primarily area type flights—is an entirely different problem.

One difficulty, as yet only partially solved, was the frequent radio channel changes required as planes went from one controller's area to another. In order to minimize this problem, sector boundaries and flight patterns were both modified to permit completing flights within a single sector whenever possible.

An arrangement only recently approved may relieve the channel switching problem under the worst conditions—formation flight at night or in actual instrument weather. Under this arrangement, a special frequency will be set aside to be used by such flights throughout a center's area.

The whole concept of positive control is based on the assumption of radio contact between pilot and controller. This requirement has raised some formidable problems which are yet to be satisfactorily solved. The instructor in VA-125,



HEAVY CIVIL jet traffic—up to 100 or more "souls" to a plane—led to drive for positive control of all air traffic at high altitude.

the A-4 (A4D) RAG at NAS LEMOORE, is at a severe disadvantage—to put it mildly—in trying to instruct his student if he also has to stay on Oakland Center frequency. This problem has been partially mitigated by center controllers clearing flights to tactical frequencies for short periods when they are in an area with no foreseeable traffic conflicts. The flight then goes to tactical frequency and checks back with the controller at the end of a specified time.

Changes in radio equipment, both in the center and in the aircraft, may reduce this problem some time in the future.

The requirement that the center have a detailed flight plan on each flight has forced some modifications in procedures. The problem has been solved for the bulk of operations at Lemoore through development of a number of "canned" flight plans. These plans cover most routine operations, including test flights. The center, holding copies of all canned flight plans, needs only to know the code number of the flight plan being followed to have a detailed statement of the proposed flight. The tower or departure control at Lemoore takes these numbers from the squadron flight schedules and informs the center of the call and flight plan of departing traffic. All non-standard flights must file a standard flight plan on a DD 175.

Since the feasibility of Area Positive Control is based upon the assumption that a flight's future movements are known to the controller, it is essential that a pilot inform the center when he has to change his flight plan. It has been amply proved that failure to do so results in conflict, confusion and communications clutter.

Early in the preliminary exercises leading to full-scale implementation of APC in the Oakland Center area, it was recognized that the difficult problems involved could be solved only with the closest cooperation between Center and Navy personnel. Joint Navy-FAA teams, composed of pilots and controllers, were formed and "turned to."

These efforts were relatively successful and most of the worst problems have been solved. Many pilots now believe the minor irritants remaining are a reasonable price to pay for the collision insurance provided.

Don't get the idea from this one case that all APC problems are behind us. True, the problems at Oakland are now manageable, but each new area has its own unique troubles.

Here are some of the advantages and disadvantages of APC, based on experiences in the Oakland case:



FAA CONTROLLERS in Indianapolis Center—one of first under APC—work high altitude traffic. Each position covers one sector of area.

- Freedom of movement is greatly curtailed. A pilot is locked on to the flight plan specified in the flight schedule or filed with the Center on a DD-175.

- Closer planning and flight discipline required have helped get more effective use of airborne time—in many cases. Planning generally makes operations more effective, and with APC you can't go unless you have a plan.

- Communications congestion is severe during peak periods. In order to operate with several planes on the same radio channel, pilots and controllers have to maintain strict radio discipline. Pre-filing of canned flight plans reduces the number of necessary communications, but even minimum transmissions cause congestion at peak periods.

- Hazard of collision with "strangers" is reduced. This is the purpose of APC and its greatest benefit.

- Owing to the awkward location of communication controls in most single-place Navy aircraft, the possibility of collision with other planes in the same formation is increased during the frequent radio channel changes required—often to channels which must be cranked in manually.

center just before reaching FL 240 for aircraft re-entry.

Normally, Center will hand off the flight to approach control for letdown to the base, unless a VFR descent is requested.

For the tactics flight in the afternoon, Pilot again calls the tower as "Bentblade 10" on event 12 for a T-8 (canned tactical flight eight) hop and requests Everglades One special operating area, an area 20 by 50 miles set up for random heading and altitude maneuvering flights.

After takeoff, and when switched to the center, he is advised that Everglades One is occupied at the altitudes requested, but that a clear area is available between Redneck Vortac radials 260 and 290, 20 to 80 miles from the station. Since this area meets the need, it is accepted for the flight. On completion of the maneuvering portion of the flight, Pilot's return to base follows the same pattern as the morning flight.

And what of the future? There is good reason to hope that developments will remedy some of the present problems, such as communications congestion. There are several prom-



FAA RADAR at Suitland, Maryland. APC depends on continuous radar IFF/SIF track.



BRIGHT DISPLAY system gives controllers TV type display of area and air traffic.



'SHRIMP BOATS,' showing call and altitude of each flight, help controllers keep track.

Let's follow an individual flight through from start to finish. The squadron flight schedule of a Lemoore-based A-4 (A4D) outfit calls for J.Q. Pilot to fly a sandblower in the morning and a tactics hop in the afternoon.

The squadron's flight schedule will have been transmitted to the Oakland FAA Center the evening before, so when James Q. Pilot fires up he will advise the tower that, as "Bentblade Six," he is up for Event 5, an A-3 (sandblower canned flight plan 3) hop. Tower, or Departure Control, alerts Oakland Center which has a flight strip already made up and ready for activation.

Normally, Departure Control will monitor the climbout on its radar and hand J. Q. Pilot off to the center controller for APC entry. Center will clear Pilot into APC, assign an SIF code and an altitude—more likely a block of altitudes to permit cruise-climb—and permit the flight to go to tactical frequency for short periods to make necessary inter-plane communications.

At letdown time for the low-level portion of the flight, the center will release the aircraft from APC and stand by for re-entry after completion of low level operations. On climbing back up for the return leg, Pilot will contact the

using developments on the horizon, but much money and effort will have to be spent to get them ready for service.

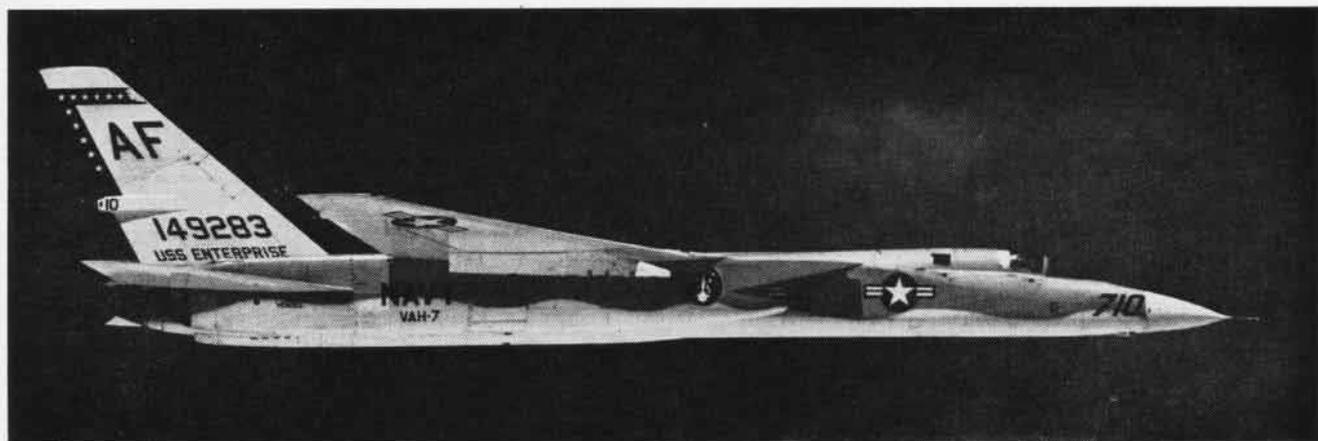
Nearest at hand is a black-box device to be installed in the aircraft which will automatically transmit a plane's altitude for presentation on the controller's scope. This should greatly reduce present requirements for pilot-controller radio transmissions.

From the Navy's standpoint, the ideal solution to the communications problem would be to have the controller switch to a flight's tactical frequency, rather than vice versa, as is done at present. This is not now possible with the equipment presently installed in centers. Automatic information handling and computer calculation of potential traffic conflicts is an odds-on probability for the future.

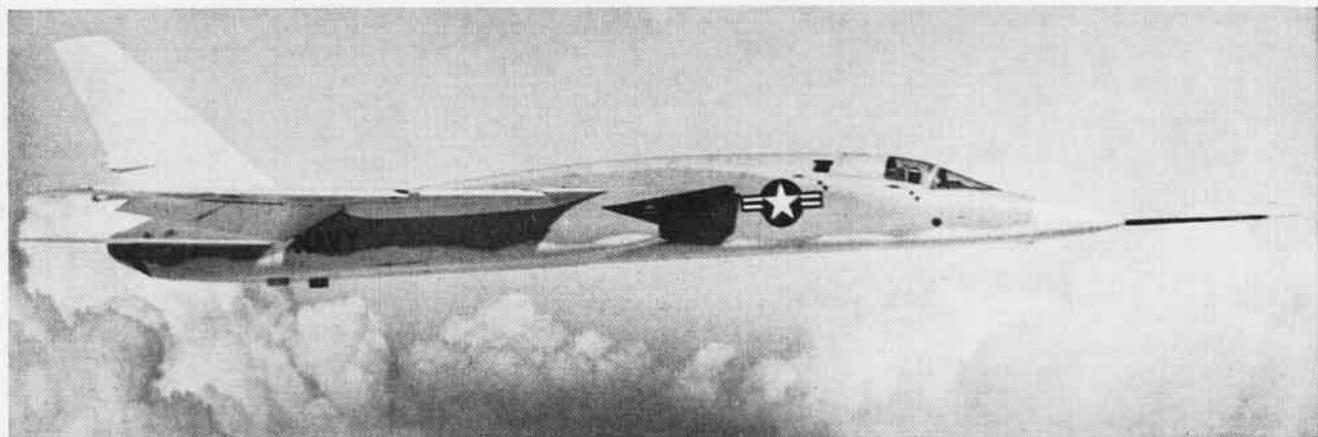
What is the Navy position on APC? The Navy endorses the principle of positive control and will make every effort to help the system succeed, *provided* APC does not result in a substantial and continuing reduction in the efficiency of Navy flight operations.

Doesn't sound too bad, does it? Give the system a fair trial; take a "can do" attitude; make the system work. APC can be an inconvenience; a collision can be a disaster.

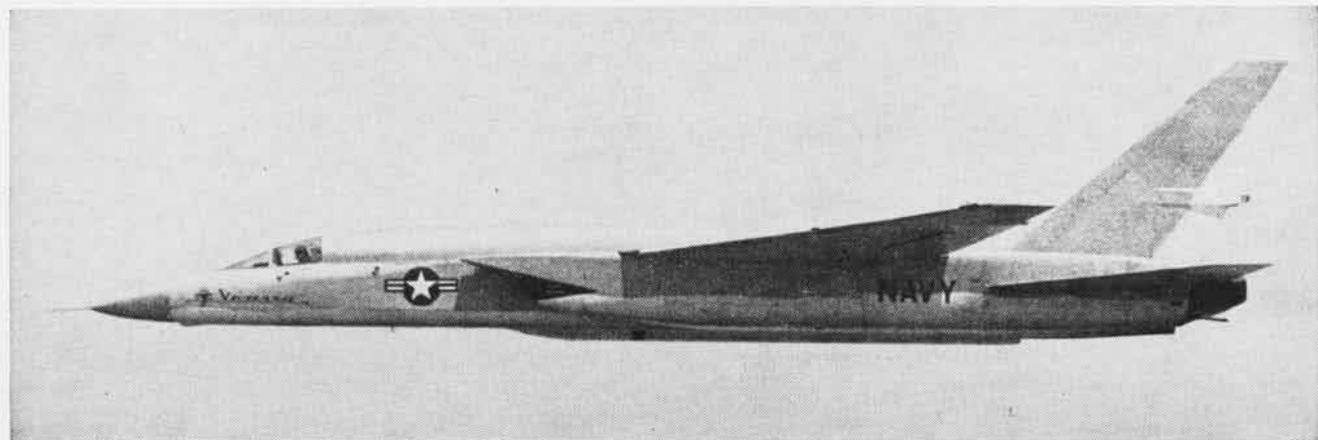
ABC'S OF NORTH AMERICAN VIGILANTE



A-5 A Designed, engineered and produced at the Columbus, Ohio, Division, the A-5A Vigilante (A3J-1) can perform missions at either extremely low or extremely high altitudes. It can deliver a variety of ordnance, including nuclear weapons, in any weather at twice the speed of sound.



