

NAVAL AVIATION

NEWS



42nd Year of Publication

JULY 1961

NavWebs No. 00-75R-3





THE NAVAL MISSION

Naval Aviation is thoroughly integrated in the Naval Mission; it plays an indispensable role in every facet of Naval undertaking. The attack carrier forces fight to secure an objective area or to destroy enemy forces afloat and ashore. The broad ocean areas must be covered, particularly against the undersea menace. Here again, the rapid search rate, the ability to get there quickly, and the great utility of aircraft comes into play.—Adm. J. S. Russell, VCNO ★ ★ ★ ★



■ IN THIS ISSUE

- Phantom II Record Flight** 6 *Lt. Aldo Da Rodda gives play-by-play account of Project LANA in which trans-continental records are broken.*
- World Record Log** 12 *In seaplanes, landplanes and even balloons, Naval Aviators have compiled a healthy total of air marks.*
- Recollections of an RIO** 15 *Ltjg. E.A. Cowart who rode LANA One as RIO tells of his part in F4H-1 record flight.*
- NAA/FAI Story** 16 *Since 1905, Federation Aeronautique Internationale has been world arbiter in aerial record matters.*
- Miramar Masters** 20 *VCP-63 turns aerial cameras on Miramar squadrons.*
- Flying Boat Years** 25 *Another in the Naval Aircraft series by Hal Andrews treats of low-and-slow but potent patrol aviation.*

■ THE STAFF

- | | |
|--|--|
| Cdr. George F. Rodgers | Head, Aviation Periodicals Office |
| Cdr. Walter E. Aymond | Editor |
| Izetta Winter Robb | Managing Editor |
| LCdr. R. J. Massey,
Joseph E. Oglesby, JOCS | Associate Editors |
| Cdr. Oliver Ortman, Harold Andrews | Contributing Editors |
| Dorothy L. Bennefeld | Assistant Editor |
| James M. Springer | Art Director |

■ COVER

These young gentlemen, Lt. Dick Gordon and Ltjg. Bobbie Young of VF-121, NAS Miramar, captured on 24 May one of our nation's and the world's most significant aviation awards, the Bendix Trophy, a miniature of which they are holding 10 minutes after landing at NAS New York.

Issuance of this publication was approved by the Secretary of the Navy on 3 April 1961

Published monthly by Chief of Naval Operations and Bureau of Naval Weapons to disseminate safety, training, maintenance, and technical data. Send mail to Naval Aviation News, Op 05A5, Navy Department, Washington 25, D. C. Office is located at 2306 Munitions Bldg. Telephone: Oxford 62252 or 62259. Annual subscription rate is \$2.50 check or money order (\$1.00 additional for foreign mailing) made payable to Superintendent of Documents, Government Printing Office, Washington 25, D. C. Single copy, \$.25.



NAVAL AVIATION NEWS

Missile DD is Commissioned Named for Naval Aviator No. Three

The guided missile destroyer *Towers* (DDG-9) was commissioned 6 June at the Puget Sound Naval Shipyard. Mrs. John H. Towers, widow of the officer for whom the ship was named, participated in the formal ceremony.

The ship is named for Adm. John H. Towers, Naval Aviator #3, who was trained at Glenn Curtiss' Hammondsport, New York, flying school in 1911.

During his career, Adm. Towers served in most of the top aviation commands, including the post of Officer-in-Charge of the flying school at Pensacola. He was Chief of BUAER and ComNavAirPac.

When he was retired in December 1957, he was Commander-in-Chief of the Pacific Fleet and Pacific Ocean areas.

The *Towers* will mount *Tartar* surface-to-air guided missiles and will be

equipped with the latest anti-submarine warfare equipment including long range sonar, ASW rockets, and tubes for ASW torpedoes. The ship also features aluminum superstructure.

High Honor Goes to Raborn President Awards Collier Trophy

On June 15, the President of the United States, John F. Kennedy, presented the Robert J. Collier Trophy to VAdm. William F. Raborn, Jr., Director of Special Projects, United States Navy, "under whose direction the U.S. Navy, Science and Industry created the operational Fleet Ballistic Missile Weapon System—*Polaris*." The Trophy was presented by President Kennedy at a White House ceremony.

High-ranking defense leaders, members of Congress, officials of major contracting firms for the *Polaris* and members of Adm. Raborn's immediate staff witnessed the Trophy ceremony.

The NAA, whose president is Miss Jacqueline Cochran, administers the Collier Trophy. Gen. Nathan F. Twining is chairman of the Trophy Committee.

The Trophy, sponsored by *Look* Magazine, is awarded "for the greatest achievement in aeronautics or astronautics in America, with respect to improving the performance, efficiency or safety of air or space vehicles, the value of which has been thoroughly demonstrated by actual use during the preceding year." Adm. Raborn's honor is for work he did in 1960.

This year marks the 50th anniversary of the Collier Trophy, which was established in 1911 by Robert J. Collier. Given originally for outstanding accomplishment in aeronautics, award requirements were expanded last year to include astronautics. This is the first time the famed Collier Trophy has been given for any accomplishment involving an underwater vehicle.



SMITHSONIAN INSTITUTION dedicated a special Naval Aviation exhibit May 8, on the 50th Anniversary of Naval Air. In scene at left, Mr. Phillip S. Hopkins, curator of the air museum, Cdr. J.E. Davis, Mrs. T.G. Ellyson, and Dr. Leonard Carmichael, Smithsonian director, stand before part of the exhibit. At right, Mrs. Ellyson holds a model of the



Curtiss A-1 Triad which her husband, Lt. T.G. Ellyson, Naval Aviator Number One, flew in 1911, and Cdr. Davis holds a model of the McDonnell F4H-1 Phantom II which he flew in establishing a world speed record of 1390.21 miles per hour over a 100-kilometer closed course at Edwards Air Force Base, Calif. in September of 1960.



ASTRONAUT'S PARENTS, Mr. and Mrs. Alan B. Shepard, Sr., take first hand look at the specially rigged platform on USS Lake Champlain where Mercury capsule was deposited. Cdr. H.H. Skilmore conducts recent tour.

Scientists Test Diet at ACEL Research Foods for Space Use

Five Naval scientists from the Air Crew Equipment Laboratory at NAMC Philadelphia recently completed a ten-day dietary study using semi-solid foods that may be used in future manned space vehicles. The caloric content and nutritional adequacy of the food were rigidly specified by the Food Services Branch of the Naval Supply Research and Development Facility, Bayonne, N.J.

Semi-solid foods of different caloric values were studied in the initial series. Water intake for some of the men was restricted to three pints daily. This type of diet is necessary for a man in

space while wearing a full pressure suit. The food is stored in containers similar to tooth paste tubes and eating is accomplished by pushing the foods through a nozzle in the clear plastic face mask of the pressure suit.

All food for the study was stored at room temperature and did not require refrigeration. Individual food items included a variety of fruit juices, vegetables, meats and fruit. Experiment was designed to include studies on bulk, variety, palatability, tolerance, and adequacy of food. Clinical findings and studies substantiated the scientists' reports of no adverse effects resulting from this type of diet, although men showed a loss in total body weight.

Capt. R.A. Bosee is Director of the U.S. Navy Air-Crew Equipment Lab.

VT-27 Designates Wives Pilots' Mates Get Certificates

An innovation has been added to the wing-pinning ceremonies of Training Squadron 27 based aboard NAAS NEW IBERIA, Louisiana.

The wives of all newly designated Naval Aviators receive a separate designation certificate as a Naval Aviator's Wife. The Commanding Officer of VT-27 presents one to each wife at the graduation ceremonies.

Each certificate reads: "Know all women by these presents that Mrs. John Doe has completed the prescribed course in empathy and having met successfully the requirements of lonesome



VT-27 SKIPPER PRESENTS CERTIFICATE

weekends has been designated a 'Naval Aviator's Wife.'"

200 Landings on Forrestal VAW-12 Pilot is Double Centurion

Lt. Frank S. Hall, Detachment 42 of Carrier Airborne Early Warning Squadron 12, made his 200th *Forrestal* landing the end of April when flying with the mighty carrier in the Mediterranean.

Lt. Hall touched down a WF-2 *Tracer* to become a double Centurion. He compiled his 200 landings over a three-year period which has included three Med cruises for the *Forrestal*.

During the first two cruises, he piloted the AD-5W *Guppy*, then on his third cruise switched to the *Tracer*. The "Flying Saucer" has replaced the veteran *Guppy* on attack carriers of the Sixth Fleet.

"Landing number 200 was as routine as the rest," Lt. Hall says. "After 199 approaches and landings, I had the groove established for this one."



FIFTY YEARS OF NAVAL AVIATION were served up with all the trimmings for thousands of visitors to the annual Navy League convention held in Washington recently. With the Golden Anniversary of the Golden Wings as its theme, the League program included distinguished civilian and military speakers and hundreds of industrial static exhibits



featuring Naval Air's past, present and future. The odds-on favorite of the four day meet was a remodeled 1932 F4B-4 which graced the entrance of the exhibit site. At left, view of assembly for Air/Seapower symposium; right, Frank Gard Jamison (L) receives Navy Public Service award from SecNav J.B. Connally while Adm. J.S. Russell looks on.



GRAMPAW PETTIBONE

Bullseye

An A4D squadron was busily engaged in competitive exercises after three hard weeks of bombing practice. Competition was keen and, of course, every pilot wanted to be the "top man."

On this fine autumn morning, a low level napalm lay down was scheduled for a desert target. The run in was briefed for 500 knots at 50 to 300 feet altitude; the target a 29-foot-high "billboard" bullseye.

One young pilot, who was known to the range as the "one who flew lowest of all," had expressed his theory for getting bullseyes to his roommate as "fly low and pickle late." He maintained that if you came in lower than the target structure, the bomb could not possibly go over and had to be a bullseye. At 500 knots and with a 29-foot target, this can get hairy.

This particular morning the young pilot seemed to be proving his theory. His first run was a bullseye! On the second run, he came roaring over the desert at an estimated 20-foot altitude with the target boresighted. The bomb



released, the A4D started to pull up and exploded with a roar as it hit the top of the "billboard." Disintegrating

in a huge fire ball, bits and pieces were scattered for almost a mile beyond the target. His theory had failed.



Grampaw Pettibone says:

This was a terrible waste of a good man and a little elementary arithmetic on a blackboard could have shown him the errors in his theory. At 500 knots and at 50 feet altitude (which clears the target), the bomb-sight setting of 26 mils puts the "pickle off" point only 592 feet and 0.7 second from the target. By the flight surgeon's figures, he had 0.47 seconds reaction time to pull up on the stick on his low run-in. This left him with a .2 to .3 second margin for error. He cut it too thin!

We've lost quite a few pilots on extremely low runs this past year. Maybe they missed the blackboard session too. You're not "Top Gun" if you fudge the rules to make a score.

Real Lash-up

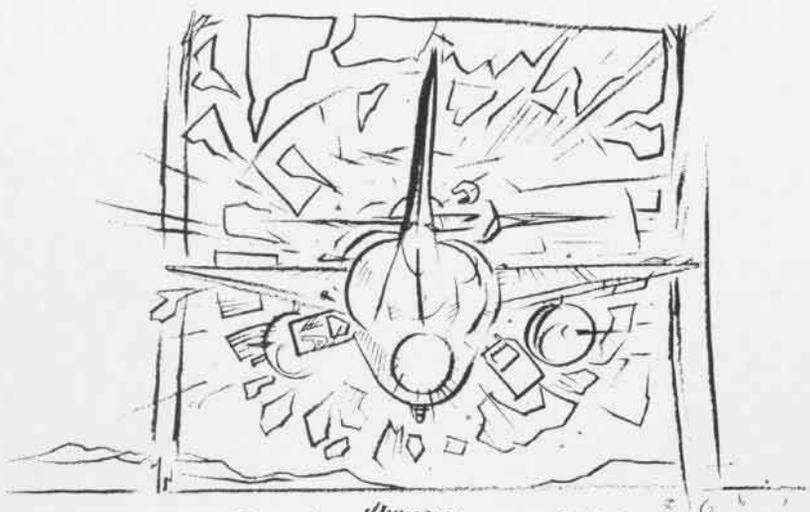
Once in a while an aircraft accident report crosses Ol' Gramps' desk that really deserves a solid analysis and some soul searching on the part of the squadron C. O. who *let it happen!*

An experienced pilot (he had a total of 5500 hours, give or take a few, in many models) was scheduled to fly an F11F on a refresher flight. He had previously flown 18.5 hours in the F11F, but not in the last 17 months. In fact, he had only 3.5 hours of jet time in the last 12 months!

Prior to flight he had a "cockpit checkout" on emergency procedures from a qualified pilot and was cleared to go.

Take-off and climbout to 5000 feet with afterburner were seemingly normal, then the burner was cut and climb continued in basic engine to 10,000. The burner was cut in again and he climbed to 21,000 feet, cut out the burner and checked the F11F in slow flight. The plane seemed sluggish, and acceleration, slow. Afterburner was tried again at this point but it *wouldn't light off.*

Another hour of just cruising around



Bullseye.

and the pilot decided to shoot a few touch-and-go landings before calling it a day. He entered the home field pattern with 3000 pounds remaining but had to orbit a while due to a "scramble" then in progress.

His first touchdown was 1500 feet down the runway and rollout to the 4500-foot marker at 100 knots was normal. He added 100% for the go-around and selected afterburner. No burner. The take-off was continued and a little dust flew as he became airborne right on the end of the runway! Climb-out was slow, and several minutes were required to reach 1500 feet.