A-5 B Second version incorporates increased fuel capacity which is carried in a compartment behind the bombardier/navigator's cockpit. Because of location it is called 'top-cap' fuel. The A-5B can fulfill delivery needs of general war or of a limited or so-called 'brush-fire' war.



A-5 C The third version is proof of North American A-5 Vigilante's tremendous growth potential. It furnishes the U.S. Navy with a new dimension in tactical reconnaissance, which is unmatched in other services, and yet at the very same time, it retains its full weapon capability.

THE FACE OF THE FORGOTTEN WAR



SOUTH VIETNAMESE Rangers await orders to board U.S. helicopters at right, which are manned by Marine Medium Helicopter Squadron personnel. Viet Cong guerrillas find the U.S. helos a prime target, but U.S. personnel are warned against firing unless actually fired upon.



HMM PILOT, 1st Lt. Laurence Delmore III, points to hole made by a guerrilla round.



BRIEFING his HMM pilots, C.O. LCol. Robert L. Rathbun discusses the next flight plans.



AFTER LANDING accident, downed Marine HUS personnel are evacuated by squadron helo.

“ONE OF THE BIRDS is down!” we were told.

Maj. F. M. Kleppsattel, USMC, brought our observation airplane into a steeper bank to see the helicopter wave landing below us. One of the H-34's (HUS's) from a Marine Medium Helicopter Squadron lay heeled on its side, a broken landing gear mired in the rice paddy.

Already we could see figures bursting out of the side door where, seconds earlier, ten South Vietnamese Rangers had jumped out and hustled across the paddy with that peculiar shuffling gait

By 1st Lt. John A. Hathaway
Marine Aerial Observer

which helps them find the hidden nail-festered boards the Viet Cong use as anti-personnel weapons.

On the radio a pilot reported that the whole crew was safely aboard his helicopter and that he was airborne. Then another voice cut in.

“One-two, you’ve got transmission oil all over your right side.”

“O.K., I’m shutting down. Can you pick me up?”

“That’s affirm. I’m on your left.”

“Rog.”

Below us, the rotors of another helicopter in the 18-plane second wave were slowing to stillness. Seconds later, the crew was tumbling into a second H-34 and it was airborne. Around the two downed aircraft, an occasional small geyser rose in the rice paddy as fleeing guerrillas fired from the ridges above the landing zone.

This was one of the more active moments in the never dull involvement of a Marine Medium Helicopter Squadron in South Vietnam. Warned against firing unless fired upon, the Marine

choppers are a prime target for the Viet Cong guerrillas.

This recent strike is typical of the dangers they face. Airlifting an ARVN Ranger battalion into a known guerrilla area, they met not unexpected opposition. In all, two aircraft were hit by small arms, another put temporarily out of commission in a landing accident. When the area was secured, the Marines flew maintenance personnel and pilots into the strike zone, later flew the planes out.

Flying as much as 2500 hours a month, the Marines sardonically called their conflict "the Forgotten War," as Cuba and Soviet missiles stole the headlines. Working around the clock, maintenance personnel of the squadron claim a high record of mission and over-all availability.

Said Richard Tregaskis, author of *Guadalcanal Diary*, who was doing research for *Vietnam Diary* on the scene, "They brought this fantastic *esprit* with them. They're not afraid to work and to take a risk. They are, in sum, the Marines I have always known."

1st Lt. Hathaway, in a separate article written for NANews, describes special training given to officers selected to become Naval Air Observers (Tactical). His brief but informative account, 'Eyes of a Marine Division,' follows.

OVER EVERY Marine battlefield since 1942, but seldom mentioned in official histories, has been the Naval Air Observer (Tactical), possibly the busiest man in the area.

Flying "low and slow," often at treetop level, he performs a variety of jobs. His most important function is to gather intelligence for the Marine Division Commander and adjust the supporting fire of field artillery or naval gunfire support ships.

Flying in a "grasshopper" airplane or a light helicopter (OH-43D), the air observer (AO) and pilot work as a close-knit team. A Marine Observation Squadron (VMO) is in direct support of each Marine Division. The AO's are members of Division G-2 (Intelligence) or the artillery regiment, but work closely with the squadron.

From his aerial vantage point above the battlefield, he is in the best position



BELL UH-1E (HU-1E) helicopter is scheduled to replace the OH-43D (HOK) and O-1B (OE-1) aircraft now operated in Marine Observation Squadrons. Army version is operated in S. Vietnam.

to adjust supporting fire. For the same reason, his sometimes job of tactical air control is "a piece of cake" because he has the same view as does the attack pilot. Spotting a target, he clears his mission with the ground Forward Air Controller (a Marine aviator attached to a ground unit), then marks it with smoke and talks the jets onto the target.

Marines often use this method to run close air support missions within less than 100 yards of friendly troops.

Though intelligence and control of supporting fire are his primary tasks, the AO also provides a variety of other services, ranging from reconnaissance through communications relay to delivering propaganda leaflets.

Often the VMO's second aircraft, the OH-43D, is flown in these missions. Soon, however, the new Bell UH-1E, a later model of the *Iroquois* will replace current aircraft operated. The gas-turbine powered helicopter is capable of performing all missions of both aircraft faster and allows for more time on station.

Since an AO is usually called to perform several missions in one flight—sometimes two or three simultaneously—just who is he?

He is a Marine officer (WO's to captains are accepted for training) who receives from 7 to 13 weeks formal schooling and extensive on-the-job training. Each Marine Division and the Marine Brigade in Hawaii conduct their own schools. In this way, the AO is trained with the pilots and squadron with whom he may go into combat. Usual applicants are infantry, artillery, engineer, or tank officers.

Schooling completed and 100 flight hours flown on-the-job, he acquires the designation Naval Air Observer (Tactical) and is given, as a secondary MOS, 0805 (Air Observer). . . .

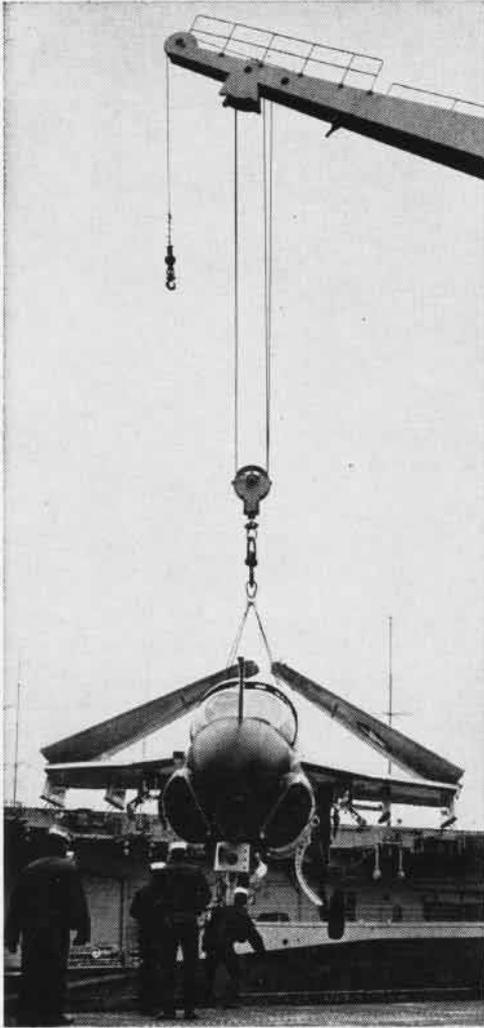
Although many Marine officers have been designated AO's (there were some enlisted AO's in WW II), there are seldom more than 50 in flying billets at any one time. This does not mean their expensive training is wasted. The inactive AO's form a trained pool for the future. Most feel they have become better officers as a result of this special training.

Summing it up, 1st Lt. Leonard A. Wunderlich, an instructor with the Third Marine Division AO School on Okinawa, said: "Although I may never again hold an AO billet, I feel exceptionally well-trained as a junior infantry officer. Having worked with them, I feel we have a much better understanding of all the supporting arms available to us in combat."

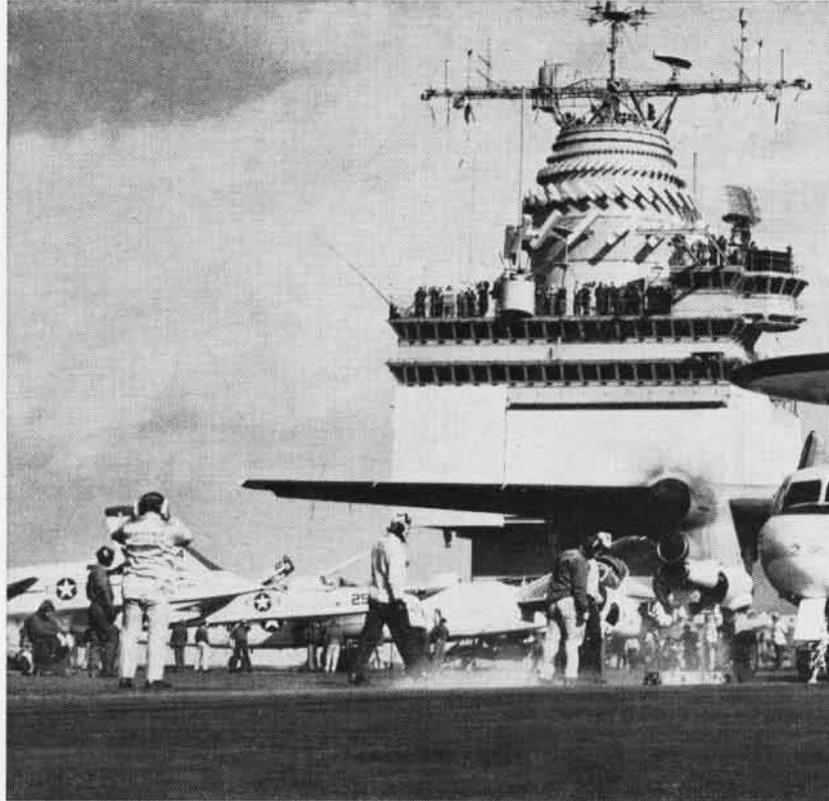
Experimentally, the Okinawa AO school is attached to a VMO squadron. All AO's hold collateral duties within the squadron and function as AO's when called to combat.

The VMO pilot/AO team forms a close brotherhood. Above and behind the front lines, they are familiarly known as the "Eyes of the Division."

● In 1928 in a three-day period, Marine Lt. Christian F. Schilt evacuated 18 seriously injured Marines under heavy enemy fire during fighting near Quilali, Nicaragua. For this "almost superhuman skill," Schilt was awarded the Medal of Honor, later became a Lieutenant General and 14th Director of Marine Aviation.



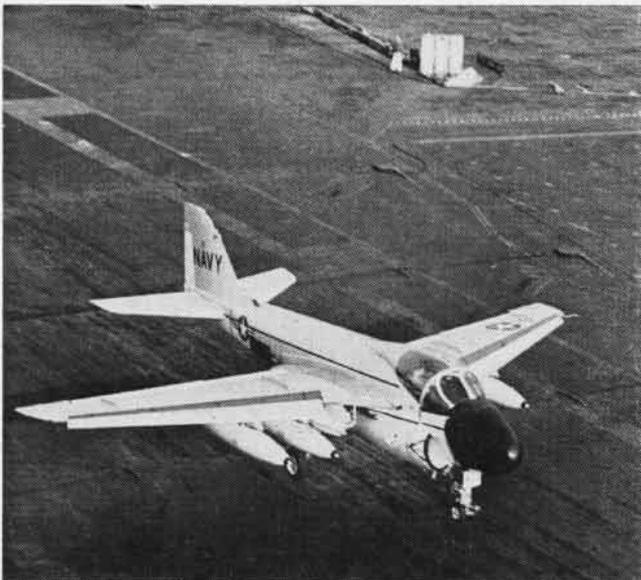
FIRST TRIP ABOARD FOR THE INTRUDER—BY CRANE!



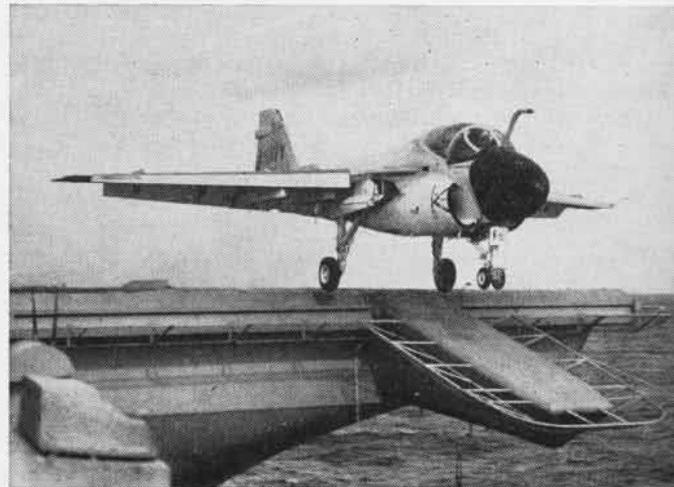
DESIGN HEAVILY INFLUENCED BY SEARCH RADAR REQUIREMENTS CH...

TRIALS ON U

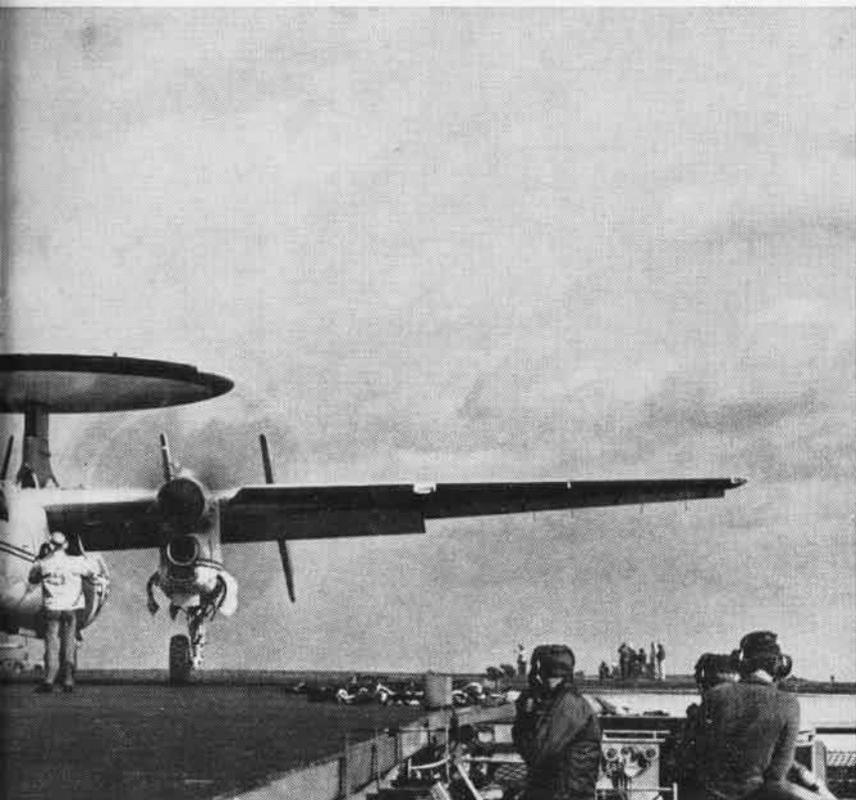
A look at the photo above reveals the most significant recent successful first carrier trials of Grumman E-2A Hawkeye on USS Enterprise. These planes are taxiing the plane forward to pick up the shuttle.



INTRUDER TRIAL OPERATIONS INCLUDED TYPICAL STORES LOADINGS



EQUIPPED WITH REFUELING PROBE, GRUMMAN A-6A LEAVES ANGLED D



FLAPS BOTH ENTERPRISE ISLAND AND THE TURBOPROP-POWERED HAWKEYE

S ENTERPRISE

...cant new feature of many that were evident in the two new carrier aircraft, the A-6A Intruder and the E-2A Hawkeye. The E-2A pilot is the first with nose-gear tow catapulting. No cumbersome bridle is needed for catapulting.



HOOK DOWN, THE HAWKEYE GOES AROUND AGAIN



FLAPS AND DROOPEDAILERONS DOWN, E-2A IS OFF AFTER TOUCH-AND-GO



TWIN T-56'S MAKE HAWKEYE MOST POWERFUL CARRIER PROP PLANE

CREW ONE, BEST ON THE BARRIER



FLYING CIC'S, such as this VW-11 "Warning Star," guard the seaward extensions of the DEW Line. VW-11's Crew One, stimulated by tough competition and a performance-measuring scoring system, achieved new performance excellence and crew satisfaction on Barrier.

By W. R. Green, JOCA

WHATEVER that mysterious something is which makes a winner, Crew One of Airborne Early Warning Squadron Eleven must have it. This crew, in competition with approximately two dozen other similar crews flying the Atlantic Barrier, won the "Outstanding Crew Award" for two consecutive six-month periods.

Odds against two consecutive wins occurring by pure chance are such that had the barrier been grinding on since the day Columbus discovered America, a double win would probably have occurred only once up to our day.

The Atlantic Barrier is designed to provide early warning of hostile aircraft trying to approach the North American continent undetected by making an "end run" around the flank of the DEW (Distant Early Warning) Line, a chain of powerful radar stations running from Alaska, across northern Canada to Greenland.

The Barrier extends through regions justly famous for some of the dirtiest flying weather found anywhere in the



OUTSTANDING CREW TROPHY goes to highest scoring of the 25 crews flying the Barrier.

Photos by M. C. Rankin, PH3

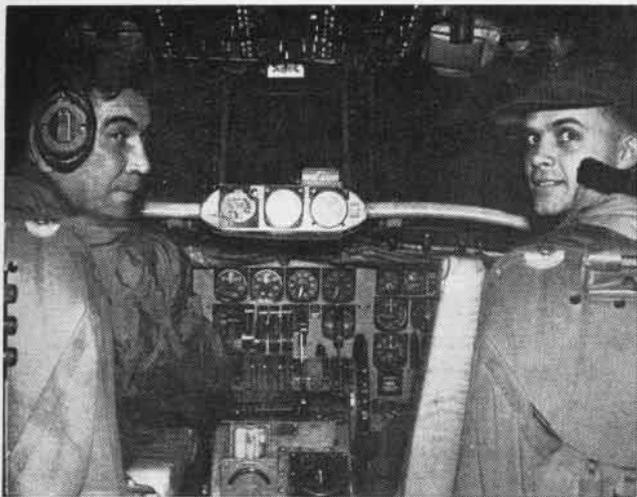
world. Almost without warning, violent storms come roaring down from the Arctic, lightning and freezing rain or hail sometimes rage, then subside.

By necessity and a strong tradition on the barrier, flights launch on schedule, almost regardless of the weather. Many Barrier veterans cannot recall a flight being cancelled for that reason.

Barrier crews fly a modification of the Lockheed *Super Constellation*, the EC-121K *Warning Star* (WV-2). The plane functions as a mobile, airborne radar station. One giant radar antenna searches a circular area 500 miles in diameter while another antenna scans vertically to fix the altitude of air targets.

About half the spacious cabin is occupied by the CIC, an assembly of radar scopes, control consoles, ECM detection equipment, communications gear, status boards and other CIC equipment.

The giant *Willy Victor* in some ways resembles a ship more than an airplane. There are bunks for men off duty, and



PLANE COMMANDER O'Hearn, left seat, and co-pilot Lt. Francis A. Harding have just secured the engines following one of barrier flights.



CIC OFFICER and Division Officer, Lt. George A. Murphy, was a key influence in developing Crew One's climate of self-controlled urgency.

a galley for hot meals. The plane even carries an abundant supply of high-usage spare parts for in-flight electronic repairs. Many Barrier crewman have even taken advancement-in-rating examinations aloft when their crew was manning the Barrier on the Fleet-wide examination day.

Atlantic Barrier squadrons, based at Argentia, fly their operational Barrier flights from Keflavik, Iceland. Crews "deploy" from Argentia to Keflavik for approximately 14 days. During this two-week period, they log about 100 flight hours, most of it on patrol between Iceland and the Danish Faeros Islands north of Scotland. On completion of its allotted patrols, a crew returns to home base for approximately 28 days.

No scheduled maintenance is performed on deployment. All major inspections and scheduled maintenance are performed at Argentia or back in the States. At Keflavik, a gang of crack troubleshooters repairs random failures and peaks up the plane and its gear before and after each flight. Troubleshooters stand by as each plane is launched, ready to fix any last-minute discrepancy.

Let's follow Crew One through a typical day on the Barrier. Such a day begins long before the aircraft actually gets into the air. Crews are in a standby status for six hours before scheduled takeoff. The Flight Engineers, John R. Warren, AD1, and Phillip R. Wilson, AD2, are at the flight line three hours before scheduled takeoff time to inspect and pre-flight the aircraft thoroughly.

A short time later Lt. Francis A. Harding, the co-pilot, reports to operations to study the forecast weather and file the flight plan. Ltjg. Michael T. Giles, the Navigator, the Second Pilot, Lt. Daniel R. Toleno, work on their charts planning the details of the flight.

In the meantime, Cdr. Charles C. O'Hearn, Plane Commander, Lt. George A. Murphy, CIC Officer, and his assistant, Ens. James A. Conaway, and Radioman, Ted West, ATI, are at BarForLant Operational Control Center for briefing.

An hour before scheduled takeoff time, all members of Crew One are aboard the aircraft completing final preparations for the flight.

Barrier flights are allowed 12 minutes leeway either side of the scheduled takeoff time. Crew One calculates the time required to taxi to the takeoff spot under the existing conditions. If the taxiways are snow-covered, it may require much longer than when clear and dry.

At the right moment, allowing time for taxi and warm-up, the heavily laden *Willy Victor* eases out of the line area and heads for the warm-up spot. When the plane is ready, and permissible takeoff time has arrived, clearance is obtained, brakes are unlocked, the plane takes the runway, full power applied, and another circuit of the Atlantic Barrier begins.

Effective performance of the barrier mission requires continuous readiness at a very high level. Most peacetime naval operations, in contrast, are aimed at preparing for some future battle or

exercise where there is a definite climax of activity. On the Barrier there are few monotony-breaking climaxes, and no period when the guard can be relaxed. The Barrier is literally "no drill."

In order to maintain the required high level of constant alertness, crew members rotate positions frequently, and then after three hours, go "off watch" for a rest period. The men in CIC rotate positions approximately every 45 minutes. A man may be on radar search one period, then put in a stint as plotter, followed by a period of operating the height-finder, and finish the three-hour watch as watch supervisor. Relieved by another crew member, he can then relax, get a hot meal, or even take a nap.

As the big plane plods along its programmed path, radar and ECM (electronic counter-measures — electronic emissions from radars, radios, etc.) contacts are relayed to the plot on the DRT (dead reckoning tracer) and changed into geographic locations. This information is checked by the CIC Officer on duty and then transmitted to the BarForLant Operational Control Center via CW radio. Within very few minutes after first detection, CIC must have its contact report in the Operational Control Center in the Headquarters of the Commander Barrier Force Atlantic.

During the patrol, technicians McCasland and Greene constantly check the electronic equipment to keep it adjusted to peak operating efficiency. Should repairs be needed, they

have enough tools and spare parts aboard the airplane to correct most malfunctions and failures. They have been known to replace the magnetron—the heart of the APS-20 search radar—and have the radar back up and on the line in just 30 minutes.

Return to base does not end the mission for Crew One. After each mission, an extensive debriefing at BarForLant Operational Control Center takes place. There, with the aid of complete records of all contact reports made during the flight, plus flight plan records on all known air traffic through the area, the flight is analyzed and critiqued in detail.

Any performance below the highest standards, such as a failure to obtain the altitude on a contact within range of the height-finder, is given particular attention.

As soon as this lengthy post-mortem is completed, Crew One customarily relays the results immediately to all those members of the crew who were not at the debriefing. Later the crew analyzes each "goof" to find its cause and determine what can be done to improve performance in that area in the future.

Competition for the "Outstanding Crew Award" is based on a very elaborate scoring system which produces almost as many statistics as a World Series baseball game. Just to qualify for competition, a crew must make at least 12 patrols during the six-month scoring period without an accident or breach of communications security.

Scores are computed for performance

in four areas: (1) readiness, (2) radar, (3) ECM and (4) communications.

The readiness of the aircraft and its equipment counts for 25% of the total score. Another 40% is based on radar contacts, primarily on the number of air targets detected compared to the number of trans-Atlantic flights known to have passed within the maximum range of its radars.

ECM counts for only 10% of the score, but it was most important to Crew One. The crew put high emphasis on ECM and picked up much of its winning margin over the next highest crew through its scores in ECM. The last 25% of the score is based on the speed and accuracy of contact reports.

Scoring ground-rules permit a flight to be airborne 12 minutes either side of the scheduled time without loss of points. Crew One had more flights go at minus-10 minutes than any other time. The crew never lost any points on this score, but had one close shave. On one occasion, an engine went sour after taxiing out for takeoff. The plane returned to the line and the troubleshooters and flight engineers changed two dead plugs in 18 minutes flat, thus permitting the flight to get airborne during the scheduled period.