The pilot re-entered the landing pattern and made a normal landing without declaring an emergency. On leaving the plane he discovered he had extensive fire damage to the tail fuselage section! The afterburner fuel nozzle had parted at the elbow and resulted in fuel being sprayed on the afterburner section whenever the throttle had been moved to the burner detent. It had ignited and burned the plane, but good.



Grampac Pettibone says:

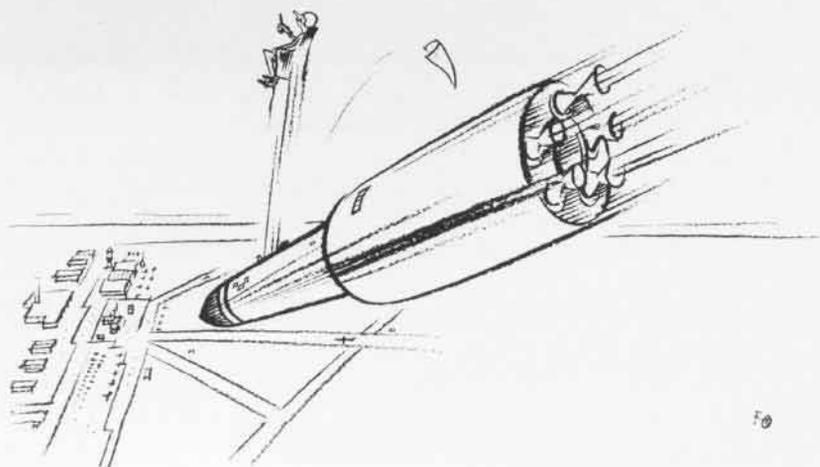
Sufferin' catfish! CNO has been pretty doggone specific on what constitutes a good check-out in model: the RAG or its equivalent or *don't fly it!* This man had some NAMO trainer time, and a factory check-out some 18 months previously. With a total of only 18.5 hours in model, a *cockpit check-out* doesn't fill the bill. A pilot with 3.5 jet hours in the last 12 months is *not* jet qualified!

Whatever made this pilot think the burner would work on a touch-and-go after it failed to ignite at altitude is beyond Gramps' comprehension. Shooting touch-and-goes in an F11F on a relatively short runway with a dead burner is not conducive to long life. He coulda bought the farm!

The F11F costs \$1,215,000. This was playing fast and loose with a pretty expensive piece of equipment. Although this pilot has 5500 hours, he sure didn't show it here.

Unguided Missile

An FJ-4B pilot commenced his run-in for a medium angle loft maneuver. He was at 100 feet above the water and .72 IMN carrying a 1000-lb. GP bomb. All switches had been checked O.K. and reported so to the flight leader. As he passed over the pull-up point he pressed the bomb pickle and



ceased back on the stick to commence the lofting maneuver.

A sudden impact raised the port wing slightly. The bomb had released prematurely and exploded under him!

The pilot continued pulling through, completing a smooth loft run and rolled out on top with a constant buzzing vibration running through the airframe. The flight leader told him to "get some altitude and head for home," so he put it up to 100% power and climbed to 15,000 feet, heading for the home base.

He had a hole in an outboard wing panel and was streaming fuel vapor behind. The fuel low level warning light came on as he arrived over the home field and the flight leader advised him to point the FJ seaward and to eject. The pilot of the stricken plane found himself in a perfect high key position and broadcast that he would make a precautionary flame-out approach. The tower cleared him to do so. Both the Moreset gear and the field chain arresting gear were ready for engagement. Knowing the pilot's skill the flight leader did not transmit disagreement and followed him at a safe distance.

At the 180° point flames suddenly erupted along the entire lower fuselage of the FJ, and at this point the engine flamed out. Informed of the fire by his flight leader, the pilot pulled the nose up in a turn away from the field and ejected. Everything worked as advertised, and he was soon floating down under a beautiful canopy.

Meanwhile, the pilotless plane had turned toward the naval air station and was plunging toward the hangars. The flight leader transmitted a warn-

ing to the tower and alarms were sounded. The FJ again veered, however, and headed broadside for a big CVA which was tied up at a pier adjoining the airfield. Fortunately, the deadly plane, now turned missile, continued to turn and crashed in the water directly under the stern of the carrier.



Grampac Pettibone says:

Sonofagun! It's mighty difficult to chew out a man who's done everything just about perfect—kept his head, brought his machine home like a real pro, and made an attempt to steer it clear before he ejected after having an excellent precautionary approach turn to a can of worms.

When you've got a wounded bird and the chances of getting it on the runway in one piece are only so-so, WHY AIM IT AT THE HOME FOLKS AT ALL? That crippled job becomes a missile when you leave it and could wipe out a whole flight line, a hangar, barracks, or housing area.

If it looks like it'll be an ejection anyway, it's far better to do it over a *safe zone* and cut down on the chance of a major disaster.

Memo from Gramps

Just having returned with Ye Editor from a two day story collectin' tour via a trusty SNB Ol' Gramps has to report nottin' but good things about NAS MEMPHIS, NAS NEW ORLEANS and NAS ATLANTA. Towers gave out with plenty of info to this ignorant transient. Follow Me vehicles were right there, servicing was excellent, hot food available for a man in flight gear, meteorology and flight planning areas 4.0, and RON accommodations at NAS NEW ORLEANS outstanding. They get a Gramps gold star for effort PLUS!

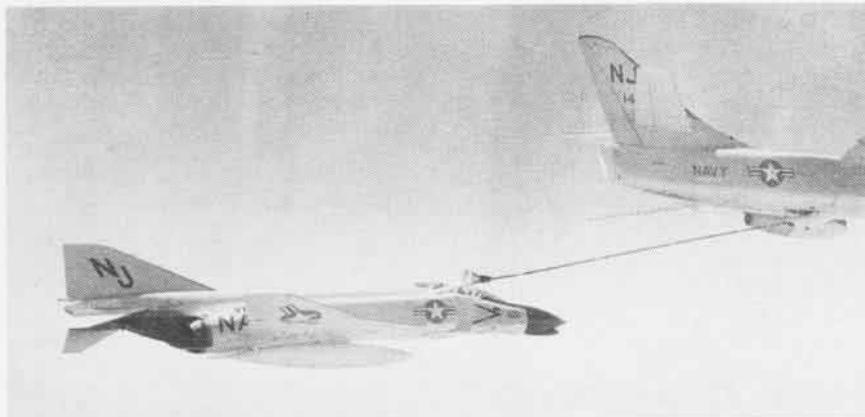
BETTER . . . BETTER . . . BEST

Bringing Home the (Bendix) Bacon

By Lt. A.J. Da Rodda
Fighter Squadron 74



RUN FOR AERIAL ROSES starts from Ontario, California, for LANA Three, third of five F4H-1's to launch on Bendix Trophy try.



FIRST OF THREE refuelings required by LANA Three took place over Albuquerque. Tankers from VAH-1, 4, 9, and VA-72, 86 and 125 supported this phase of project which saw records fall.



TRIUMPHANT VF-121 team of Lt. Gordon, pilot, and Ltjg. Young, Radar Intercept Officer, taxis at NAS New York after 2445.9 mile dash at an average speed of 869.739 mph. McDonnell twin-jet, carrier-based fighter pulled "off the line" made flight in normal configuration.

UNTIL THE MAJORITY of Mr. McDonnell's fabulously fast fighters involved in Project *Lana*—appropriately dubbed *Phantom II's*—had come home to NAS NEW YORK on 24 May in response to the relatively ancient aerial lure of the Bendix Trophy, the issue was never in doubt.

The 'issue' was a transcontinental speed record of three hours, seven minutes, 43 seconds last etched in the coveted trophy's base by still another McDonnell product, the *Voodoo* in 1957.

Probably no race of its type ever produced so many winners—turned losers in so short a period of time.

Cdr. Julian S. Lake, Commanding Officer of Fighter Squadron 74 based at NAS OCEANA, Va., and his Radar Intercept Officer (RIO), Ltjg. E. A. Cowart, also from VF-74, were the first of five *Phantom II's* airborne from Ontario, Calif., at 1059 EDST. They landed in New York at the Naval Air Station at 1402 and for a few minutes held the unofficial transcontinental speed record of three hours, 3 minutes



NOTEWORTHY HANDSHAKES are accorded "winningest" team after race. Left, Bendix Corporation's Bill Mara congratulates Lt. Gordon,



holding Bendix Trophy miniature; right, Radar Intercept Officer Ltjg. Young receives official kudos from RADm. F. A. Brandley.

SOME seven minutes later at 1409 LCdr. Scott Lamoreaux and his RIO, Lt. Tom Johnson, both of VF-101, Detachment Alfa, based at NAS OCEANA, Va., flashed by the tower at New York for another record time of two hours and 57 minutes. The transcontinental record had been broken again and seven minutes later Lt. Dick Gordon and Ltjg. B. R. Young flew by the tower at over 400 knots to establish the current unofficial record and personally capture the prized Bendix Trophy. Gordon's time of two hours, 47 minutes, 17 and $\frac{3}{4}$ seconds, over a course of 2445.9 miles—an average speed of 869.739 mph—was filed immediately with the Federation Aeronautique Internationale (FAI) by Bert Rhine, National Aeronautic Association contest board chairman.

The fourth entrant in the race, LCdr. Paul E. Spencer with his RIO, Lt. Jim Wagner, both from VF-74, encountered refueling difficulties and had to finish the race subsonically and arrived in New York at 1530 for an elapsed time of three hours and 47 minutes.

In compacting the events which preceded the epic bid for the Bendix Trophy, the verbal package reveals that a lot of people lost a lot of sleep over a two-week period.

CNO approval of the project and its entrants was granted on 9 May with Cdr. Julian S. Lake, C.O. of VF-74, in charge. The speed run code name, LANA, was inspired by Naval Air's current Golden observance: "L" the Roman numeral equivalent of 50 and "ANA" representing the initials of "Anniversary of Naval Aviation."

Three F4H teams were entered from LantFlt, two from PacFlt. These were: LANA One, VF-74: Cdr. Julian S. Lake and Ltjg. E. A. Cowart
LANA Two, VF-101 Det. A.: LCdr. L. Scott Lamoreaux and Lt. T. J. Johnson
LANA Three, VF-121: Lt. R. F. Gordon and Ltjg. B. R. Young
LANA Four, VF-74: LCdr. Paul E. Spencer and Lt. J. W. Wagner (alternate team)
LANA Five, VF-121: LCdr. K. W. Stecker and WO-2 J. H. Glace (alternate team).

NAMING the *Phantom II* as the project vehicle was an obvious one. Already the holder of three world class records in speed and altitude achievements, the McDonnell carrier-based, twin-jet, Navy fighter was considered "ready" in its routine squadron configuration. In the case of the VF-74 team, which had trained in the *Phantom II* but which had none assigned, a loan of two training F4H-1's was made by VF-101, Detachment A, based at NAS OCEANA.

Concurrent with the start of a short but intensive planning and training period, the paper side of LANA was tackled. Coordination and documentation of record attempts are prime considerations. Clearances and approvals were obtained from the Federal Aviation Agency and the National Aeronautic Association, U.S. representative of the FAI. Through the NAA, official timers were procured.

Air Force GCI sites were contacted for in-flight following and all centers across the country were notified of the flight to take place during the week of

21 May 1961. On both coasts, LANA teams, with the assistance of Navy and company experts, staged dress rehearsals. In-flight refueling had not been done by the contestants, and Heavy Attack Squadron 9 of Sanford, Fla., assisted VF-74 and VF-101, Det. Alfa, in aerial refueling with its A3D's. VAH-4 from Whidbey Island conducted practice aerial plug-ins for VF-121.

Engineers from McDonnell Aircraft were consulted with regard to the profile to be flown. Advent of Mach 2.0 flight in the *Phantom II* created new problems which had to be solved in a speed run such as this. For example, the most critical problem was that of upper air temperature. At the 40,000-foot level, the temperatures had to be colder than -54° C. or the engines would not be performing at their peak level. The speed of 1.9 to 2.0 was necessary at 50,000 or above in order to make up time lost during the refueling periods which were planned at 33,000 and at Mach .8. With the two J-79 GE-2 engines in the F4H, it was determined that a minimum of three refuelings had to be made, one north of Albuquerque, one north of St. Louis, and one over Fort Wayne, Ind. Each refueling had to be a full load of up to 20,000 pounds in order to make the next point on the profile.

Another possible problem was that of spotting the tanker at the right position and at the right time to preclude loss of precious minutes en route. Each refueling area had a minimum of four A3D tankers on station, two A4D tankers for marking in case of no contrails and for emergency gulps, one

(Continued on page 10)

IN THE PROCESS of covering the Bendix Trophy story for **N**ANews, Lt. A. J. Da Rodda of VF-74, who was the New York coordinator for Project LANA, recorded the various "hot line" transmissions referenced in his narrative.

Inasmuch as his log of Project LANA, 24 May 1961, presents an unusual word picture of a classic struggle against time and circumstances, it is reproduced here. LANA Three entries are in bold face. All times are EDST.

1059—LANA One, Cdr. Julian Lake (pilot) and Ltjg. E. Cowart (Radar Intercept Officer) airborne at Ontario International Airport, California.