What was that certain something that gave Crew One the edge over the other sharp and competent crews in the competition? One answer is surely good luck. There are many accidents of weather or equipment failure which could have knocked them out of the competition. Luck is not, however, the

whole answer. Lady Luck is known to bestow her favors more lavishly on those hard-working, forward-looking souls who do not place upon her the whole burden of success. Crew One never left to chance anything in which forethought, training and hard work could shade the odds in their favor.

Custom dictates, and rightly so, that a major share of the credit for the success of any team or organization should go to the man who heads it.

Cdr. O'Hearn, like virtually every Navy line officer, has a varied background of training and experience. As a Barrier plane commander, his particular capabilities meshed almost perfectly with the unique requirements of the job.

Like every other plane commander flying the Barrier, Charles O'Hearn is a topnotch pilot. In addition to that essential qualification, he has a professional-level understanding of the CIC mission and an ability to evaluate and appreciate the performances of the men whose skills contribute to that mission.

An Aviation Machinist's Mate, 1C, before he went into flight training, Cdr. O'Hearn understood the problems of the engineers. A tour as Assistant CIC Officer of the aircraft carrier USS *Bennington* gave him a depth of understanding of the CIC problems and the eccentricities of working with electronic gear.

A graduate of Intelligence post-graduate school, with two tours of intelligence behind him, he understood vividly the necessity for communications discipline and the advantages to



ENS. ROGER A. GARRETT logs navigational data. The plane's precise location must be known in order to give accurate position of air targets.



PLOTTERS C. D. Stroud, ADAN, and J. W. Raven, AA, convert radar data into geographic position for relay to BarForLant Control Center.



CW RADIO—dots and dashes—are normal communication link between planes on Barrier and OpCon Center at ComBarForLant Headquarters.



TECHNICIAN Harold L. McCasland monitors gear to keep it "peaked." Enough tools and parts are carried to permit many repairs in flight.

be gained through full exploitation of the possibilities of ECM. Members of Crew One tried to deliver their best performance knowing they were being judged by one who could appreciate the best.

Perhaps Cdr. O'Hearn's personality and manner had something to do with that certain something—call it morale, call it *esprit de corps*, call it unit pride—which made Crew One keep striving to prove itself. People who have known him for years and observed him under extreme stress have never seen him lose his appearance of utter composure.

When the Navy sent him to Ohio State University under the Five-Term Program, Charles O'Hearn managed to pack a four-year college education into 21 months and was graduated "Cum Laude" in Business Management with a minor in Personnel Administration.

The fact that Cdr. O'Hearn, at 45, is a full generation older than most members of Crew One, combined with his understanding of their problems and an ability to judge superior performance, may have given impetus to the cooperation and team spirit which characterized the crew.

Lt. George Murphy, the CIC Officer, is another individual who made essential contributions to the "climate" of Crew One. Lt. Murphy is an ex-patrol plane commander who lost his wings because of eyesight. In addition to his technical competence as a CIC officer, Lt. Murphy had a genuine concern and feeling of empathy, in the best division officer tradition, with the members of his CIC team. To him every man was

an important human being as well as an essential cog in a complex man-machine system.

Though its exact cause must remain a matter of speculation, the fact that Crew One was blessed with a climate of mutual confidence and respect cannot be denied. Every member had a firm conviction that Crew One was worthy of his best efforts.

Even temporary members of the crew were infected with this spirit.

Owing to shortages of personnel in some skills, there were not enough for full assignment to all crews. Thus some members went from crew to crew. When these men came to Crew One, they worked as hard as any of the

crew regulars to make sure that no mistake or failure on their part would jeopardize the standing of the crew.

All members of the crew, regulars and temporary members, were constantly reminded that while no one member could claim credit for its success, a failure on the part of any man on it could cause the team to fall from the top spot in the competition—or even bring on disaster.

All men in the crew were extensively cross-trained. Such was the spirit in Crew One that no member ever had to be ordered to pitch in and help in "out of his rate" work. Every man on the team was constantly on the alert for opportunities to contribute to improved performance.

Smooth coordination of individual effort is important to the performance of any kind of team, even of draft horses pulling a wagon. Disciplined teamwork is doubly important in such a complex operation as that of a flying CIC. Crew One had high-order discipline, discipline founded on the willing cooperation of its members.

An important contribution and cause of their superior performance was surely the stimulation of competition and of the performance-measuring scoring system which made that competition possible. This scoring system enabled all crews to see how they were performing, both in relation to their own previous performance and to that of the other teams in the competition.

Crew One kept the latest performance figures posted in the aircraft where every man would see—the galley.



PREPARATIONS, intensive and time-consuming, are made before each barrier patrol flight.

EL TORO AIR-SEA RESCUE TEAM FORMED

AMERGER, now underway at MCAS EL TORO between members of two off-duty sports clubs, will produce a sky-sea rescue team unique to Southern California.

The plan is to combine the talents of skydiving parachutists and underwater skin divers. Parachutists trained in first aid and life-saving techniques will leap from planes and plummet into the sea in complete SCUBA gear (self-contained underwater breathing apparatus) ready to assist shipwreck survivors and others in distress.

Members of El Toro's *Diving Bulls* (the largest military SCUBA club—70 members—on the West Coast) and parachutists of El Toro's *Skydivers* form the nucleus of the enterprise.

Training has already started for the first six Marines engaged in this voluntary air-ground-sea rescue unit. Four *Diving Bulls* made their first series of parachute jumps from 3000 feet early in January. They will make 25 air-to-ground jumps before attempting the air-to-sea plunge.

Two *Skydivers* are now in training in the use of SCUBA gear. They will rack up more than 30 hours training in the water before jumping from planes in their SCUBA outfit.

Members of the *Diving Bulls* include SSgt. Bob Voss, Cpl. Tom Thompson, Cpl. Larry Moser and Pfc. Harold Paderick. The *Skydivers* are Sgt. Dave Becker and Sgt. Senico Varela.

Pfc. Paderick and Cpl. Moser are qualified water safety instructors and have been trained in first aid by the Southern Orange County Chapter of the American Red Cross. All of the rescue team will be trained in first aid by the Red Cross before becoming full-fledged members.

After skydiver Paderick made his first parachute jump, he admitted to a "butterflies in the belly" sensation but did remarkably well, missing his landing target by only 20 feet. He said, "I jumped from 3000 feet, counted off six seconds, then felt a tug at my shoulder. I looked up to see the most beautiful sight—that gorgeous canopy in full bloom. The sensation of falling was gone. I seemed to be suspended in mid-air."

Many modifications in their underwater equipment will be needed. For instance: It is neither practical nor safe to hit the water wearing the present form of feet-flappers. The team must modify them or learn to put them on after plunging into the sea.

Blending the talents of skydiving and skindiving doesn't strike the members of the rescue team as being unusual. As one member remarked, "Well, as Marines, we already have a long tradition of land, air and sea."

VP-22 Excels in Safety Returns to Hawaii from Iwakuni

Navy Patrol Squadron 22, which has since rotated to Hawaii, established one of the finest safety records ever known at MCAS IWAKUNI during a six-month stay there.

The squadron's safety record went unblemished for the full six months, during which VP-22 pilots accumulated more than 16,000 accident-free flight hours. This brought the squadron's total safe flying time up to more than 81,000 hours.

Since January 1954, the squadron has been cited continually with the ComNavAirPac Quarterly Safety Award. VP-22 also received the CNO Safety Award for the years 1956 and 1959.

On its departure from Iwakuni, VP-22 was awarded a letter of appreciation by the Japanese Maritime Self-Defense Forces for the squadron's help in locating a downed Japanese aircraft on November 10. In special ceremonies, Cdr. John L. Kauth, VP-22's C.O., accepted the letter from the JMSDF Air Training Command Chief of Staff, Capt. Nobuo Ando.

Navy Patrol Squadron 28, commanded by Cdr. Lloyd A. Kurz, relieved VP-22 in late November at MCAS IWAKUNI, Japan.

Norfolk's 100,000 GCA's Unit #12 Commissioned in 1947

GCA #12, commissioned in 1947, controlled its 100,000th ground controlled approach landing at NAS NORFOLK the end of December.

LCdr. C. R. Pendell, flying a Navy *Beechcraft* with Lt. M. R. Rumelhart of the USS *Valcour* as co-pilot, made the landing.

Ground Controllers J. J. Falcone and C. P. Clous directed the landing.

Since its commissioning, GCA Unit #12 has operated five types of radar equipment; until recently, the radar complex consisted of three independent units in operation at one time.

LCdr. D. D. Abbott relieved LCdr. R. K. Culbertson as O-in-C in December.



THIS IS ONE of 28 Sikorsky HH-52A helicopters being delivered to USCG air stations ringing continental USA. The Coast Guard selected the single-turbine, boat-bulld HH-52A last year after lengthy evaluation. It carries the latest in electronics gear, including automatic stabilization equipment. In evaluation tests, this helo model flew 230 miles on a simulated rescue mission, picked up six survivors and returned without refueling. It has a GE T-58-8 gas turbine engine.

PHOTO-CRUSADERS PLAY DECISIVE ROLE



LT. WILLIAM N. KELT, photo pilot from VFP-62, tells his maintenance crew how his plane performed in a recon flight over Cuba.



TEN NAVY and Marine Corps pilots, awarded the Distinguished Flying Cross, pose with C-in-C Atlantic, Adm. R. L. Dennison.

CHANCE-VOUGHT RF-8A photo-reconnaissance *Crusaders* (F8U-1P) played a big role in keeping Castro's Cuba under aerial surveillance during the crisis last fall.

Light Photographic Squadron 62 flew the "1-P's" and brought to light the Cuban missile buildup. VFP-62 is regularly based at Cecil Field, Fla.

A member of the *Crusader* airplane family of Ling-Temco-Vought division, the photo-recon airplane has almost the same silhouette as the fighter version. Its fuselage is slightly enlarged and squared underneath to afford installation of flat optical glass.

One of the top photo-recon aircraft

by virtue of its speed, altitude and range capabilities, the RF-8A was the first aircraft to span the nation faster than the speed of sound. Flown by Marine Aviator John Glenn, later to become the first U.S. astronaut to go into orbit, the photo *Crusader* also achieved another "first" by making a supersonic map of the nation from coast to coast and horizon to horizon during its record setting run. It was equipped with three trimetrogon CAX-12 and two K-17 aerial cameras.

VFP-62's work during the crisis earned 16 pilots the Distinguished Flying Cross for "extraordinary achievement in aerial flight." The awards

were made by RAdm. Joseph M. Carson, Commander of Fleet Air Jacksonville and Naval Air Bases, 6ND.

Later President Kennedy in his tour of the military build-up bases in the Florida area presented the Navy Unit Commendation to the squadron.

The citation read: "For extraordinary achievement in the planning and execution of aerial reconnaissance during 1962 on missions in support of the operations of the utmost importance to the security of the United States. The successful completion of these flights in the face of adverse circumstances was in keeping with the highest traditions of the U. S. Naval Service."



LINE PHOTOGRAPHERS go into the essential parts of RF-8A after a flight over Cuba.



RADM. CARSON talks with Lt. G. L. Coffee and Lt. A. B. Day to get their report of flight.



LTJG. M. M. COX (C) explains to Coffee and Day indications on the films of missile sites.

WEEKEND WARRIOR NEWS



NEW YORK HELICOPTER drops towline to be attached to downed civilian plane. Light aircraft was towed to shallow water, hauled to beach by an Army tank. All four occupants escaped injury.

Record Breakers in Schooling

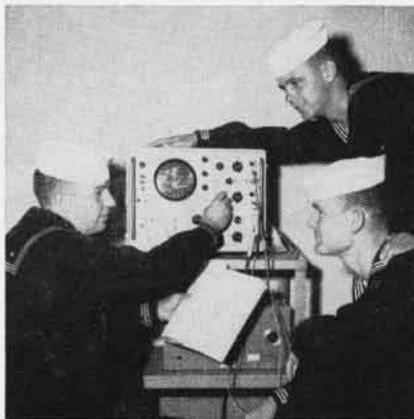
Three Naval Air Reservists at NARTU ALAMEDA may have set new records in accelerated education. Under the six-month training program authorized in the Naval Air Reserve, the trio completed several school periods, usually of long duration, during their six months of active duty.

James McClay completed recruit training, the Aviation Familiarization, Avionics Fundamentals and Aviation Electronics Technician training, plus special classes in specialized equipment for the p-2 *Neptune*. During the same period, Niel Larson completed recruit training, a 28-week course in ATN (A), a 21-week course in ATI (B), and in his spare time took part in activities of the company band, drill team and choir. Robert Carlson completed recruit training, the familiarization school, Avionics Fundamentals, the nine-week ATN(A) and 32-week ATI(B) course. He was top man in the AFU(A) and ATN(A) schools.

Two Emergency Responses at N. Y.

A helicopter and giant crane from NAS NEW YORK assisted in two separate emergency situations—one at sea

and one on land. The first involved the saving of an Army flying club *Navion* aircraft which had crashed into the water 500 feet off Midland Beach. LCdr. J. T. Stulz, C.O. of HS-832, after learning that the passengers and pilots had been rescued, flew over the downed aircraft. With the help of civilian volunteers from Miller Field beach, a towline was attached and the helicopter dragged the *Navion* toward shallow water. An Army tank pulled it onto the beach where the salvage job



ACCELERATED RECRUITS compare notes on electronics test equipment at NARTU Alameda.

could then be efficiently accomplished.

The second incident involved use of the Floyd Bennett crane (cherry-picker) in assisting the removal of victims in a railroad crane accident. The Navy crane, under motorcycle escort, was rushed to the Coney Island area to hoist the cab of a demolition crane which had fallen through a pair of railroad tracks, killing three men. Civilian employees Joseph Cavallo and Ed Guffre worked for four hours removing the wreckage.

Management Ability Recognized

LCdr. Robert Brunson, Supply Corps, received a Secretary of the Navy Achievement Award for "outstanding management contributions" in a ceremony at South Weymouth. The award was made by Capt. Forrest Pease, C.O. of the Massachusetts station, just prior to LCdr. Brunson's departure from the station on change-of-duty orders. He was cited, in part, for programs which "resulted in economy of operations



SECNAV Commendation is presented to LCdr. Brunson by S. Weymouth C.O., Capt. Pease.

through savings of manpower and reduction of expenses while providing excellent supply effectiveness." He departed for the Navy Transportation Management School, Oakland, Calif.

Reservists Transport Shoes

A delegation of Naval Air Reservists

from South Weymouth warmed the hearts and feet of some 400 orphans in Kenitra, Morocco, when they delivered a truckload of shoes to the needy youngsters. Delivery was made by members of VR-912, who carried the shoes with them to NAS PORT LYAUTEY to commence a two-week training period. More than 1500 pairs of shoes were donated by a Randolph, Mass., shoe manufacturer for delivery by Reserve Transport Squadron 912.

Navy Unit Commendation Medal

Two NARTU JAX personnel, assigned temporarily to the VFP-62 photo lab at Jacksonville, received Navy Unit Commendation awards issued by the President following the Cuban crisis. Those who were honored were Photographer's Mates I. J. Fullerton and J. C. White.

Other Reservists at Jax participated in the airlift of men and equipment in connection with the Cuban quarantine. They included VR-934 of NAS WILLOW GROVE, Pa., who, during a two-week training period, logged 270 hours in the air and transported 570 personnel and 16,000 pounds of cargo.

NARTU's own aircraft participated in the airlift of fleet personnel from Norfolk to Key West to take part in the buildup of defenses. A NARTU JAX aircraft also flew newsmen to the Caribbean area to obtain first hand coverage of removal of offensive weapons from Cuba. During the flight the aircraft circled over the Soviet ship *Krasnograd*, enabling photographers to take pictures of the missiles' departure.



ELEVEN YEARS AGO Barry Schen, 6, stood proudly beside his father at inspection. . . .



THE SAME Barry Schen, again at father's side, is in his new, full-sized suit standing the inspection of VR-834 at NAS New York.

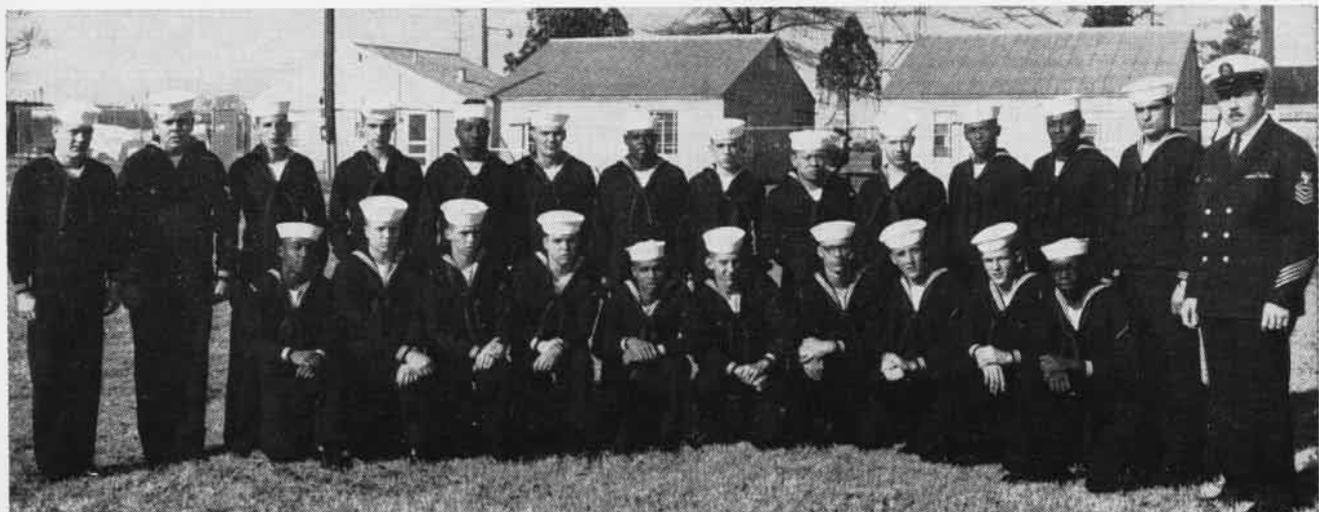
Meritorious Mast for GCA Men

Atlanta's GCA Unit (#20) prevented what could have been a serious ground accident and five members of the unit received commendations for their alertness. The incident took place in November when, with an aircraft on the runway ready to take off, an unidentified and unannounced aircraft showed up on the GCA radar on a one-mile final approach to the same runway. By calling the tower for a quick "hold" on the aircraft awaiting take-off, a possible accident was prevented.

The approaching civilian aircraft was making a no-radio emergency approach to Dobbins AF Base, which is also the home of NAS ATLANTA. Enlisted men cited at mast by Capt. I. J. Schwartz, NAS Commanding Officer, were: W. L. Neary, AC1; L. Luther, AC2; J. L. Tyson, AC1; Charles Young, Chief Radarman, and R. A. Johnson, Radioman First Class. The mast was based on a letter from the Dobbins AF Base commander.

New Year's Day Graduation

Twenty airmen from Virginia and Pennsylvania completed a 14-day recruit training period and were graduated at NARTU NORFOLK on January 1. Studying over the year-end holiday period, the recruit trainees completed training in Navy regulations, physical fitness, close order drill, religious training, discipline and watch standing. Class members were enlisted for six years, will spend two years on active duty and four years in Reserve.



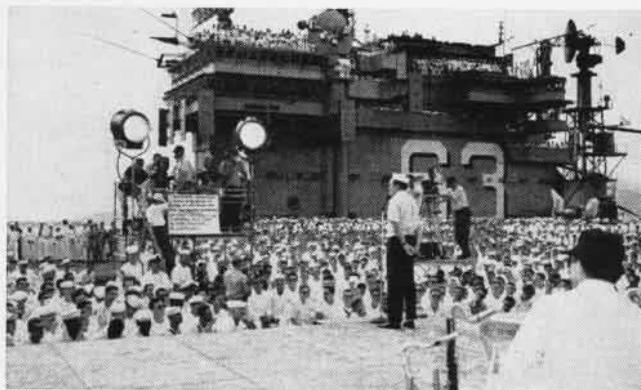
NEW YEAR'S DAY graduation marked the end of recruit training period for twenty trainees at NARTU Norfolk. Two weeks of holiday drill and

study prepared the airmen recruits for duty with Norfolk weekend squadrons. Active duty commitments include two years with the Fleet.

AT SEA WITH THE CARRIERS



ANITA BRYANT leads the Hope troupe in the singing of "Silent Night." After the first chorus, 6000 men of the Kitty Hawk audience joined in.



"WHO SAYS they don't have a White Christmas in the Philippines?" quipped Bob Hope as he looked out on the white-uniformed sailors.

PACIFIC FLEET

Kitty Hawk (CVA-63)

The *Kitty Hawk* entertained and was entertained by the Bob Hope touring show at Cubi Point, Luzon Island, Republic of the Philippines. Some 6000 crewmen and guests watched the renowned American comedian, accompanied by Lana Turner, Janis Page and several Hope "regulars," put on one of his touring entertainment programs for the crew. The heat caused Hope to give out quips about "baked ham on stage." It was one of his stops on a Pacific trek for the holidays, an annual jaunt for Hope.

An earlier visitor to the *Kitty Hawk* was Francis Cardinal Spellman, Catholic Archbishop of New York, who celebrated a mass with crewmen two days before Christmas.

Ranger (CVA-61)

Ranger's milestone-cake baker—who fashioned a 400-pound cake to mark the carrier's 50,000th landing—was given a milestone cake, himself. The baker, Bob Rogers, CS1, was honored for making his 20th cake commemorating a 1000th landing. To Ltjg. Don Watkins of VF-96 went the honor of making the first cut in Rogers' 20th cake. Watkins made the 50,000th *Ranger* landing in an F-4B *Phantom II* (F4H). *Ranger's* C.O., Capt. George

Duncan, and RAdm. Paul Masterton, ComCarDiv One, presided over the double ceremony.

Bon Homme Richard (CVA-31)

Before spending its holidays in the Far East with the Seventh Fleet, the *Bon Homme Richard* had time to rack up many milestone landings among its embarked air group pilots. The ship celebrated its 84,000th landing (VF-191's Ltjg. W. M. Williams, pilot); its 85,000th (VF-193's LCdr. D. E. Swank); 86,000th (VA-192's Ltjg. E. K. Bannan) and its 87,000th (VA-195's Ltjg. J. F. Smith).

VA-196 added six to its *Centurion* roster, including five double and one triple *Centurion*. Lt. A. E. Keen made his 300th landing and Lt. R. Gorman, Lt. C. H. Yohe, Lt. E. S. Baker, Ltjg. D. D. Kalember and Ltjg. P. R. Wood

hit the 200-landing mark.

LCdr. Dale Vandermolten, VA-192, became a "Nocturnon," which means he has now logged 100 night landings in the *Bon Homme Richard*. He has passed the 500-landing mark and has already become a *Quadruple Centurion* on the carrier.

Hancock (CVA-19)

Five squadrons, in a 20-day cruise aboard *Hancock*, qualified 84 men in daylight operations and 77 in night landings as the ship cruised off the coast of Hawaii before heading for the Alameda docks for the holidays. Fighter squadrons involved were VF-121 and VF-124. Attack squadrons on board were VA-122, VA-125 and VAH-123.

A 14-year-old heart patient, Miss Claire Sprague, visited the ship early in



USS TICONDEROGA (CVA-14) has something to be proud of in winning for the third consecutive time a Battle Efficiency E. Capt. J. G. Daniels, III, C.O., announced they would try for a fourth.



CONSTELLATION was recipient of five tons of snow, shipped in by a San Diego radio station to the group that could make best use of it.



CONNIE GAVE a party for crew members' children at which there was a snow man, Santa Claus, a magician, and, of course, food and presents.

January to thank members of the *Hancock* who had supplied the blood for her three major heart operations. Forty-nine pints of blood had been required for Claire in the fall of 1962. In all, 177 pints were given. Of this total, 57 were immediately transferred from the *Hancock's* credit in the 12th Naval District Blood Fund.

Constellation (CVA-64)

Snow in San Diego? Impossible? Not so. The *Constellation* was recipient of a special load of snow, delivered to the flight deck in 60-degree temperatures over the holiday season. The snow was delivered after members of the *Constellation's* Operations Department wrote a letter to a San Diego radio station which offered snow to any group who had plans for good use of the frozen stuff during the holiday season. *Connie's* crew won, used the snow as part of their on-deck holiday party celebration.