Five A3D tankers from VAH-4 under Cdr. Marn, O-in-C, out of Whidbey Island, two A4D tankers from VA-125 under command of Lt. Gleim, O-in-C, out of Moffett Field, plus one F3D flown by LCdr. J. Foxgrover of VF-74 (coordinator for refueling area) and two WF's airborne and on station over first refueling site. Aircraft took off from Kirtland AFB, A3D's used ten bottles of JATO for take-off and grossed out at over 83,000 pounds.

1112—LANA Two, LCdr. Scott Lamoreaux and Lt. T.J. Johnson airborne at Ontario, Calif.

1116—LANA One at Peak Springs, three minutes ahead of profile schedule.

1124—LANA One is five miles from pushover point and getting ready to descend to pick up tankers.

1125—LANA Two under positive radar control.

1127—LANA Two reported 22 miles north of Needles.

1129—LANA Three, Lt. Dick Gordon and Ltjg. Bobbie Young airborne out of Ontario, Calif.

1130—LANA One reported plugged in and gulping.

1134—LANA Two reported 100 miles out from tanker. Present calculations show LANA Two doing 20 knots slower than LANA One over same course.

1141—LANA One off tanker with a full load.

1143—LANA Four, LCdr. Paul Spencer and Lt. Jim Wagner, airborne out of Ontario, Calif.

1144—Top speed on first leg for LANA One reported at 1200 miles per hour.

1145—LANA Two plugged in and drinking.

1150—LANA One visually sighted above Pueblo, Colo. "Really making tracks," states Dali Lana.

1158—LANA Two off tanker with full load at Wagon Wheels Gap. He is 30 miles down the track from drop off point and 3 minutes behind on profile.

1159—LANA Five, LCdr. Stecker and W.O. Glace airborne out of Ontario.

1200—LANA Three reported drinking and on track.

1204—LANA One 50 miles out from refueling point.

1206—LANA Three off tanker and with a full load. Profile looks O.K.

1213—LANA One has a visual on the second tanker.

1215—LANA Two 8 minutes from second plug-in.

1218—LANA One hooked up.

1219—LANA Two is 160 miles out from second refueling area.

1227—LANA Two tally-ho the tanker.

1230—LANA One off the tanker again. Now four minutes late on profile. Some difficulty here in refueling.

1232—LANA One over the Missouri River.

1233—LANA One hooked up again. Slow transfer of fuel has bogged him down on profile time.

1235—LANA Three 100 miles out from second plug-in.

1235—LANA One north of St. Joe. Some difficulty still exists. A possibility he may be out of the race.

1236—LANA Four reported off tanker at 1233 and proceeding on course.

1241—LANA Five off tanker in good time but only received 13,000 pounds of fuel. This will possibly put him short before second plug-in.

1244—LANA Two is experiencing trouble on plug-in.

1245—LANA Three ten miles from second refueling.

1250—LANA One and LANA Two are not receiving fuel fast enough. Time on profile is being lost.

1254—LANA One definitely off tanker. Posit is 30 miles south of Ottumwa, near Iowa-Illinois border.

1255—LANA Two broke off tanker without a full load. He's 100 miles south of Des Moines but figures he can still hack the third plug-in area.

1258—LANA Three off tanker. Three minutes late on profile but he got a full load.

1300—LANA Four is 50 miles west of Salina, Kans. Looks like he might have to drop out. LANA One, Two and Three have tapped all the tankers. This might force Four and Five to land in St. Louis area.

1305—LANA One clocked by radar at 920 knots.

- 1309—LANA One over 100 miles out doing a reported 1020 knots ground speed. He's decreasing speed to 840 to save fuel. Tankers are proceeding further westward to have plug-in earlier.
- 1310—LANA Five due in second refueling area. No tankers available. Looks like he may have to divert.
- 1311—LANA One 72 miles away from hook-up area.
- 1312—LANA One is 20 minutes late on profile. Schedule looks like he'll finish in two hrs. and 58 min.
- 1318—LANA One is now gulping over Fort Wayne, Ind.
- 1320—LANA Two called in 180 miles out—critical on fuel. Two tankers detach from main group and head west to pick up LANA Two early.
- 1322—LANA Five will be at refueling point in a few minutes. There is a possibility of a tanker.
- 1325—LANA Four is reported out of the race.
- 1326—LANA Three is going to be three minutes late for third refueling.**
- 1327—LANA Three is 100 miles out from tanker. Clocked at 970 knots. The hot upper air has slowed him down to Mach 1.7.**
- 1328—LANA Five is extremely short on fuel and has to divert. He is definitely going to land.
- 1329—LANA Four asks to get back in the race. He is heading west from St. Louis to get a tanker.
- 1330—LANA Three clocked on radar at 1110 mph.**
- 1331—LANA Three is three minutes from tanker.**
- 1331—LANA One reported drinking—slow. LANA Two is drinking. LANA One has some other difficulties. Information not available on this last report.
- 1332—LANA Three at pushover point.**
- 1333—LANA Four is 12 minutes behind profile, but wants to try all the way. If he gets a plug-in, he has a chance of getting to New York.
- 1333—LANA Three is 6 to 7 minutes behind on profile.**
- 1334—LANA Four is out of the race again. He couldn't drink enough.
- 1335—LANA Three has a visual tally-ho on the tanker at four miles, is 12 minutes late on profile now.**
- 1336—LANA One off tanker at drop off point with only 13,000 pounds.
- 1337—LANA Three not hooked up yet.**
- 1338—LANA One is 25 minutes late on profile.
- 1340—LANA Three is now drinking.**
- 1341—LANA Two reported still drinking.
- 1342—LANA One 40 miles north of Pittsburgh.
- 1344—LANA Two off the tanker with a full load and at drop-off point. He's 11 minutes late on profile.
- 1346—LANA One is 13 minutes out of New York.
- 1349—LANA One is 170 miles away from New York.
- 1350—LANA Four heading for third refueling site. LANA Five landed at Salina, Kans. All O.K.
- 1351—LANA Three reported off tanker at 1349 with a full load. He is eight minutes behind a revised profile. Looks as if he can come in to New York in two hours and 46 minutes. ETA: 1414.**
- 1352—LANA Four's whereabouts unknown, last reported on course and proceeding to make last tanker.
- 1356—LANA One 100 miles out—five minutes away.
- 1358—LANA One 40 miles out at 50,000.
- 1359—LANA One 30 miles out beginning descent to New York.
- 1400—Tankers over Pittsburgh area returning to scene to wait for LANA Four.
- 1401—LANA One sighted coming downhill to field.
- 1402.45—LANA One passes the tower for an elapsed time of three hours, three minutes, a new unofficial trans-continental speed record.
- 1403—LANA Two passed Harrisburg.
- 1405—LANA Two less than 100 miles out.
- 1406—LANA Two descending from 50,000.
- 1408—LANA Two sighted two miles out.
- 1409.28—LANA Two passes tower in two hours and 57 minutes, breaking LANA One's record.
- 1410—LANA Three reported passing Harrisburg.**
- 1411—LANA Three 100 miles out.**
- 1413—LANA Three commencing descent.**
- 1415—LANA Three visually sighted west of N.Y.**
- 1416.49—LANA Three crosses finish line in elapsed time of two hours and 47 minutes.**



LANA ONE team, Cdr. Lake, Ltjg. Cowart bettered old world record by four minutes.

F3D coordinator to assist tankers and the F4H coming in for a drink, and two WF's to act as auxiliary air intercept controllers and divert advisors in the event the transfer had been unsuccessful. To maintain an accurate signal for homing, one A4D at each refueling site set up a UHF frequency to allow the F4H to get a relative bearing. The Radar Intercept Officer, in addition to the above, used his long range radar to initially pick up the targets as far out as 100 miles.

The final link to the transcontinental set-up consisted of a hot-line telephone established from the West Coast at the Ontario Airport to the finish line at Navy New York. Coordinator for the overall project was Capt. "Butch" Satterfield, USN, of ComNavAirLant who located himself at Norad in Colorado Springs, Colo.

After a week of practice plug-ins over the first leg of the profile, the aircraft headed for their positions. The F4H's landed at Ontario, the tankers at their various support fields. All aircraft were in position by Saturday afternoon, 20 May 1961. The first possible run could take place on Sunday, if the weather conditions were favorable in temperature, upper winds and in cloud coverage, in that order.

On Sunday morning at 0800 EDST, all parties were on the hot-line with Dali Lana at Colorado Springs. Weather reports from the already airborne pilots reported conditions favorable, however, balloon soundings indicated the upper temperatures were far above

normal and almost precluded an attempt that day. The engineers on station in Colorado who worked the profile on each given leg advised that the profile looked good on the first run. On the second leg a loss of about two minutes was predicted and on the last leg to the finish line, the loss was estimated at 12 minutes, with a possibility of 15 to 20 minutes. Weighing these calculations to the planned two hour and 38 minute flight, the figures



LANA TWO LCdr. Lamoreaux and Lt. Johnson eclipsed F-101 mark by ten minutes.

were too close to the present record to attempt a try. The flight was cancelled until the following morning.

The planned flight of two hours and 38 minutes was worked out on a basis of a 25-knot tail wind from the west, with average temperatures and an average speed. With any favorable set of conditions, the profile could be executed in shorter time.

On Monday morning, the hot-lines were activated at 0800 EDST again (0400 Pacific time), and the weather aircraft in each of the sectors involved were again airborne relaying their information to Colorado Springs. F3D's, F9F-81's, A3D's airborne over Ontario, Albuquerque, St. Louis, Fort Wayne and New York, gave fair indications for a possible try. Finish line weather was marginal and becoming worse. Required at New York was 10,000 feet and five miles, and it appeared that the overcast would drop to 1000 feet about the time the race would be over. Another requirement of FAA was that the last aircraft had to arrive

in New York no later than 1530 EDST. This made take-off quite early on the West Coast and allowed for a minimum of time in making the final "Go or No Go" decision. Again the flight was cancelled and conditions indicated the same for Tuesday morning.

Tuesday showed the same conditions with a minor change in the Midwest. The Eastern leg upper temperature was at -47° which was unacceptable to the planned profile. The prospects looked better for Wednesday, 24 May.

Wednesday morning, reports again indicated some questionable areas but conditions were better than the previous two days. Further, the meteorologists were positive that another day's delay would result in bad weather at the altitudes to be used for the refueling. The balloon soundings over New York showed an upper temperature of about -53° for 35,000 and about -54.5° for 45-50,000. This was barely acceptable. The Pittsburgh soundings, which came in through New York for relay to Colorado, showed an isothermal layer from 40,000 to 50,000 of -60° . This was the final clincher in providing Dali Lana with the Execute signal. Lima (launch) time was set for LANA One as 1500 Zulu (1100 EDST).

All stations along the line were alerted, and aircraft were prepared for the historic race. In New York, the timers were notified and called to their station. New York center flashed out a notam and radio announcements were passed to everyone within 80 miles to



LANA FOUR team of LCdr. Spencer and Lt. Wagner finished despite refueling problems.



PROJECT LANA PILOTS meet with VAdm. R. B. Pirie and H. E. Wirtb, Julian Lake, Ltjg. Cowart, Ltjg. Young, Lt. Gordon, VAdm. Pirie, Navy League VP at League annual convention. Left to right, Cdr Mr. Wirtb, LCDr. Lamoreaux, Lt. Johnson, Lt. Wagner, LCDr. Spencer.

stay alert and clear for the streaking jets. In Ontario, teams were getting a good breakfast under their belts, checking last minute points and donning their pressure suits for the run. Ground crews, mechanics, technicians, and factory representatives were scurrying around each aircraft insuring that nothing had been left undone. Airplanes were positioned at the edge of the runway and power units were hooked up. Once the engines were started, it was a race to get everything disconnected, so the precious fuel would not be wasted on deck. The airplanes would light off and literally run down the runway with only one heading in mind—GO EAST and GO FAST.

The hot-line telephone remained manned during the entire race and information was passed up and down the line instantaneously. Radar tracked each aircraft as it proceeded on course

and the engineers plotted the track each minute for comparison with the planned profile. The weather was also checked constantly in order to give a different altitude if the conditions were better at another level than that being flown at that moment.

What occurred at NAS NEW YORK as the first three of the four *Phantom II*'s blurred past the field control tower at intervals of seven minutes is now history. LANA One, home first, broke the existing record by nearly five minutes.

The congratulatory tide was turned in short order to engulf the team in LANA Two which eclipsed the short-lived mark by a healthy margin of seven minutes. A ditto and final demonstration was enacted a little later as LANA Three, cleaving another ten minutes from the most recent mark, taxied in to take all of the (Bendix) bacon and cheers of the flying world.

Of LANA Four little has been recorded owing to its failure to top any of the transcontinental marks.

It is noteworthy that the team of LCDr. Spencer and Lt. Wagner, undaunted by refueling problems, and despite the fact the crowd had dispersed, closed on the terminal point tower with the same enthusiasm as had the winners. LANA Four finished at 1530 New York time, precisely the limit set by FAA for ending the race.

For their achievement in the advancement of Navy Aviation, Lt. R.F. Gordon and Ltjg. B.R. Young received Distinguished Flying Crosses from VAdm. R.B. Pirie, Deputy Chief of Naval Operations (Air), on 26 May 1961 at the Navy League Convention dinner in Washington, D.C. Cdr. Lake, Ltjg. Cowart, LCDr. Lamoreaux and Lt. Johnson received Air Medals for their spirited contribution to the effort on the Bendix Trophy speed race.