Ticonderoga (CVA-14)

Accepting the third consecutive Battle Efficiency E Award, the Commanding Officer of the *Ticonderoga*, Capt. James G. Daniels III immediately announced that the ship was starting to work toward its fourth award and "I don't think any TICO Tiger will be satisfied until we have the Gold E for winning five consecutive years." The presentation was made by VAdm. Paul D. Stroop, Commander Naval Air Force, Pacific Fleet.

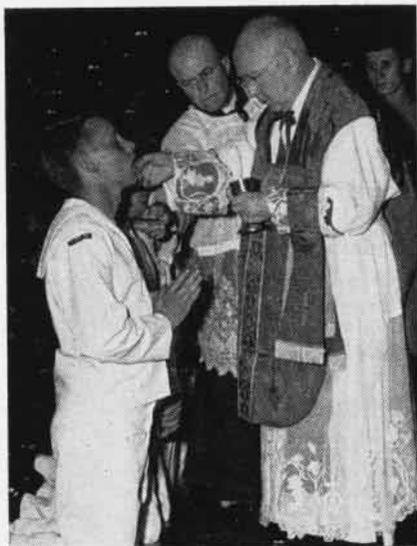
Yorktown (CVS-10)

On January 21, the "Fighting

Lady," USS *Yorktown*, celebrated the 20th anniversary of its launching. She was sponsored by the late Mrs. Franklin D. Roosevelt. In special ceremonies not only was the anniversary noted, but the *Yorktown* was awarded the Battle Efficiency E, the finest of her class in the Pacific Fleet. Receiving the coveted award presented by RAdm. Joseph A. Jaap, ComCarDiv 19, was Capt. W. C. Moore, the "Fighting Lady's" 16th Commanding Officer.

Ens. Joseph R. Heaston of VS-25, on January 10, made the 87,000th landing in an s-2 *Tracker*.

Six days later, USS *Yorktown's* 15,000th helicopter landing was made by Cdr. R. H. St. Clair, Executive Officer of Helicopter Anti-Submarine Squadron Four, a unit of CVSG-55. Cdr. St. Clair was piloting an SH-34G *Seaborse* helicopter (HSS-1).



CARDINAL SPELLMAN serves holy communion to a crewman on *Kitty Hawk*, Christmas, 1962.

ATLANTIC FLEET

Intrepid (CVS-11)

Chaplain C. R. Weber published a quiz in the ship's newspaper, *The Ketcher*, asking a series of 15 personal questions to be answered *Yes* or *No* by crewmen. Included in the quiz were such statements as (1) "I write home less than once every two weeks. (2) I never pray. (3) I drink or eat or smoke too much. (4) To express myself I have to use profanity." The chaplain's scoresheet stated that a score of 10 YES (out of the 15) answers called for "a visit to the Chaplain NOW." If the score is between five and 10 YES answers, "You ought to get acquainted with the chaplain." For anyone who answers NO to all the questions, the Chaplain said, "You are either a saint or a liar and, in either case, the chaplain would like to meet you."

Saratoga (CVA-60)

RAdm. Robert J. Stroh is "back home." As Commander Carrier Division Six, the Admiral now flies his flag in the *Saratoga*. Six years ago he was the ship's first commanding officer, taking her through the commissioning and shakedown periods.

After its tour in the Guantanamo area during the Cuban crisis, *Saratoga* took its Christmas liberty in its homeport (Mayport) for the first time in four years.

The 65,000th arrested landing was made by a Marine pilot stationed aboard *Saratoga* with VMA-324. At



LTJG. J. B. McFADDEN (right) explains equipment for landing planes on the four-acre flight deck of *USS Wasp* to visiting college midshipmen.



BOXER REVERSED normal operations in 40-knot winds. Marine O-1 took off as "wrong way" carrier steamed with wind off port quarter.

the end of a week of carquals, 1st Lt. R. S. Coates rode in on an A-4B *Skyhawk*, caught the cable—and Sara is now started toward the 66,000th landing.

Forrestal (CVA-59)

During the ceremony in which he relieved Cdr. Earl Yates as CAG-8, Cdr. Julian Lake was presented with the SecNav Commendation Medal for services rendered in connection with the development of the F-4B *Phantom II* (F4H) weapons system. Cdr. Lake, former C.O. of VF-74, assumed his new job while the carrier was in Genoa, Italy. RAdm. John Hyland, Com-CarDiv Four, made the presentation.

Franklin D. Roosevelt (CVA-42)

An *FDR*-based helicopter made a night rescue flight in the Greek moun-



RADM. HYLAND pins award on Cdr. Lake for service in helping develop F-4 weapons system.

tains to pick up a stricken man who required hospitalization. The flight from the *FDR* was made by LCdr. Stephen Denham, who flew inland without aid of maps until he found a few lights and bonfires burning in an open field. It turned out to be his assigned field. The stricken man was taken to Athens for hospitalization and was later reported to be recovering.

The 117,000th arrested landing was made January 5 by Ltjg. Edmund O'Brian. He was flying an A-1H (AD).

Wasp (CVS-18)

Eighteen NROTC midshipmen from the Boston area spent the holiday period in the *Wasp* taking a training cruise. Highlight of the cruise was a stopover in Bermuda where the *Wasp* and escorts spent Christmas day.

Boxer (LPH-4)

Light Marine aircraft had the *Boxer's* oldtimers shaking their heads the other day. The Marines' O-1 (OE) spotter aircraft took off from the deck from forward to aft. Forty-knot winds (actual wind), which allowed the ship to maneuver into a position of 20 knots (relative wind) off the port quarter, permitted the light planes to fly off the tail easily.

Career Togetherness

Talk about coincidences! One happened in San Diego aboard *USS Constellation* (CVA-64) one day in early

January that would have had the late Robert Ripley rushing for his "Believe It Or Not" drawing board in a twinkling of an eye.

The Commanding Officer of *Constellation*, Capt. S. W. Vejtasa, had as his guests aboard ship two other Commanding Officers of aircraft carriers—Capt. J. G. Daniels, *USS Ticonderoga*, and Capt. C. A. Iarrobino, *USS Oriskany*.

This in itself is not earth-shattering. But consider this: All three earned their wings at Pensacola Flight School, Class 116C, in August 1939 . . . all three are now commanding officers of aircraft carriers . . . and, the three ships were in the same port at the same time. The odds are great against such an occurrence.

One other item might also be considered. None of the three is an Annapolis graduate. All three were graduated from colleges or universities before attending flight training school



CAPT. VEJTASA, *Constellation* C.O., plays host to carrier skippers Daniels and Iarrobino.



U.S.S.R. HOUND

The Hound is a single-rotor general purpose helicopter. Recognition features include a droop snout look, a container attachment mounted on the underside of the fuselage, and a fixed, four wheel landing gear. The Hound carries a crew of two and can accommodate 10 passengers or 14 troops. Bulky freight is loaded through clamshell doors at the rear of the main fuselage. It has a combat weight of approximately 11,000 pounds. It has flown to an altitude of over 19,843 feet.

NAVAL AVIATION LOOKS AT AFM 66-1



USAF ANALYSIS technician, MSgt. E. A. Herbstreet, instructs a group of VA-72 men in mechanics of 66-1 maintenance information system.



66-1 INFORMATION system pins down facts on repair of this VA-72 Skyhawk, helps squadron get best use of men and maintenance material.

WE WHO are involved, at the BUWEPs level, in naval aircraft maintenance management are proud of the progress made since publication of the first organization and procedures manual, BUAEER Instruction 5440.2, in September of 1958.

The latest of many progress milestones was publication, in the late summer of 1962, of a comprehensive maintenance management manual, BUWEPs Instruction 4700.2, *The Naval Aircraft Maintenance Program* (NAMP). This maintenance officer's "bible" brought the whole program together in one handy volume, superseding 5440.2 and many other basic and related instructions.

Although we are proud of what has been accomplished, we realize the NAMP is neither perfect nor complete. Progress is never finished business.

The next requirement in the development of the NAMP is for a comprehensive maintenance management "intelligence" system. We need an information system which can provide everyone concerned, from the Shop Chief to the Bureau Chief, the information needed to get the most readiness from the resources—trained men, parts, publications, facilities, equipment, etc.—available.

The Navy's Malfunction Reporting Program provides much useful information for higher levels, but we have yet to implement a system that will

LCdr. Jack Riley, BuWeps

provide the people on the aircraft maintenance "firing line" firm answers to questions such as those in the Maintenance Officer's quiz, opposite page. Without this kind of information, managers are at the same disadvantage as the battlefield commander without an intelligence system.

One such system showing promise of meeting Navy requirements is set forth in Air Force Manual 66-1, the U.S. Air Force equivalent of BUWEPs Instruction 4700.2. After considerable study and numerous visits to Air Force activities to see it in action, Navy has established a pilot program at NAS OCEANA to evaluate this system.

The 66-1 information system is designed to meet the requirements for a cost accounting system—based on man-hours rather than dollars—for local maintenance managers as well as some of the requirements of a failure reporting system. With the aid of automatic data processing (ADP) equipment, reports on man-hours available and maintenance work accomplished are used to develop the information needed at all levels of maintenance management.

Information demanded from working level maintenance people is held to a minimum. Two basic types of reports are required: man-hour exception reports and maintenance trans-

action reports. [Editor's note: See "Fighter Mission Data Automated," NANews, October 1962, pp. 34-37, for a report on a similar use of ADP.]

The man-hour reporting system answers the question, "How much maintenance manpower is assigned to a squadron and how is it utilized?" The system employs the "exception" principle. As long as a man works full time at his assigned job, no report is filed. When he performs other than his assigned job, is loaned to another work center, is idle awaiting parts or assistance, etc., a card is made out reporting the exception.

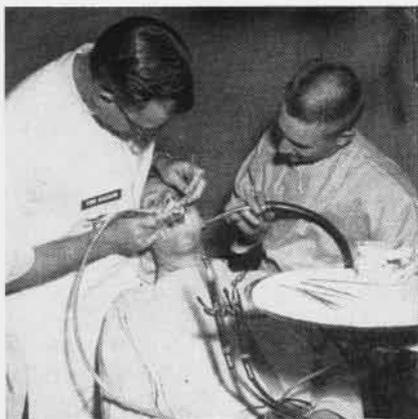
Filling out the man-hour exception reports is actually a fairly painless job. Each shop has EAM type cards already partially filled out and prepunched for each man assigned. A report involves merely checking a few blanks and entering the duration of the exception. For instance, a man returning from sick call, pulls a card with his name on it, checks a blank showing that the exception is in "labor distribution code change" puts another check in the box for "medical," then enters the total time off, such as 1.3 hours. The whole report takes only a few seconds to complete.

The accumulated cards are picked up from each work center daily and processed at the base data processing center. Next morning the shop supervisor receives a print-out showing what

became of his manpower on the previous day. If there are any errors on the report, he marks up the correction and returns the corrected copy for use in preparing semi-monthly Actual Labor Utilization Reports.

Monthly reports are distributed to each work center supervisor, to each division officer covering all work centers in his division and to the maintenance officer for his department.

While man-hour accounting shows the extent of the manpower available for direct productive work, Maintenance Transaction Reporting develops information on what was actually accomplished with it. Each time a man, or a team of men, completes a maintenance job, a report is filled out. Since these reports also provide information along the same lines as the Navy FUR



DENTAL WORK, many other activities, claim time of maintenance men assigned to VA-72.

system, they call for some details. This report identifies the weapon system or equipment involved, the system, subsystem and part concerned, the nature of the failure or the maintenance transaction and the time required to complete the corrective action.

Since the same reports provide the raw material for the information needs of all levels, two sets of punch cards are made up from each report. One set of cards is forwarded to a service-wide data processing center at Memphis while the other set is retained for base level information needs.

Base Statistical Services develops several reports from data collected through man-hour accounting and maintenance data collection for the aid of base maintenance management. In addition to nine routine reports, which are analyzed and summarized by highly

MAINTENANCE OFFICER'S QUIZ

1. How many maintenance man-hours per month (MMH/M), by rating, job code and skill level, are required to keep your squadron's planes mission-ready under normal operational schedules?

2. How many MMH/M are assigned to your squadron?

3. How many of the total MMH/M assigned to the squadron are actually available for maintenance work—total man-hours less time lost for leave, sick call, driver training, watches, etc.?

4. Of the total MMH/M available for direct productive work, how much is effectively employed on maintenance and how much is lost "spinning wheels"—waiting for parts, for a plane to work on, for support equipment, for another rating to assist, etc.?

5. How many man-hours, on the average, does it take your men to perform various routine jobs, such as preflight, major inspections, etc.?