NAVY'S WORLD RECORDS LOG

OFFICIAL WORLD RECORDS are of two general types. The first, generally referred to as maximum or absolute records, is the best performance in a specified event by any aircraft regardless of its type. The second, identified as Class Records, is limited to performance by a specific aircraft type. Thus the holder of a maximum record is also the holder of one of the Class Records.

Records of the maximum type are limited to speed, altitude and distance, and at various times have also included duration. Those of the class type include in addition a number of modifications of the general event which in speed, for example, involves specified distance, payload, and a combination of distance and payload.

TRANSCONTINENTAL RECORDS

Date	Pilot	Plane	Place	Hrs. Min. Sec.
16 Jul 57	Maj. J.H. Glenn, USMC	F8U-1P	Los Angeles to N. Y.	3 22 50.05 723,517 mph
21 Mar 57	Cdr. D.V. Cox and crew	A3D-1	N. Y. to Los Angeles	5 12 39.24 469,383 mph
21 Mar 57	Cdr. D.V. Cox and crew	A3D-1	Los Angeles to N. Y.	9 31 35.4 513,496 mph
24 May 1961	Lt. R.F. Gordon and Ltjg. B.R. Young	F4H-1	Los Angeles to New York	3 hrs. 47 min.



LTS. PRICE AND WEAD on 22-23 June 1924, set five records for Class C seaplanes; one for distance, one for duration, and three for speed.

MAXIMUM RECORDS

ALTITUDE

Date	Pilot	Plane	Place
25 Jul 27	Lt. C. C. Champion	F3W-1	Anacostia, D. C. 38,418 feet
8 May 29	Lt. A. Soucek	F3W-1	Anacostia, D. C. 39,140 feet
4 Jun 30	Lt. A. Soucek	F3W-1	Anacostia, D. C. 43,166 feet

DISTANCE (AIRLINE)

29 Sep-1 Oct 46	Cdr. T.D. Davies and crew	P2V-1	Perth, Australia to Columbus O. 11,235.6 miles
-----------------	---------------------------	-------	--

SPEED

Date	Pilot	Plane	Place	Speed
2 Nov 23	Lt. H.J. Brow	R2C-1	Mineola, N. Y.	259.47 mph
4 Nov 23	Lt. A.J. Williams	R2C-1	Mineola, N. Y.	266.59 mph
20 Aug 47	Cdr. T.F. Caldwell	D-558-1	Muroc, Calif.	640.663 mph
25 Aug 47	Maj. M.E. Carl, USMC	D-558-1	Muroc, Calif.	650.796 mph
3 Oct 53	LCdr. J.B. Verdin	XF4D-1	Salton Sea	752.943 mph

CLASS A—BALLOONS

ALTITUDE

4 May 1961	Cdr. Malcolm D. Ross and Cdr. Victor A. Prather	Off the flight deck of USS Antietam	113,500 feet
------------	---	-------------------------------------	--------------

DISTANCE

Fifth Category (1601-2200 cu.m. vol.)

4-6 May 29	Lt. T.G.W. Settle and Ens. W. Bushnell	Pittsburgh to Prince Edward Island	952 miles
25-27 Sep 32	LCdr. T.G.W. Settle and Lt. W. Bushnell	Basle, Switzerland to Daugieliszki, Poland	963.123 miles

Sixth Category (2201-3000 cu.m. vol.)

4-6 May 29	(As for Fifth Category above)		
25-27 Sep 32	(As for Fifth Category above)		

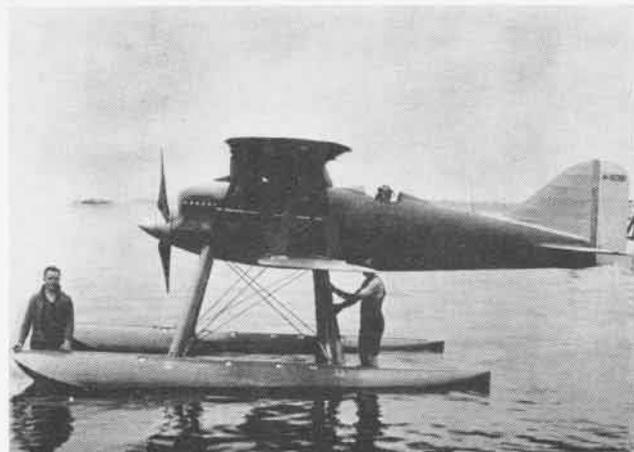
Seventh Category (3001 to 4000 cu.m. vol.)

4-6 May 29	(As for Fifth Category above)		
25-27 Sep 32	(As for Fifth Category above)		

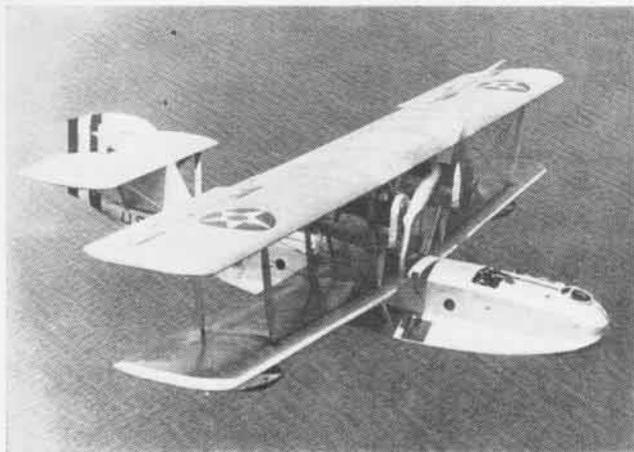
DURATION

Fifth Category (1601-2200 cu.m. vol.)

2-4 Sep 33	LCdr. T.G.W. Settle and Lt. C.H. Kendall	Chicago	51 hours
------------	--	---------	----------



LT. DAVID RITTENHOUSE, 1923 Schneider Cup winner, established in CR-3 a new record for seaplanes with speed of 169.89 mph for 200 km.



THOUGH FORCED down in PN-9, Cdr. John Rodgers, Lt. B. J. Connell and crew set 1,841.12-mile record in San Francisco-Honolulu flight.

Sixth Category (2201-3000 cu.m. vol.)

2-4 (As for Fifth Category above)
Sep 33

Seventh Category (3001-4000 cu.m. vol.)

2-4 (As for Fifth Category above)
Sep 33

CLASS C—LANDPLANES

ALTITUDE

Date	Pilot	Plane	Place	
25 Jul 27	Lt. C.C. Champion	F3W-1	Anacostia, D.C.	38,418 feet
8 May 29	Lt. A. Soucek	F3W-1	Anacostia, D.C.	39,140 feet
4 Jun 30	Lt. A. Soucek	F3W-1	Anacostia, D.C.	43,166 feet
18 Apr 58	LCdr. G.C. Watkins	F11F-1F	Edwards AFB	76,959 feet
6 Dec 59	Cdr. L.E. Flint	F4H-1	Edwards AFB	98,558.51

With 1000 kg payload

17 Apr 23	Lt. R. Irvine	DT	Dayton, Ohio	11,609 feet
13 Dec 60	Cdr. L.A. Heath and Lt. H.L. Monroe	A3J	Edwards AFB, Calif.	91,450.8 feet

SPEED

For 100 Kilometers

6 Oct 23	Lt. A.J. Williams	R2C-1	St. Louis, Mo.	243.812 mph
16 Oct 53	R.O. Rahn	XF4D-1	Edwards AFB	728.114 mph
25-Sep 60	Cdr. J.F. Davis	F4H-1	Edwards AFB	1390.21 mph

For 200 Kilometers

6 Oct 23	Lt. A.J. Williams	R2C-1	St. Louis, Mo.	243.672 mph
----------	-------------------	-------	----------------	-------------

For 500 Kilometers

15 Oct 55	Lt. G. Gray	A4D-1	Muroc, Calif.	693.127 mph
5 Sep 60	LCol T.H. Miller, USMC	F4H-1	Edwards AFB, Calif.	1216.78 mph

TIME TO CLIMB

To 3000 Meters

22-23 May 55	Maj. E.N. Le Faivre, USMC	F4D-1	Pt. Mugu, Calif.	44.392 sec.
--------------	---------------------------	-------	------------------	-------------

Date Pilot Plane Place

To 6000 Meters

22-23 May 55	Maj. E.N. Le Faivre, USMC	F4D-1	Pt. Mugu, Calif.	66.095 sec.
--------------	---------------------------	-------	------------------	-------------

To 9000 Meters

22-23 May 55	Maj. E.N. Le Faivre, USMC	F4D-1	Pt. Mugu, Calif.	90.025 sec.
--------------	---------------------------	-------	------------------	-------------

To 12,000 Meters

22-23 May 55	Maj. E.N. Le Faivre, USMC	F4D-1	Pt. Mugu, Calif.	111.224 sec.
--------------	---------------------------	-------	------------------	--------------



LT. APOLLO SOUCEK, in a Wright Apache with P&W Wasp engine, on 4 June 1929, set world altitude mark for Class C seaplanes of 38,560 ft.

To 15,000 Meters

22-23 May 55	Maj. E.N. Le Faivre, USMC	F4D-1	Pt. Mugu, Calif.	156.233 sec.
--------------	---------------------------	-------	------------------	--------------

CLASS C—SEAPLANES

ALTITUDE

7 Jun 23	Lt. C.F. Harper	DT-2	San Diego, Calif.	13,898 feet
5 May 27	Lt. C.C. Champion	F3W	Hampton Roads, Va.	33,455 feet
4 Jul 27	Lt. C.C. Champion	F3W	Anacostia, D. C.	37,995 feet
4 Jun 29	Lt. A. Soucek	F3W	Anacostia, D. C.	38,560 feet

With 250 kg Payload

7 Jun 23	Lt. E.B. Brix	DT-2	San Diego, Calif.	10,850 feet
----------	---------------	------	-------------------	-------------

With 500 kg Payload

7 Jun 23	Lt. R.L. Fuller	F5L	San Diego, Calif.	8438 feet
14 Apr 27	Lt. G.R. Henderson	O2U-1	Anacostia, D. C.	22,178 feet

With 1000 kg Payload

7 Jun 23	Lt. E.E. Dolecek	F5L	San Diego, Calif.	7979 feet
27 Jun 28	Lt. A. Gavin	PN-12	Philadelphia, Pa.	19,393 feet

With 1500 kg Payload

7 Jun 23	Lt. H.T. Stanley	F5L	San Diego, Calif.	5682 feet
----------	------------------	-----	-------------------	-----------

With 2000 kg Payload

7 Jun 23	Lt. H.E. Halland	F5L	San Diego, Calif.	4885 feet
26 Jun 28	Lt. A. Gavin	PN-12	Philadelphia, Pa.	15,426 feet

Greatest Payload to 2000 Meters

18 Aug 27	Lts. B.J. Connell and H.C. Rodd	PN-10	San Diego, Calif.	3504 kg
-----------	---------------------------------	-------	-------------------	---------



TRUCULENT TURTLE, 1946, skippered by Cdr. Davies, set non-refueling distance record.



ON 20 AND 25 AUGUST 1947, the famed Douglas Skystreak D-558-1, broke the world's speed record over the three-kilometer course at Muroc, Calif., at 640.663 mph and 650.76 mph.

Date	Pilot	Plane	Place	Miles	Date	Pilot	Plane	Place	Miles
DISTANCE									
Greatest Distance									
12 Jun 23	Lt. M.A. Schur	DT-2	San Diego, Calif.	792.25	25 Oct 24	Lt. G.R. Henderson	PN-7	Baltimore, Md.	248.55
22-23 Jun 24	Lts. F.W. Wead and J.D. Price	CS-2	Anacostia, D. C.	963.123	25-26 May 25	Lts. Z. Soucek and L.J. Maxson	PN-12	Philadelphia, Pa.	1243.2
11-12 Jul 24	Lts. F.W. Wead and J.D. Price	CS-2	Anacostia, D. C.	994.19	11-12 Jul 28	Lt. A.W. Gorton and CB'N E.E. Reber	PN-12	Philadelphia, Pa.	1336
31 Aug-1 Sep 25	Cdr. J. Rodgers and Lt. B.J. Connell	PN-9	San Francisco toward Hawaii	1841.12	With 1500 kg Payload				
14-15 Oct 35	L.Cdr. K. McGinnis and crew	XP3Y-1	Canal Zone to Alameda	3443.255	25 Oct 24	Lt. O.B. Hardison	PN-7	Baltimore, Md.	62.137
Straight Line									
31 Aug-1 Sep 25	Cdr. J. Rodgers and Lt. B.J. Connell	PN-9	San Francisco toward Hawaii	1841.12	With 2000 kg Payload				
10-11 Jan 34	L.Cdr. K. McGinnis and VP-10	P2Y-1	San Francisco to Pearl Harbor	2399	25 Oct 24	Lt. O.B. Hardison	PN-7	Baltimore, Md.	62.137
14-15 Oct 35	L.Cdr. K. McGinnis and crew	XP3Y-1	Canal Zone to San Francisco	3281.383	8 Jul 27	Lts. B.J. Connell and S.R. Pope	PN-10	San Diego, Calif.	947.705
Closed Circuit									
12 Jun 23	Lt. M.A. Schur	DT-2	San Diego, Calif.	792.25	11-12 Jul 28	Lt. A.W. Gorton and CB'N E.E. Reber	PN-12	Philadelphia, Pa.	1336
22-23 Jun 24	Lts. F.W. Wead and J.D. Price	CS-2	Anacostia, D. C.	963.123	DURATION				
11-12 Jul 24	Lts. F.W. Wead and J.D. Price	CS-2	Anacostia, D. C.	994.19	12 Jun 23	Lt. M. A. Schur	DT-2	San Diego, Calif.	11 16 59
15-16 Aug 27	Lts. B.J. Connell and H.C. Rodd	PN-10	San Diego, Calif.	1569	22-23 Jun 24	Lts. F.W. Wead and J.D. Price	CS-2	Anacostia, D. C.	13 23 15
With 250 kg Payload									
6 Jun 23	Lt. H.T. Stanley	F5L	San Diego, Calif.	574.75	11-12 Jul 24	Lts. F.W. Wead and J.D. Price	CS-2	Anacostia, D. C.	14 53 44.2
With 500 kg Payload									
6 Jun 23	Lt. H.E. Halland	F5L	San Diego, Calif.	466	1-2 May 25	Lts. C.H. Schildhauer and J.R. Kyle	PN-9	Philadelphia, Pa.	28 35 27
15-16 Aug 27	Lts. B.J. Connell and H.C. Rodd	PN-10	San Diego, Calif.	1569	3-5 May 28	Lts. A. Gavin and Z. Soucek	PN-12	Philadelphia, Pa.	36 1 0
With 1000 kg Payload									
6 Jun 23	Lt. R.L. Fuller	DT-2	San Diego, Calif.	205.2	With 250 kg Payload				
(Continued on page 34)									



Recollections of an RIO

THE RADAR INTERCEPT OFFICER (RIO) in the F4H, seated in a separate cockpit directly behind the pilot, is responsible for operating the airborne intercept radar. Taking his target from the ground or ship-based air controller, the RIO in combat directs the pilot in maneuvers of the aircraft by interpreting scope data.