6. How do the times required for recurring jobs compare with the averages for similar squadrons?

7. What maintenance jobs are taking the most maintenance man-hours?

8. Where could on-the-job training efforts be most effective in improving your squadron's readiness?

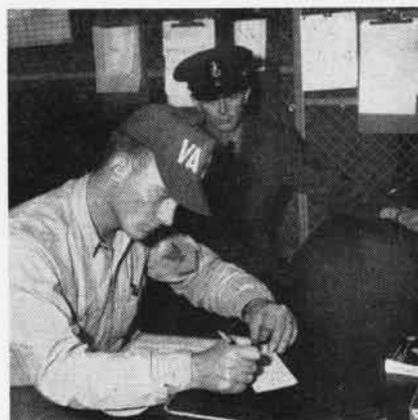
9. Does your squadron have all the trained men it needs?

10. Do you have the facts to prove your answers to the satisfaction of the average budgeteer or personnel detailer?

trained specialists, squadron maintenance people are encouraged to request any additional information which will help them do their jobs.

These routine reports highlight facts and trends of significance to maintenance managers. For instance, the report on Bench Check and Shop Repair Data might show an excessive number of removed components which actually had nothing wrong with them. This would indicate a need for further investigation which might, in turn, show a need for additional training for troubleshooters.

It should be noted that the reports referred to here are prepared by the base statistical services division for the benefit of working level maintenance managers. The two types of raw data reports by the direct maintenance peo-



BACK AT THE SHOP after dental appointment, Marshall, AT3, files exception man-hour card.

ple are virtually the only reports required of them.

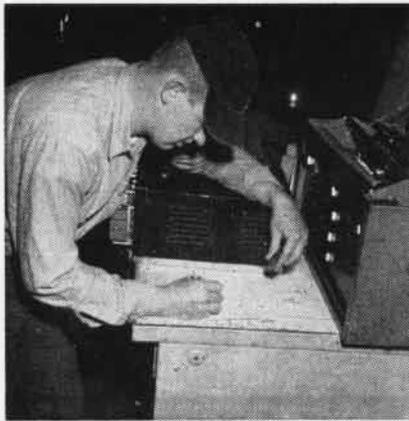
The reports from the system provide aircraft maintenance management with the facts needed to employ the available manpower with maximum effectiveness. Facts on non-productive manpower, such as excessive supervision and non-maintenance work, are spread out in black and white for all to see. These reports help pinpoint the work problems which are costing the most manpower, and hence are most deserving of management attention.

One item of high interest obtainable from the reports is the percentage of the total maintenance man-hours available for maintenance which is actually employed in productive jobs. This figure provides an index of the efficiency of the maintenance organization.

It might seem that the temptation



MAINTENANCE DATA Collection System records time lost waiting replacement units, etc.



REASOR, AT2, repaired defective TACAN, records time, parts used, etc., 66-1 form.



DATA CARDS are picked up daily at AMD and squadron; data transferred to punch cards.

to gun-deck the reports so that all time was charged off against some job would be too strong for many to resist. It doesn't work out that way. Another set of figures shows how long it took the people to do specific jobs compared to the service-wide averages for such jobs. Spreading the time among the jobs actually accomplished would only make it appear that the squadron took above average length of time to accomplish a given task.

Information for local maintenance management is but one product of the 66-1 system. From the cards shipped to the data processing center, information for the following purposes is developed:

- Measurement of weapon system maintainability and reliability.
- Identification of systems or components needing action to reduce maintenance requirements.
- Purging of preventive maintenance and inspection check lists of items

which are not worth the maintenance effort. Using 66-1 data, the Air Force was able to cut the number of items inspected on each 100-hour inspection of the KC-135 tanker from approximately 3300 to about 1000 without reducing flight safety.

Extensive advance preparations were made for testing the 66-1 information system. VA-72, an Oceana-based *Skyhawk* squadron, and the supporting Aircraft Maintenance Department (AMD) were selected for the first test. Additional automatic data processing equipment has been installed.

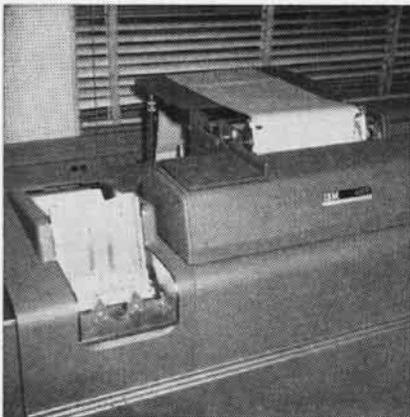
On-site training at Oceana has been provided by an Air Force technical assistance team from Chanute AFB Technical Training Center. The team also provides technical advice on the mechanics of the 66-1 system.

Additional training for key personnel has been provided at Chanute. One LDO lieutenant and two master chiefs from AMD OCEANA completed an

eight-week course in analysis of 66-1 information. Several senior officers from ComNavAirLant, ComFAir Norfolk and NAS OCEANA completed a one-week course for command and staff officers on the 66-1 system.

At the time of writing, only the results of the first month's operations are available, thus it is much too early to forecast the outcome of the test. Even though the system has not been in operation long enough to provide many answers, its installation has raised some interesting questions which are now receiving command attention.

Building from experience now being gained with 66-1 at Oceana, it is hoped it will be possible to develop an information system tailored to the organization and needs of Naval Aviation. When such a system is ready for general implementation, it will be promulgated as a change and addition to BuWEPs Instruction 4700.2, *The Naval Aircraft Maintenance Program*.



AUTOMATIC DATA Processing machine correlates data, prints out processed information.



HOW'D WE DO, CHIEF? Avionics crew checks report to see where yesterday's time went.



PRINT-OUT is analyzed by Cdr. Kimbrel, AMD, and CWO Stowers, Supply Liaison Officer.

Fleet Receives Last A-4C Douglas Producing A-4E Bomber

The Navy has received its last production model of the A-4C *Skyhawk* (A4D-2N). It was delivered to the Navy by Douglas at Palmdale, Calif., in January.

This doesn't mean, however, that the compact little attack bomber is going to fade from the Navy's sky in the immediate future. What it does mean is that Douglas has started production on a newer and more powerful model of the *Skyhawk*, the A-4E.

There are some minor changes in the external appearance of the plane, but the major difference between the old and new is a more powerful engine.



LCDR. H. HARRIS (2nd from left), ComCru-DesPac Staff, discusses QH-50C DASH (DSN-3) (drone anti-sub helo) with VU-3 officers. These officers will be among first to take QH-50C and DASH detachments aboard DD's.

New AAMREP Aid Devised System Provides One-Stop Service

A VMF(AW)-314 RIO, who flies an El Toro-based *Phantom II*, has devised a practical new piece of ready room furniture. The new item is a complete AAMREP table.

The AAMREP (Air-to-Air Missile Weapon System Flight Report) automated information system, now in field tests, is designed to gather essential data on every intercept sortie.

Information on each flight is put on punch cards and transferred to the magnetic memory of automatic data processing machines at NOL CORONA, Calif. Data from AAMREP's can potentially eliminate the need for almost all other reports of missile firings and can produce the system-wide information needed for maximum improvement of the mission effectiveness of missile-armed fighter weapon systems. (For further information on the



VMF(AW)-314 RIO'S COMPLETE AAMREPS

AAMREP system, see "Fighter Mission Data Automated," October 1962 NANews, pp. 34-37.)

VMF(AW)-314's AAMREP table was devised by CWO E. S. Holmberg, right in photo. Code information and related instructions are mounted under the table's glass top. A stack of blank AAMREP forms is available in an open box—visible behind CWO J. Marzioli, left in photo.

Completed AAMREP's—confidential when fully filled out—are deposited in a locked barrel on top of the table.

More Names on World Map Antarctic Features Honor VX-6

The U.S. Board on Geographic Names has approved the naming of eight recently discovered features in Antarctica. Seven of these features honor former members of Air Development Squadron Six, the Navy's air support force in the south polar regions during Operation *Deep Freeze*. The eighth honors NAS PATUXENT RIVER, original home of the VX-6 squadron.

Patuxent Mountains are located at 85° 10' S, 94° 35' W, some 40 or 50 miles south of Pensacola Mountains, named after the air station.

First four features honoring former members of VX-6 memorialize two officers and two enlisted crew members of a P-2H *Neptune* (P2V-7) who died in a crash moments after takeoff at Wilkes Station in 1961. They were LCdr. William D. Counts, Ltjg. Romuald P. Compton, William W. Chastain, AM1, and James L. Gray, AD2. The features named for them are located in Thiel Mountains, named after the late Dr. Edward Thiel, civilian scientist.

Two pilots and a navigator now serving at other commands were also

singled out by the Board, because of their many flights flown in support of scientific parties in the field. They are Lt. George Janulis, Capt. Joe G. Walker and SSGT. Fred W. Streitenberger, the latter two both USMC.

The features and coordinates are:

Chastain Peak	85° 10' S,	94° 35' W
Compton Valley	85 01 S,	91 20 W
Counts Icefall	85 13 S,	90 48 W
Gray Spur	85 10 S,	90 29 W
Janulis Spur	85 07 S,	90 27 W
Streitenberger Cliff	85 03 S,	92 07 W
Walker Spur	85 01 S,	91 12 W

The September 1961 and June 1962 issues of NANews contain lists of names and coordinates of features similarly honoring 44 other VX-6 members.



ADM. JAMES S. RUSSELL, C-in-C of Allied Forces, Southern Europe, accepts Italian Air Force's pilot training certificate and "wings." The admiral has been a Naval Aviator since 1929, was co-winner of 1956 Collier Trophy.

Pax River Helos Give Aid Crew Ignores 'Old Man Winter'

Rain, sleet or snow, helicopters from NAS PATUXENT RIVER refused to bow to Old Man Winter's antics. Answering emergency calls from weather victims stranded on small Chesapeake Bay islands kept the choppers busy.

A heart patient in need of medical aid, an expectant mother in need of hospital transportation, and hundreds of hungry and stranded people were unable to reach the mainland because of frozen waterways.

In one incident, Lt. John C. Thoma, pilot, took off in 24 to 35 knot winds and headed for a marooned group stranded on an islet just south of Wallops Island. Without aid of a briefing on landing conditions, and braving gusts up to 50 knots, he landed on dangerous marshy ground and retrieved the shivering band.

W. C. Snellman, chief air controlman and aviation pilot, assisted Lt. Thoma.

VP-18 is Given a Reward \$1000 for Discovering Nina II

VP-18, homebased at NAS JACKSONVILLE, Fla., with a detachment at NS ROOSEVELT ROADS, P. R., was rewarded in January for having found *Nina II*.

The check was presented to the squadron's leading Chief Petty Officer, August Spata, by Mr. Frank Astor, the representative in Puerto Rico of the Wynn Friction Proofing Company. This company had posted the \$1000 reward for the finders of the lost ship (See NANews, February 1963, p. 13).

VP-18 detachment spotted the missing ship in the southern Atlantic on November 30.

The reward money was put in the squadron's welfare and recreation fund for the benefit of all the men.

Sound Barrier is Broken Woman Marine Takes a Back Seat

It is potentially embarrassing to a woman to speak and not be heard. But this is not always so. Woman Marine Lt. Wilma Athy happily demonstrated this point recently.

Lt. Athy is flight clearance officer and operations duty officer at MCAS EL TORO. The performance of her work requires a thorough knowledge of aircraft and aircraft flight procedures. The pert Marine reluctantly admitted her familiarity with jets was limited and resolved to correct this at



LT. ATHY, COUGAR AND BROKEN BARRIER

the earliest possible opportunity.

The opportunity came along when Maj. A. W. Anthony, Assistant Operations Officer and Instrument Training Officer for Marine Training Squadron Two, okayed a flight in an F-9 *Cougar* (F9F). Lt. Athy had already been checked out in low pressure chamber and seat ejection procedures, and was qualified to fly as a passenger on jet flights.

At the conclusion of a flight over the Pacific, Lt. Athy became the first woman Marine to break the sound barrier. As one wit com-

mented, although she did break the sound barrier, he doubted that the exciting experience left her speechless.

New FAA Rule Announced Disaster Area Flying is Limited

A civil air regulation issued by the Federal Aviation Agency prohibits aircraft from operating in a disaster area unless they are taking part in search and rescue operations or carrying news media representatives or persons on official business in connection with the disaster.

The new rule (Amendment No. 60-30, Part 60, Air Traffic Rules, Reg. Docket No. 1160) adds Section 60.28, "Avoidance of Disaster Areas," to the Civil Air Regulations. It takes effect March 20, 1963.