To qualify for his designation as Naval Aviation Observer (Intercept), the RIO must have completed an intensive program in aerology, aerodynamics, navigation, fire-control systems, and radar intercept.

On a speed run, the emphasis shifts, and the RIO assists the pilot in working out courses, speeds and distances to be flown, and in computing fuel consumption data. Radar is used for navigational mapping of terrain features along the path of flight, and, more importantly, in using the intercept capability of the system to join up with tanker aircraft.

Ltjg. E. A. Cowart, RIO, who rode LANA One, with Cdr. Julian Lake as pilot, describes their record-breaking transcontinental ride.

THE PILOT and the Radar Intercept Officer acted as a team throughout the project. My first job as the RIO was the initial planning on navigation. Gathering all the charts and laying them out with distances to figure, route to follow and radio navigational aids to list en route occupied me the first few days. Three in-flight refueling areas were designated, one over Albuquerque, about 200 miles north of Kirtland AFB, the second over the St. Louis area, and the third around Pittsburgh, Pa.

Since before plugging in for fuel we would be down to a minimum of fuel aboard, various airfields that could take the F4H were checked along the route. Facilities were verified, radio frequencies and navigational aids were listed on knee-board cards. My job would be to give my pilot a field within close range in the event of any difficulty, emergency or non-transfer of fuel. In addition, I would provide an immediate vector and handle the radio transmission prior to arrival at that field.

McDonnell Aircraft provided us with performance data and a mission profile card for each leg which at a glance showed exactly how you were doing in terms of *time*, *fuel*, and *speed* at any given point in order to insure that you would not fall behind in the projected plan for that leg. The first leg was about 600 knots; the second, about 950 knots and the third, about 1000 knots.

For a few days at Oceana before leaving for Ontario, Calif., VAH-9 provided some A3D's for practice refueling as we ran the simulated profile on the first leg. Each time we did, there was some variance because of tem-

perature changes. Naturally, the colder it is at altitude, the better the specifics for the engine are, and you really get great speeds from the *Phantom II*. Finally on 19 May we left for Ontario via a stop at St. Louis and a practice refueling over Albuquerque, arriving Ontario that evening.

The first run was set for Sunday, 21 May, however, temperature and weather conditions in general were not satisfactory and the race was postponed.

Execute was given with our take-off as the Number One plane set for 0800 Pacific time, 24 May. I had all my charts, knee-board cards and other gear laid out in the back seat.

As soon as the starting units were attached, Cdr. Lake cranked up both engines, signaled for un-plug of the starters. He added throttle up to full power plus afterburners. Our take-off was normal, and we climbed to 50,000 feet. My job was to keep tabs on miles to go, and every 30 seconds I relayed this information to Cdr. Lake. Our first leg was shorter than the rest because of the fuel we needed to get off the deck and up to cruising altitude.

At about 100 miles to go, I concentrated on the radar set and started checking the area ahead. I found the tankers on course and in position. Cdr. Lake also had the A3D on the homing needle, and we had a visual on the contrails just about pushover point at 30 miles from the tanker group. We eased down to 33,000 feet at Mach .8, came up to the tanker, and Cdr. Lake plugged-in without difficulty. We had a full load in 15 minutes and during that time traveled another 122 miles along our course.

After we unplugged, Cdr. Lake accelerated and climbed back to 50,000 and continued running at full power. I was relaying info every 30 seconds, checking the field en route, figuring the ground speed, and then getting on the radar scope to spot the tankers up ahead. Over the second leg, I was able to pick up the tankers on the radar and tracked them in until we had another visual at pushover.

Cdr. Lake plugged in easily, but transfer was extremely slow. He then unplugged and went to another tanker. After plugging in he had the same trouble. Fuel was not transferring at the prescribed rate. We stayed on this tanker five minutes longer than scheduled and finally unplugged 2000 pounds short. We accelerated and went back up to 50,000. Cdr. Lake eased up to 55,000 to save on burning rate since we were a little shy on fuel.

We knew before reaching Number Three tanker that we had lost some 15 to 20 minutes because of our slow transfer over the second tanking area. I was able to spot the third tanker over the Fort Wayne, Indiana, area on my radar set. Cdr. Lake had the homing needle indicating the correct position, and we pushed over at the 30-mile mark. Down at 33,000 there was no trouble plugging in but we again had slow transfer problems. We had to stay plugged in again longer than anticipated and we went 50 miles past our drop-off point. The acceleration, climb to altitude and further acceleration were normal as in the first legs. About 30 miles out of New York, Cdr. Lake nosed over, reduced speed and came down to low altitude in order to pass the tower at 500 feet and slow speed for identification purposes.



The FAI is the sole international sporting body qualified to make and enforce rules to encourage and control . . . aviation records.

—FAI Code Sportif Section 1.2.1.

For The

NAA/FA

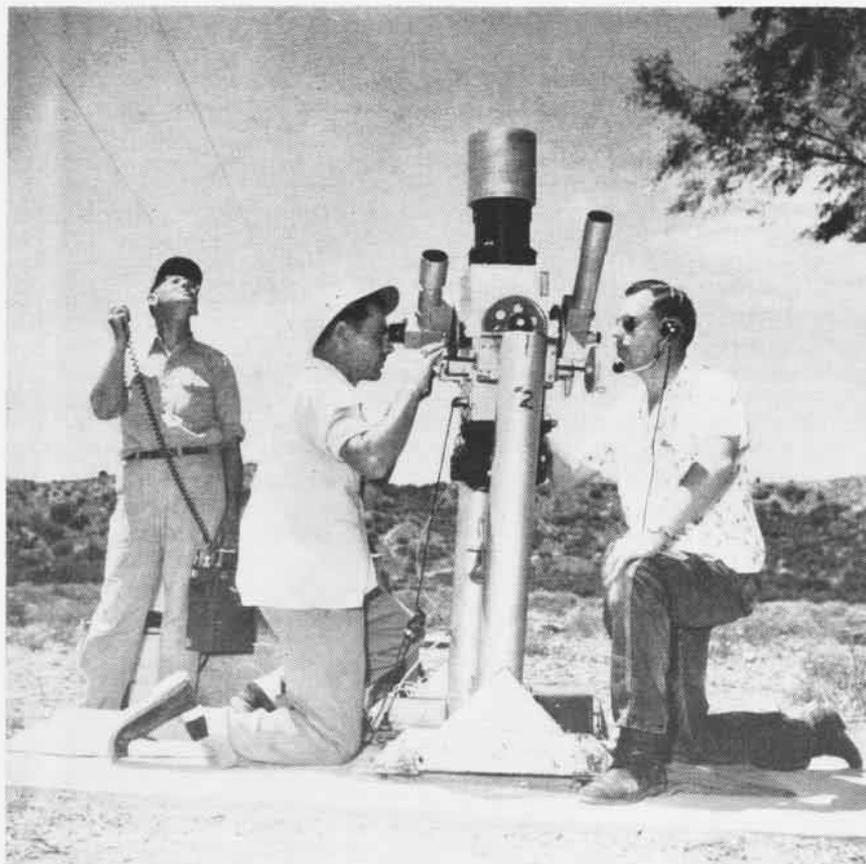
OF THE THOUSANDS of eyes fixed on Project LANA *Phantom II*'s as they telescoped the existing transcontinental speed record, the surveillance of two gentlemen named Lou Davis and Bill Zint was the only one that counted—for the book, anyway. Precisely positioned astride a Coast and Geodetic Survey marker, Davis and Zint manned devices at NAS New York which permitted them to establish the exact (in fractions of seconds) moment each of the Bendix Trophy aspirants crossed the finish line.

Earlier from another survey marker location some 2445.9 miles away at Ontario International Airport, Calif., Burt Locanti, with the use of special equipment, had made similar observations to fix the start of the record setting runs from west to east.

The three timers involved in the 24 May speed classic were volunteer official observers of the National Aeronautic Association, the U.S. affiliate of the *Federation Aeronautique Internationale* (FAI). The recording methods they employed were the first step in the traditional process whereby aviation achievements are started on the road to recognition as official international records.

Beginning in 1905 when it certified an official world speed record of 41.292 kilometers per hour and a distance record of 220 meters, FAI has become the supreme arbiter of all aviation records. Only holders of FAI "sporting licenses" may compete for a record, and only those records made in accordance with the strict rules of its code and certified by its Paris headquarters can be recognized as official.

FAI recognizes three general classes of aircraft records: national, world class, and world. There are only six



Record Book

HAS LOGGED 'EM SINCE 1905

true "world" records: (1) distance in a straight line without landing, (2) distance over a closed circuit, (3) altitude, (4) speed over a straight course, (5) speed over a closed circuit, and a newly established record (6), altitude in horizontal sustained flight. The United States holds all of these except the last, which has yet to be claimed. U.S. Navy aircraft hold two of these records: for distance in a straight line without landing, Cdr. T. D. Davies in 1946 successfully piloted the P2V *Truculent Turtle* from Perth, Australia, to Columbus, Ohio. Current record holder for speed over a closed circuit is Cdr. John F. "Jeff" Davis and the F4H *Phantom II*.

The exact number of possible world class records is a matter of conjecture and is certainly many times the number now claimed. Each class of aircraft is subdivided by weight, and the events are subdivided in various ways, such as time to climb to 3000 meters, to 6000 meters, etc. In addition, there is a possible official record between any two cities of international importance, for example, between New York and Paris.

FAI was first organized at the urging of a Frenchman, a German and a Belgian. In 1905, the Aero Club of France issued invitations for representatives of other clubs of the world to meet in Paris to establish a federation for the promotion of the art and science of aviation. The Aero Club of America was among the eight national clubs represented. On 14 October 1905 the FAI was officially born with the signing of the first statutes and by-laws.

Objectives for the organization adopted at the first meeting remain unchanged today. One of those objec-

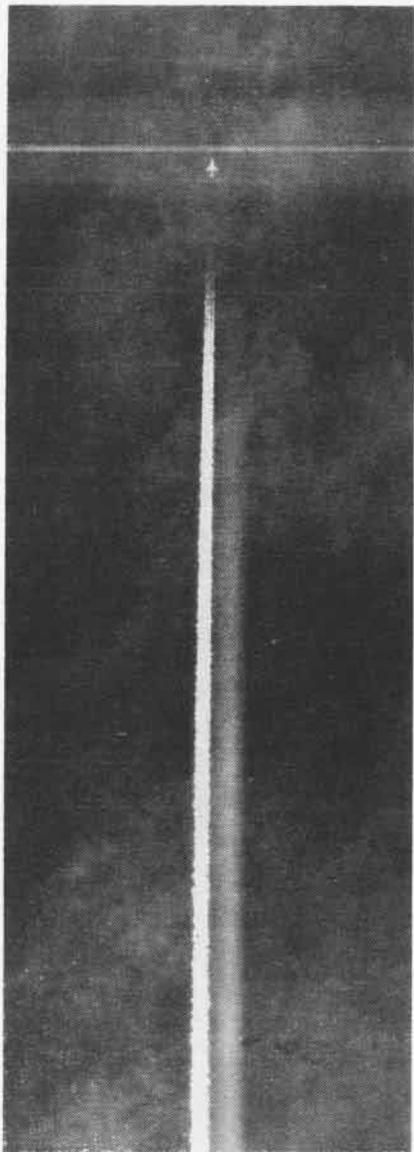
tives was "through the international regulation of aviation sport, [to insure] the control and comparison of aerial performance throughout the world, thus contributing to progress in aeronautical construction."

FAI carries out its world-wide program through affiliated national aero clubs. NAA is the U.S. member of FAI and is responsible for the conduct of aviation activities in this country coming under FAI rules and policies. Organized in 1922 as the successor to the Aero Club of America, it is the only organization in the United States which can officially sanction and certify world record flights, both civilian and military.