Non-essential flights will be prohibited in the airspace below 2000 feet above the surface and within five statute miles of certain disaster areas resulting from aircraft accidents, train wrecks, forest fires, earthquakes, etc.

FAA will designate the disaster area through a Notice to Airmen (NOTAM), giving location and dimensions of the area.

Purpose of the rule is to prevent sightseeing aircraft from congregating over the scene of a disaster. This should obviate potential conditions for mid-air collision. Also, the rule is intended to restrict other non-essential flying which might interfere with the safety of airborne relief operations.



A SAFETY BELT designed to hold firemen on the back of a speeding firetruck (L) is in service at NAS Corpus Christi. It will also help them hold on while dragging a hose up a high ladder or scaling a wall (R). It will expedite a speedy escape from the top of a



burning building. The belt, introduced at the Memphis Fire Department instructors' conference two years ago, appeared on the market only recently. NAS Fire Chief, Jean M. Britton, ordered the belts for Corpus. The belts are equipped with a quick release hook attached (C).



NAVY AIDS MOROCCAN FLOOD VICTIMS



HELO CREW from NAS Rota maps out their next food drop to the Moroccan flood victims.



LT. GEORGE LEHMAN prepares to spend long day helping with the air/rescue operations.



LAWRENCE ROBERTS, AD3, hands out needed food stuffs to the soldiers for distribution.

ON JANUARY 7, 1963, the only available helicopter at NAS PORT LYAUTEY commenced rescue operations to victims of one of the worst floods in Morocco's history. Flood water covered an area 35 by 50 miles, affecting some 72,000 people, many in grave danger.

The helo crew, working alone, picked stranded Moroccans off houses, trees, haystacks and threatened low ground. Two days later, an H-34 (HSS) from Rota, Spain, joined in the emergency effort.

The H-34, designed for 14 passengers, set a lift record when it airlifted 40, plus the crew of three, in one flight. It was the last lift before darkness, so

it was either lift them or let them drown.

On January 11, the two helicopters were augmented by a UH-25 (HUP) from the USS *Springfield*, the U.S. Sixth Fleet Flagship. During the five-day emergency period, the helo crews had saved 321 lives.

The Naval Communications Station and Air Station dispatched vehicles to the area and rescued nearly 400 more people who were in danger of being cut off by the rising flood.

Medical supplies, clothing and 45,200 pounds of food were dropped in the needy areas. In some instances, the copter could not land to distribute

food for fear of being overwhelmed by the victims, many of whom had not eaten for five days. Army Medical Teams were lifted to emergency aid stations to prevent the spread of epidemics.

Operating from bases at Sidi Slimane and Kenitra, military personnel, civilians and their dependents worked around the clock to supply help.

The Governor of Rabat Province said of the rescue operations: "On behalf of his Majesty, the King, myself, and the people of Morocco, I wish to express appreciation for your timely help in this emergency. Americans are a people with great hearts."



BREAD AND FOOD are about to be air-dropped to the stricken areas by R. Barnhill, ADR2.



SPLASHING THROUGH flood waters, the Moroccans, smiling and happy to see the boving Navy helo, eagerly pursue food that is being dropped. Many of them had not eaten for five days.

LETTERS

SIRS:

In your article regarding records set aboard USS *Princeton* (LPH-5) on page 35 of the December 1962 issue, you referred to her as a Landing Platform Helicopter. This is a commonly used misnomer.

The *Princeton* is properly titled an Amphibious Assault Ship. In translating the designator, the "L" indicates an amphibious force ship, the "P," a troop transport, and the "H," a helicopter transport.

W. R. "RED" KNOPKE, CDR.
COMPHIBPAC Staff

Dial 3111 to End Hazard Cherry Point has 'Wired Secretary'

An electronic "secretary" has been installed in the Wing Aviation Safety Office at MCAS CHERRY POINT. The device, a wire recorder tied into extension 3111, the Safety office, is on duty around the clock. Wing or station personnel can use this number to report a safety hazard.

"We are interested in everything hazardous to the safe servicing, maintenance, operation and control of aircraft," said LCol. James H. Berge, Wing Safety Officer who had the recorder installed. "It could be a report from a plane captain on the flight line or a pilot who had just landed. The hazard could be anything from airfield construction, unsafe operation of flight line vehicles, to a report of a near miss in the traffic pattern over the field."

The recording device is monitored



LCol. BERGE MONITORS WIRED SECRETARY

constantly during working hours and the first thing in the morning following non-working hours. The instructions make it clear that anyone observing an extremely dangerous hazard during non-working hours should report the condition at once to the Operations Duty Officer or any other cognizant authority available to take immediate remedial action.

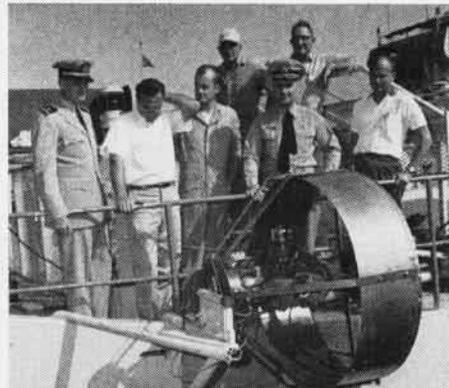
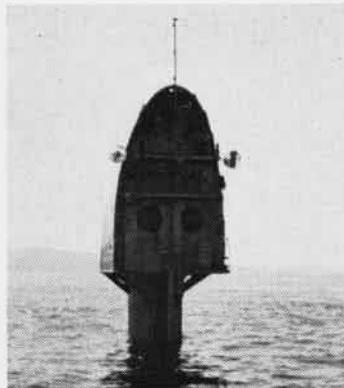
The electronic secretary is efficient and easy to use. Names of callers are not required. Word of the recorder has already spread to other stations. A pilot from another air station remembered reading of the secretary in a copy of the station newspaper, *The Windsock*. Temporarily blinded by headlights of a "follow me" vehicle at Cherry Point, the pilot dialed 3111 after parking and suggested red lenses be used on the vehicle's headlights. As a result, some units at Cherry Point are trying the idea.

NATOPS NOTICES

In or Pending Distribution

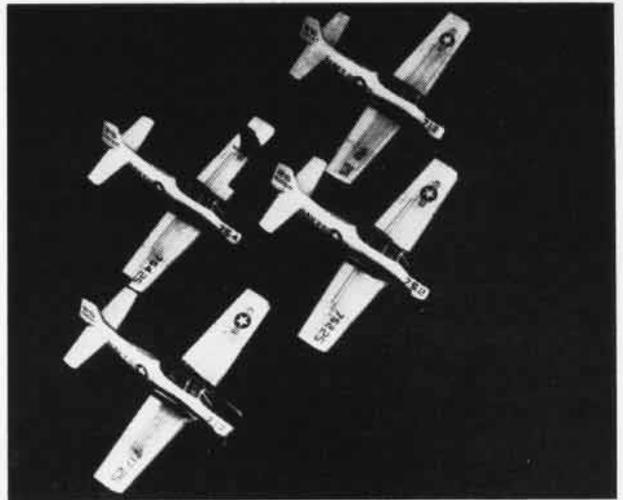
A-3A	Second Revision
A-3B	First Revision
A-4A	First Revision
F-3B	First Revision
F-3B	Supplement
S-2A/B/C	Second Revision
S-2A/B/C	Supplement
S-2D	Supplement
UH-19F/CH-19E	Supplement
CH-37C	Supplement
SH-34G	First Revision
SH-34J	First Revision
SH-34	Supplement
TH-13M	Supplement
SP-2E/2H	First Revision
SP-2E/2H	Supplement
P-5	First Revision
P-5	Supplement
C-118B	Basic Manual
C-131F	Basic Manual
HU-16D	Basic Manual
EA-1E/F	First Revision
EA-1E/F	Supplement
C-130F	Basic Manual
O-1B/1C	First Revision
TC-45J	Supplement
T-28	Supplement
T-34	Supplement
T-2A	Basic Manual
T-2A	Supplement
C-1A	Basic Manual

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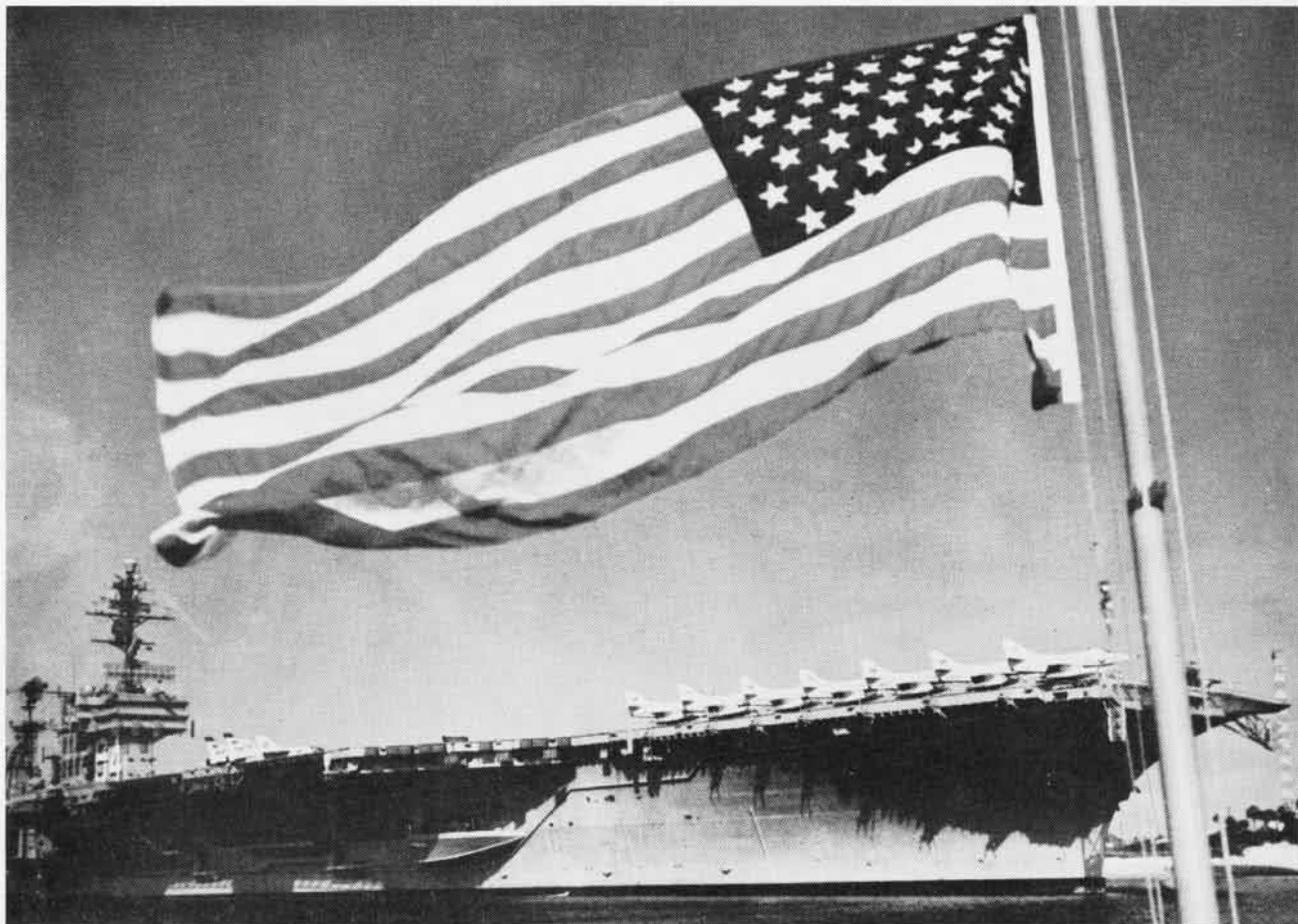


UTILITY SQUADRON THREE helped solve a stabilization problem for what is commonly called the FLIP ship (left). This ship is used primarily for research in connection with underwater sound transmission and the effects of temperature, currents, and other factors. This ship is partially flooded as shown (center) and assumes a vertical, rather than horizontal, attitude to provide a stable listening platform under water. During sea trials, the ship proved stable as predicted ex-

cept that an unexpected rotation was encountered around the ship's vertical axis while "flipped." VU-3 was consulted. Ltjg. Nick Ide of VU-3 and Bud Mundy, one of FLIP's engineers, devised a plan for the attachment of 72-hp drone aircraft engines with propellers to the ship, one on each side, to provide thrust to oppose the rotating motion. Shown examining the engine installation (above) on FLIP ship are E. P. Carlson, skipper of VU-3, and, at the far left, Ltjg. Ide.



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