In the U.S., records controlled and measured by officials of NAA are presented for certification. Each attempt requires the services of a large number of officials—timekeepers, technical stewards, clerks of the scales, etc.—to monitor and document the record. For instance, eight of NAA's 103 certified officials observed the Heath/Monroe A3J altitude record flight on 13 December 1960. A record attempt is no casual affair. Every precaution is taken to insure the authenticity of the record.

Duties of NAA officials vary greatly. New observers sometimes serve an apprenticeship lying on their backs in the desert, lining up crossed wires marking the point the contest aircraft must cross and taking the time as it does so. Other assignments include calibrating complex timing equipment, removing film from contest aircraft, staying with it until it is processed, and returning it to the chief Timer or Directing Official of the run.

U.S. courses over which record runs are made come under NAA jurisdiction. Record attempt applications must



HIGH IN BLUE, exact moment of speed run finish is recorded by NAA Askania camera. Measuring methods include visual sighting.

be accompanied by detailed itineraries showing the exact distances to be covered. FAI rules provide for "permanent courses" which may be used for attempts on international records, provided they have been formally recognized by the FAI.

Two of these permanent courses, located in the Edwards AFB vicinity include the 500-km. closed course used for the F4H Phantom II record set by LCol. T.H. Miller on Labor Day 1960, and the 100 km. closed course used for the F4H world record set by Cdr. John F. Davis 20 days later.

Instruments used for measuring a record (time, distance or altitude)



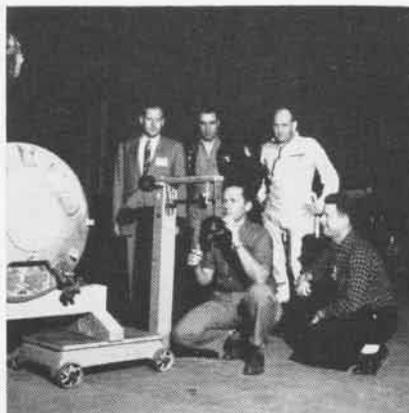
BAROGRAPH is started and sealed in the nose of F4H by observers prior to the record try.

the subject of documents which become part of the record file submitted to FAI in support of the claim. This file or "record dossier" includes such documents as Coast and Geodetic Survey calculations; certificates of stewards that the fuel tanks were sealed at the start and finish; detailed reports drawn up or certified by the Bureau of Standards or other approved scientific body, on the method and instruments used for timing, complete with an indication of the degree of accuracy, etc.

Certification as an official record is an elaborate step-by-step process beginning with a telegram giving par-



OFFICIAL observer takes visual sighting on contest aircraft during desert record trial.



REQUIRED load for altitude record try is weighed before, after flight; must be same.



DATA ENGINEER reduces instrumented data after pre-Bendix tune-up flight by F4H-1.

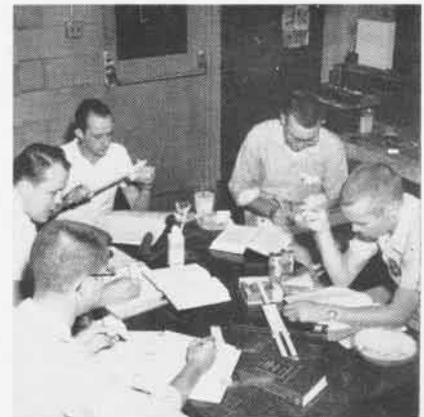


READINGS are fed into radar control station where data is recorded, flight path plotted.

piano wire sights have been supplemented with Bohlen and Askania cameras, oscillographs, precision radar, electronic timers, and electronic computers. Where once officials worked half the night after a record run working out all the computations, today they work half the night verifying the accuracy and calibration of the space-age instrumentation used to observe the flight.

Actual running of a record event has many ritualistic aspects. The competitor must present his permit to the NAA official. Barographs and other instruments are installed in the aircraft and started. Fuel tanks must be sealed for speed record attempts, such as the 100-km. closed course and for certain distance record tries to show that the aircraft did not land and refuel during the record attempt.

On completion of a record flight, the officials inspect the seals and remove the instruments from the aircraft. Each step of the procedure is



POST RECORD attempt session involves observers in laborious, complex calculations.

must be of a type approved by a scientific body recognized by the governing body. They must be calibrated both before and after the record runs.

Recording instruments through the years have become increasingly complex. Hand-held stop watches and

particulars forwarded to FAI Paris Headquarters within 48 hours after the record attempt. If a try for a better mark is desired, the first attempt may be regarded as provisional for one week.

Next step is certification of the record as a national one. Within eight

days after the attempt, the complete record file must be in the hands of NAA. Four months are allowed the national aero club to certify a world record as a national record and three months for a world "class" record.

Within eight days of its certification as a national record, the file must be forwarded to FAI headquarters in Paris accompanied by its certification as a national record and a request for certification as a world class or world record.

At FAI headquarters, the file may be turned over to a technical committee for further investigation. FAI reserves the right to demand further proof in support of the calculations given. They may refuse certification if the information is insufficient.

After its review, FAI advises member clubs of the certification of the new record. However, the record remains tentative during a three-month period when it may be subject to protest. Any FAI national aero club can review and inspect the record dossiers on file at the FAI headquarters.

FAI enjoys an incidental claim to fame as one of the world's most successful international organizations. For over 50 years, this cosmopolitan group, using the international conference table as its chief tool, has enjoyed a record of successful and constructive international cooperation in promoting aviation. Even during the chilliest of cold war periods, FAI has held its an-

nual meetings and successfully completed its work.

Once a year, always in a different country, delegates from the member national aero clubs meet in general conference to discuss and act on agenda items submitted by the various members. The last general conference was held in Barcelona 6-10 October 1960.

Between general conferences, FAI affairs are conducted at meetings of international committees: aerobatics, aeromodelling, private and touring, helicopters, medicine, parachuting, soaring, sporting aviation, and the newly established one for astronautics. These committees met in Paris last spring. VAdm. R. B. Pirie, DCNO (Air) and NAA Director, was a delegate on the Private and Touring Committee and on an *ad hoc* committee to study FAI statutes.

FAI uniquely combines the old and the new—ways unchanged since the birth of aviation and provisions as new as the latest advances of science. At the conference in Barcelona in 1960, FAI added sections to the Sporting Code to provide for records for "the performance achieved by jet-propelled, non-air breathing rockets." A standing committee established for astronautics held its first meeting in Paris last February where rules for space records were further refined and details worked out.

The new rules, proposed by the

American member club, had their beginning in a meeting in the summer of 1960 presided over by Jacqueline Cochran, President of FAI for two years in 1959 and 1960 and current president of NAA. The NAA contest board worked out the proposals for certifying space records and took them to the Barcelona conference.

Five records were established: duration of flight with earth orbit; altitude without earth orbit; altitude with earth orbit; greatest mass lifted without earth orbit, and greatest mass lifted with earth orbit.

Requests for certification of records in each of these categories are now being processed. On 12 April 1961, the Russian Aero Club sent a cable to FAI headquarters requesting certification of the Yuri Gagarin space flight.

Application for certification of rec-



NAA PRESIDENT and famed aviatrix, Jacqueline Cochran, makes 1960 carrier visit.



FAI DIPLOME DE RECORD for 1960 record flight is presented to the Marines' LCol. T. H. Miller by VAdm. R. B. Pirie as NAA's Secretary of Contest Board, Tony Mablman, looks on.

ords in the non-earth orbit categories have been submitted for Astronaut Alan Shepard's space flight which was observed by NAA contest officials headed by Miss Cochran and Jacques Allez, President of FAI, who was present as an honored guest.

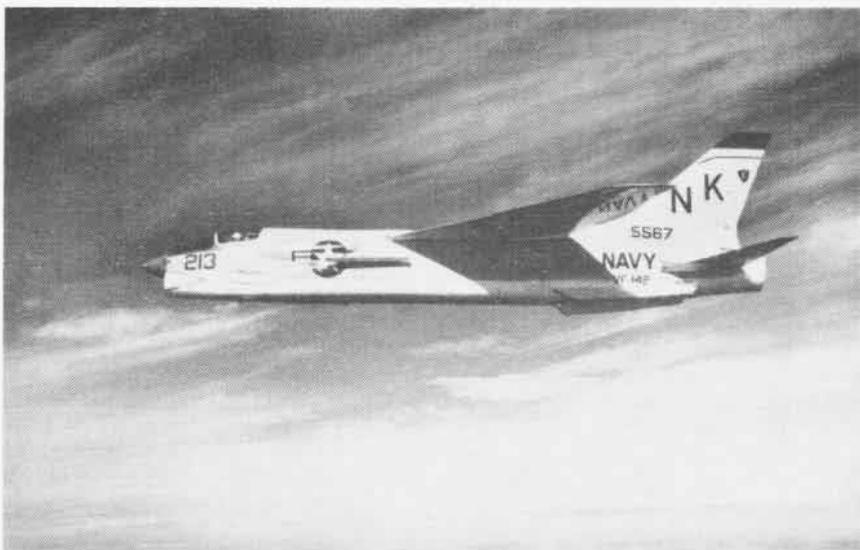
Currently FAI lists 412 records held by men and airplanes of various countries. Of these, the United States holds 113, including all of the outstanding world records.

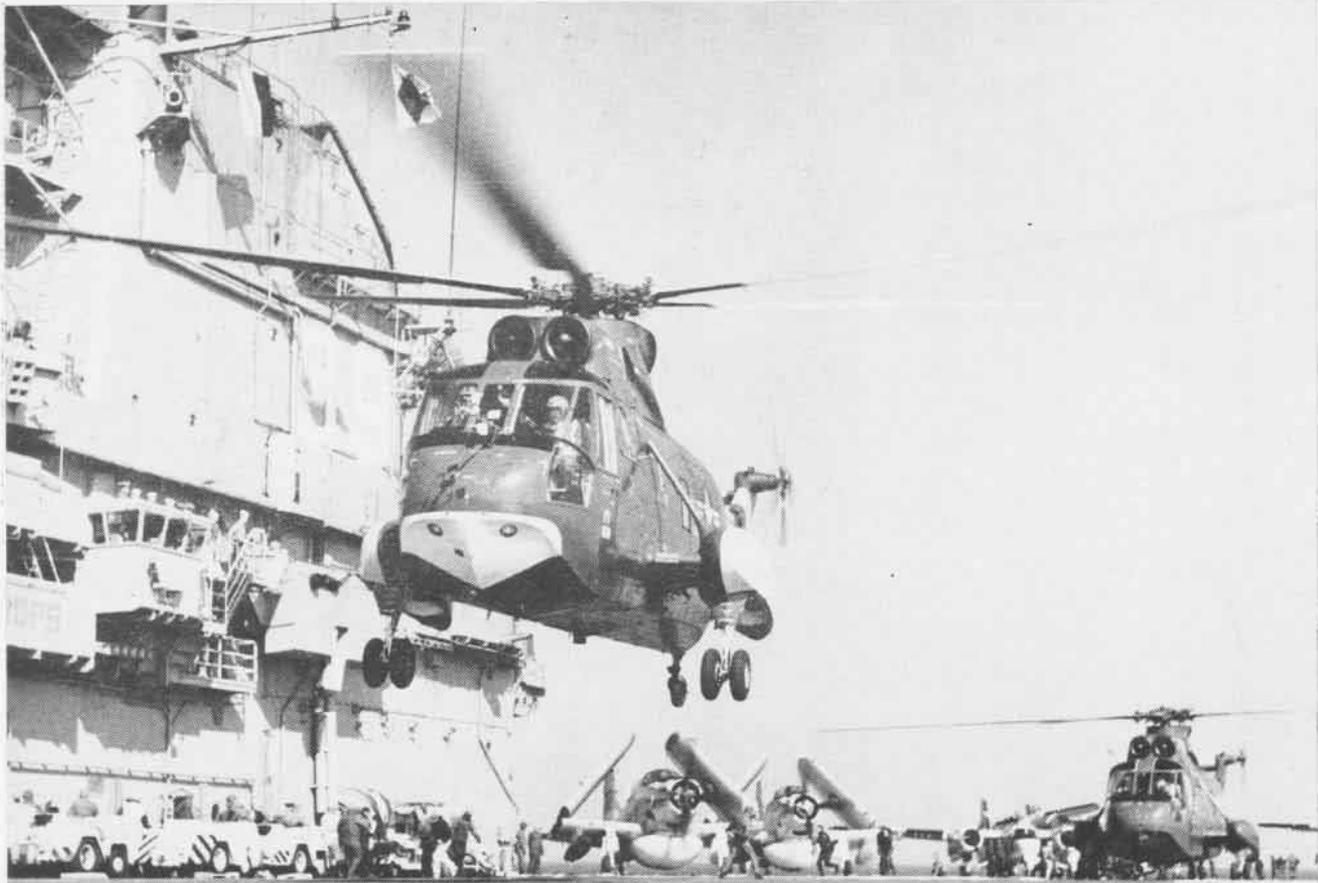
With the dossier of Navy Lts. Richard Gordon and Bobbie Young in FAI hands, and all enclosures pertaining to their Bendix Trophy flight painstakingly prepared by the National Aeronautic Association, it can be anticipated that the already imposing U.S. collection of *Diplomes de Records* will be increased in short order.



MIRAMAR MASTERS

Routinely, VCP-63 is busily engaged in developing and sharpening tactics and techniques for aerial photography. In a battle situation the squadron cameras would provide pre-strike and damage assessment information as well as used for target and weather reconnaissance. In one recent change-of-pace undertaking, the outstanding results of which are shown here, the aerial lensmen focused on these Miramar-based subjects: 'Iron Angels' of VF-141, 'Fighting Falcons' of VF-142 and the 'Blue Diamonds' of VA-146.





CDR. PATRICK L. SULLIVAN AND LT. B.V. WITHERSPOON FLY THE HSS-2 HELICOPTERS OFF THE DECK OF THE USS LAKE CHAMPLAIN

HSS-2 COMPLETES CARRIER TRIALS...

SCHEDULED to go into fleet service late this year as a submarine hunter-killer, the Navy's twin-turbine Sikorsky HSS-2 has completed its first carrier suitability trials.

USS *Lake Champlain* served as the test carrier during a week's cruise off the Atlantic Coast. The tests were part of the Board of Inspection and Survey trials.

Two HSS-2's of the seven BIS helicopters were used in the sea trials. They operated in a variety of extreme wind and sea conditions from a wide selection of deck locations.

The following points of the HSS-2 operations were cited:

1. 100 per cent availability for all scheduled flights.
2. Automatic blade folding successfully accomplished in winds up to 45 knots.
3. Rotor turn-ups and helicopter take-offs conducted in winds up to 48 knots.
4. Engine starts, spreading of blades and rotor turnups made downwind without difficulty.
5. Normal and roll-on landings made on one or two engines. The turbocopters proved very stable on the deck, even under extreme cross-wind conditions.
6. After rotor shutdown, HSS-2's were shifted from flight deck to hangar deck at more than twice the speed possible with present types of fleet ASW helicopters.

During the HSS-2 trials the *Lake Champlain* was flying the flag of RAdm. George P. Koch, commanding the anti-submarine test group. The *Lake Champlain* was under the command of Capt. Ralph Weymouth during the tests.



AN HSS-2 HOVERS NEAR A DESTROYER IN THE SUITABILITY TRIALS



BOAT-HULLED, TURBINE-POWERED SIKORSKY HSS-2 WHICH BROKE RECORDS WILL SOON ENTER FLEET SERVICE WITH THE ASW FORCES

... AND SMASHES TWO WORLD RECORDS

TWO HELICOPTER world speed records have been claimed by the Navy, based on flights of the new HSS-2 ASW helicopter. Both records have been submitted to the *Federation Aeronautique Internationale* for certification by its U. S. member, NAA.

Cdr. Patrick L. Sullivan and Lt. Beverly W. Witherspoon flew the turbine-powered, boat-hulled helicopter at 192.9 mph over a three-kilometer (1.86 mile) straight-away at Windsor Locks, Conn., May 17. Fastest previous helo speed was 167.09 mph by a Russian MIL-6 helicopter on a 100-kilometer course in 1959.

Seven days later, the same pilots flew the HSS-2 at 174.9 mph over a 100-kilometer closed course to claim a record for that distance.

Cdr. Sullivan is assigned to the Flight Test division at NATC PATUXENT RIVER. He served previously in HS-11. Lt. Witherspoon, also a veteran of HS-11 service, is an HSS-2 project pilot at NATC PATUXENT RIVER.

Soon to enter fleet service, the HSS-2 can operate from land or from carriers. In emergencies it can land on and take off from water.

The Navy's first helicopter completely suited for night and instrument flight, the big HSS-2 can detect, identify, track, and destroy submarines.

All weather flight is made possible by automatic stabilization equipment, radar navigation devices, and protec-

tive devices which prevent icing on the windshields and on the engines.

The boat hulled HSS-2, which is powered by two GE T-58 gas turbine engines, will be a key weapon in the nation's ASW defenses when it goes into Fleet service in the near future.



FLIGHT IS TIMED TO THE SPLIT SECOND



WINNING PILOTS SULLIVAN, WITHERSPOON



CVG-2 STAFF PILOTS POSE BESIDE A4D-2

Day and Night Qualified CVG-2 Staff Pilots Show the Way

Every staff aviator in Air Group Two aboard USS *Midway* is qualified for day and night landings in at least one operational carrier aircraft.

In the accompanying picture, from left to right, Lt. J.V. Walters, LSO, is qualified in the A4D-2, as are Cdr. F.D. Barton, Operations Officer, Cdr. R.J. Selmer, Air Group Commander, and LCdr. E.E. Riley, Special Weapons Officer. Lt. W.A. Lott, at right, senior LSO, is qualified in the AD-7.

In addition, Cdr. Selmer and Lt. Lott are day qualified in the F8U-2.

HU-1 Looks at the Record In 13 Years Service, 859 Rescues

When Helicopter Utility Squadron One paused to celebrate its 13th birthday in April, somebody took time to tally up the HU-1 achievements.

HU-1 has rescued 859 airmen from the sea and from behind enemy lines in Korea, with many of the rescues performed under fire.

Men of the squadron have earned one Congressional Medal of Honor, three Navy Crosses, five Silver Stars, two Legions of Merit, 38 Distinguished Flying Crosses, 160 Air Medals, and 38 Navy Commendation ribbons. The squadron also earned the Presidential Unit Citation.

HU-1 is the Navy's oldest and largest helicopter squadron. Commissioned at Lakehurst in April 1948, the unit now is stationed at Ream Field, Imperial Beach, Calif.

The squadron deploys men and helicopters aboard major Pacific ships.

Additional units have been deployed aboard LST's, icebreakers, and British aircraft carriers. The squadron's general operating area includes nearly a million square miles, from pole to pole and from California to Thailand.

20,000 Get Air Check-out Recruits Get Basic Preparation

In its first two years of existence, the Aviation Familiarization School at NATTC MEMPHIS has graduated more than 20,000 students.

AFAM(P) School is not a technical school. Its mission is to teach civilian-thinking recruits what Naval Aviation is about before they are enrolled in one of the technical schools.

The two-week course covers Naval Aviation history, flight theory, organization, aircraft equipment such as interphones and sound powered telephones, and other handling and line paraphernalia. Students also learn aircraft designations, hand tools, taxi signals, seaplane handling, line operations and the duties of a lookout.

Part of the course is devoted to survival practices. Students learn first aid procedures, survival swimming, and basic parachute techniques.

Whiting's Lt. Beck Cited Made 'Instructor of the Month'

Lt. William Beck, flight instructor at VT-3, Whiting Field, has been selected a second time as Instructor of the Month. Cdr. Ray Stacy, Commanding Officer of VT-3, made the presentation.

Earlier, Lt. Beck had been given an award for flying 1200 accident-free hours of instruction. His present total is now 1700.

He was also VT-3's outstanding Instructor of the Year in 1960 for which achievement he won a Lion's Award.



NAVCAD Joe G. Cooke, VT-1, NAS Pensacola, became the 9000th student to complete primary flight training since the T34B aircraft went into the basic training command. First Lt. T. F. Kausly (right) congratulates Cooke.



STUDENTS 'FOLLOW' HAZARDS ON SCREEN

Corpus Airman in Car Crash Survives Head-On Without Scratch

The NAS CORPUS CHRISTI airman crashed head-on into the oncoming convertible and came out of it without a scratch, bent fender, or even cancelled insurance. How? The same way student pilots "spin in" and walk away from it while practicing instrument flight procedures.

NAS CORPUS CHRISTI recently started an experimental driver training course which uses "Drivotainers," the automotive synthetic training device equivalent of the Link trainer. Sitting at the controls of a stationary simulator car, the driver is given a highway and every conceivable type of traffic condition on a motion picture screen. His every reaction is recorded electronically so there is a perfect record of each trip—including possible accidents or "near misses."

Over the next two or three years, safety records of the graduates of the course will be compared with those of non-graduates to measure its effectiveness. If the records prove its worth, the course may become the model for similar courses throughout the Navy.

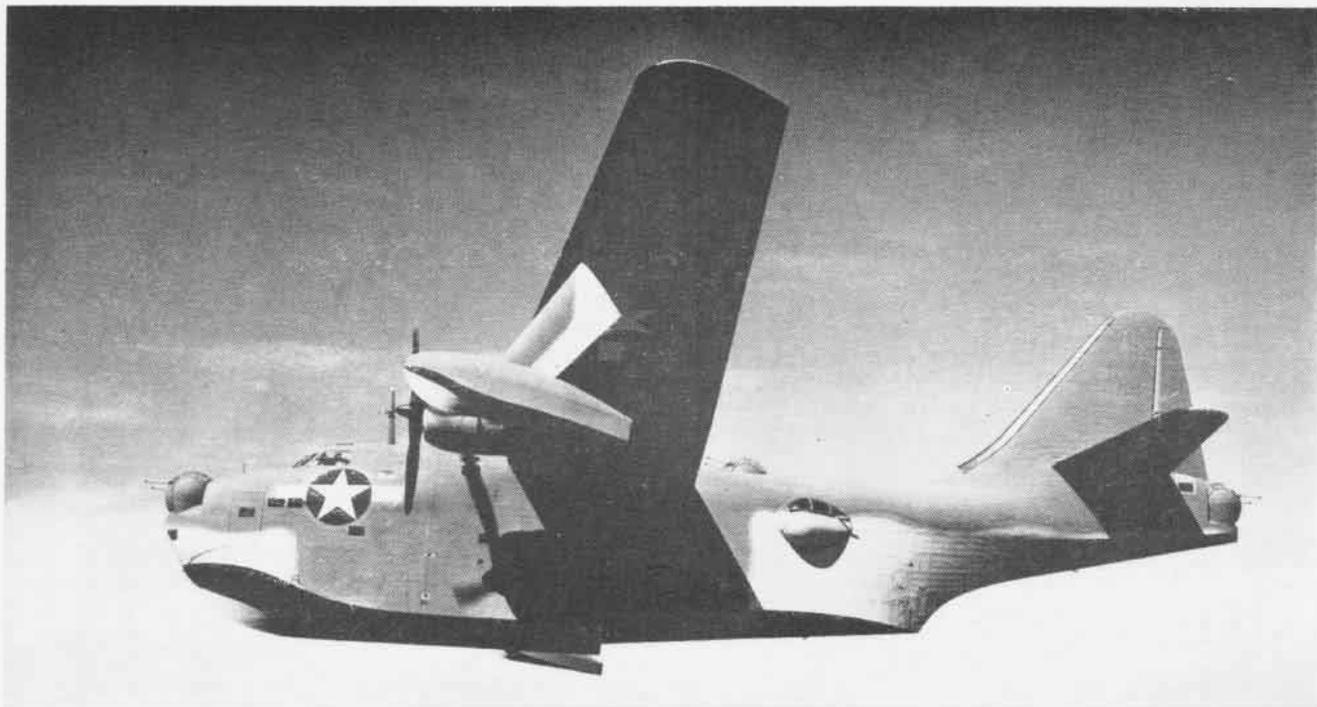
Radar Purchase Increased Tracks Many Targets at One Time

Additional money has been authorized for the purchase of radar which can simultaneously determine direction, range and height of several airborne targets at once.

The shipboard radars are for use on carriers and missile cruisers.

In May last year a \$14-million contract was awarded to General Electric for production of the pencil-beam AN/SPS long range radar. The contract has been extended to \$36-million.

Now in quantity production, the first operational unit is scheduled to be delivered in May of next year.



50 Years of Naval Aircraft

VP—FLYING BOAT YEARS

TWENTY YEARS ago patrol aviation and flying boats were practically synonymous. Today, land based VP types are taking over the majority of current VP operations, and no VP flying boats are in production.

In 1941 Consolidated and Martin "P-boats" equipped the patrol squadrons. New types were also being developed by Martin and Boeing.

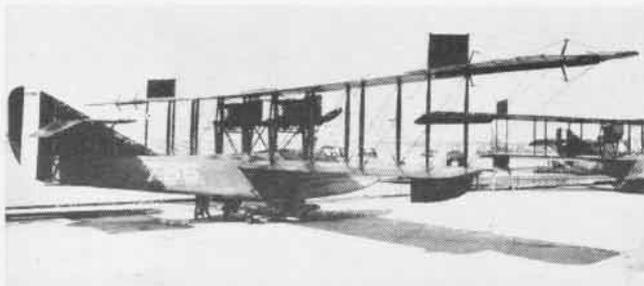
By July of 1942, action brought about by expanded wartime operations spelled the end of the exclusively fly-

ing boat years of patrol planes. In spite of its promise, production of the new Boeing PBB-1 *Sea Ranger* was cancelled. The plant was transferred to the Army for B-29 production. The Navy received other Army bombers for use as land based patrol bombers.

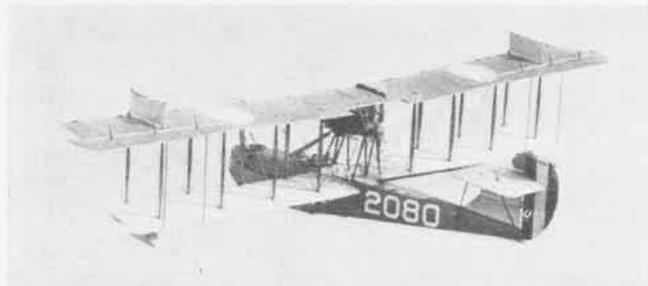
In many ways the XPBB-1 *Lone Ranger* shown above marks a fitting turning point for patrol plane development. As with a number of its more significant predecessors, it represented a blending of the latest develop-

ments in hydrodynamics, aerodynamics, structures and powerplants to accomplish a large step forward in patrol plane capability. Characteristically, the U.S. Navy's patrol planes had been frequent holders of world records and distance marks for seaplanes.

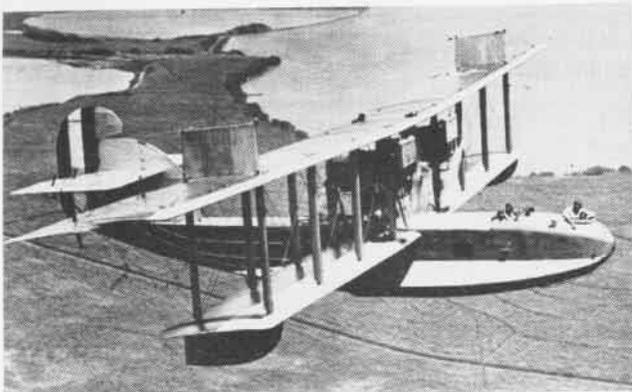
While early Naval aircraft were generally water-based, the Navy's patrol planes trace their roots to a privately developed flying boat of 1914. This was the Curtiss *America*, a large biplane, originally a twin-engine design,



TYPICAL CURTISS H-series flying boat design, the H-12 of 1917 vintage was used by both the British and the U.S. Navy in WW I.



ANTI-SUBMARINE patrols off European coast were flown by Curtiss HS's. HS-2L had 350 hp Liberty, weighed 6400 lbs., reached 82 mph.



NAF F-5L's replaced H-16 in production. Re-engineered from British F-5's with two Liberties, they were modified for use in 20's.

which was built to fly the Atlantic.

Because of World War I, the flight was cancelled. Flying boats based on the *America* were sold to the British, and later to the U.S. Navy. They became the first operational patrol plane flying boats in both services.

After the entry of the U.S. into WW I, the Curtiss HS-1L with a single Liberty engine was ordered in quantity, as well as the larger twin engine H boats. These were to be used for anti-submarine patrol operations, the principal mission of Naval Aviation in

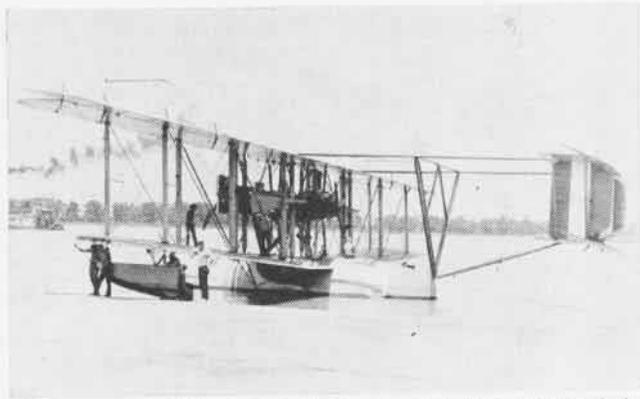
WW I. Initially, a number of the H-12's, were procured. Later, the H-16, incorporating much of the British experience, was built by Curtiss and by the new Naval Aircraft Factory.

The H-16 was replaced on production lines by the improved British design, the F-5. Re-engineered for U.S. production, with Liberty engines, the F5L performed better than the H-16.

After our entry into the war, a new, larger flying boat was conceived. If large enough, it was calculated that delivery to Europe could be made by fly-

ing them across the Atlantic. This ability was a requirement for the design. The NC, as the new model was designated, was the result of the closest possible cooperation between Navy and Curtiss designers. It was originally powered by three Liberties, but a fourth was added after tests.

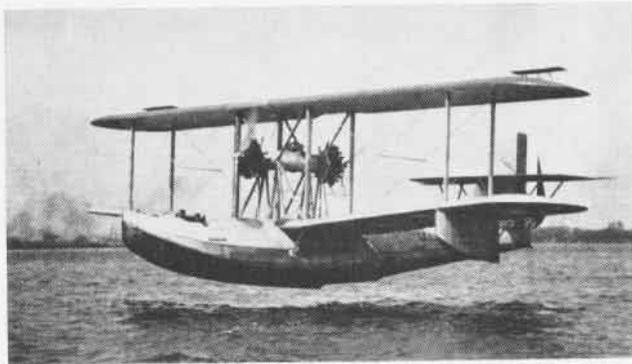
The fame of the NC's rests upon the completion of the first trans-Atlantic flight by the NC-4 in 1919. Additional NC's, built by the NAF, were operated in the early twenties, along with HS-2L's and modified H-16's and F5L's.



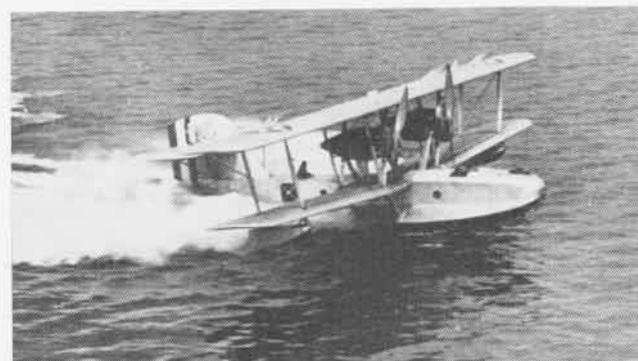
NC-9, one of six NC's built by NAF after 1919 trans-Atlantic flight. With four Liberties, its weight was 28,000 lbs., its speed 85 mph.



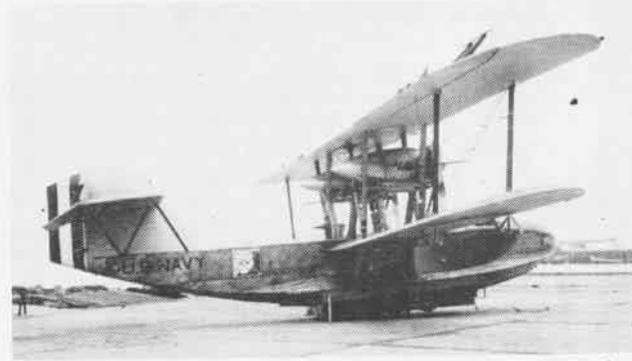
WRIGHT T-2'S of 525-hp powered the NAF PN-7 of 1923. Speed was 104 mph, its weight was 14,400 lbs., its range about 700 miles.



MODIFIED BOEING PB-2 had two 550-hp Hornets, flew at 112 mph, and weighed 12,500 lbs. Original in 1925 was powered by two Packards.



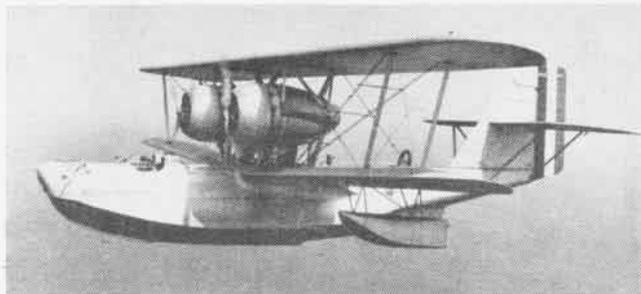
NAF PN-9'S were used for attempted flight to Hawaii in 1925. With two water-cooled 475-hp Packards, they reached speed of 114 mph.



PN-10 was basically a service version of PN-9. Four were ordered in 1925-26. One, modified with two Wright Cyclones, became PN-12.



PRODUCTION flying boat based on PN series was Douglas PD-1. First of 25 was delivered in 1929. With 525-hp Cyclones, its maximum speed was 121 mph. Detachable beaching gear replaced early cradles.



HALL-ALUMINUM XPH-1 was prototype of lighter weight biplane design. Later production versions were in Coast Guard service in early WW II. Note beaching gear carried in rear cockpit and between wings.



TOUCHING DOWN is Martin PM-1, one of 55 PM's built in early Thirties. With 525-hp Cyclones, 15,800-lb take-off weight, maximum range was 1330 miles. Later PM-2's had enclosed cabin for pilots.



WRIGHT CYCLONES powered this 1930 XP4N-1, one of the last Naval Aircraft Factory series of flying boats. Its range with take-off weight of 17,900 lbs. was 1510 miles, its maximum speed was 115 mph.



STREAMLINED NACELLES and cowlings were features of Keystone PK-1. Open cockpits remained. With Wright Cyclones rated at 575 hp, speed was 120 mph. Eighteen of these boats entered Navy service in 1931.



SIKORSKY AMPHIBIANS, adapted as VP types from commercial S-38 design, included PS-3 of 1929. Engines were P&W 450-hp Wasps. PS's became RS's with armament removed; served utility squadrons.



MAJOR ADVANCEMENT in flying boat design was seen in Consolidated's XPY-1 in 1929. It was a parasol-wing monoplane, powered by two 450-hp P&W engines. Alternate power plants were three Whirlwinds,

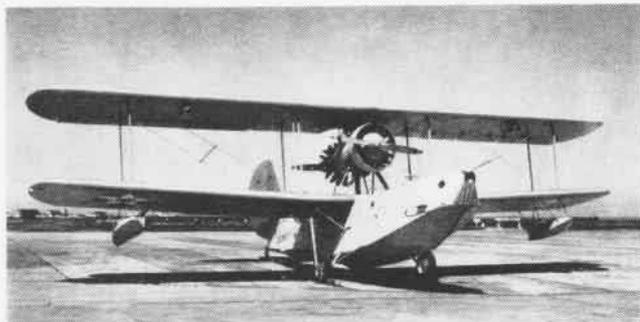
with the third mounted above the wing. With 13,700-pound take-off weight, the twin-engine version of the XPY-1 had a range of 1200 miles at 90 mph. Plane's design still featured open cockpits.



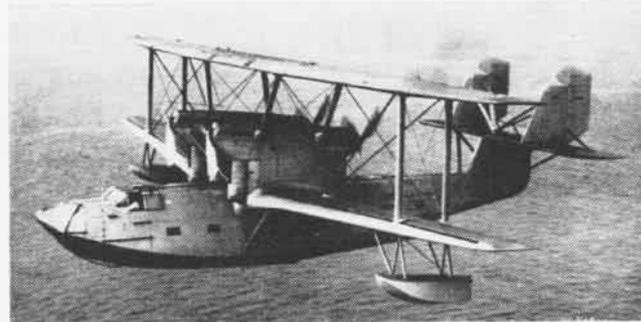
THREE-ENGINE monoplane flying boat was 1931 Martin XP2M-1, using Wright Cyclones; speed was 140 mph, weight was 20,100 lbs.



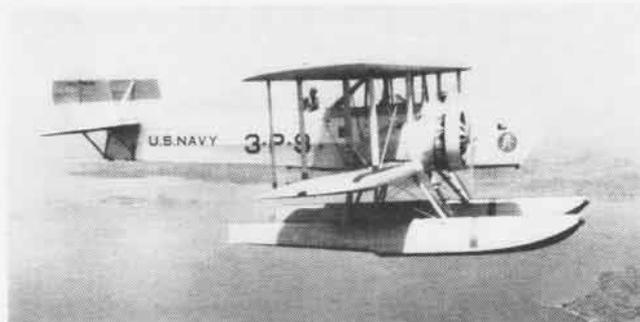
MARTIN P3M'S were production versions of XPY-1. The P3M-2 shown above had 525-hp P&W Hornets in place of Wasps in the -1 models.



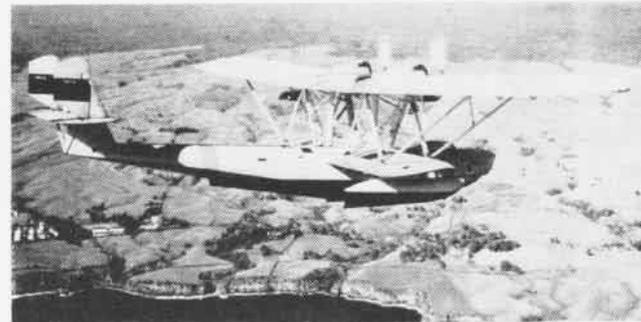
BUAER DESIGN for VP amphibian served as basis for experimental tandem engine Sikorsky XP2S-1 of 1932. Engines were P&W Wasps.



LIQUID-COOLED Curtiss Conquerors of 600-hp powered four-engine Hall-Aluminum XP2H-1 prototype which took off at 32,000 pounds.



DOUGLAS P2D-1'S were twin-float torpedo or bombing planes originally designated T2D-2's. T2D-1's, P2D's served in VP squadrons.



CONSOLIDATED P2Y-2, with 700-hp Cyclones, was typical of P2Y series which gradually replaced many of the old biplanes from 1933 on.

The Fleet redeveloped the mission of patrol planes after WW I, operating them as long range scouts and bombers, and utilizing advancements in radio and other equipment to increase their effectiveness. Meanwhile, new technical advancements were also being investigated. Metal structure wings were built for testing on the HS's. A much larger flying boat based on the NC was designed. Construction of the *Giant Boat* was begun at the NAF while a prototype of the three power eggs (three coupled Liberties driving a single prop) was built and tested. However, the project was cancelled before completion. Improved versions of the F5L, with succeeding

numbers, were also designed and tested. The F7L became the PN-7 to initiate the PN series which became the main effort in flying boat development for the remainder of the biplane period.

None of the PN's went into production—from one to four of each were built—but they were used in fleet operations. New engines, first the larger liquid-cooled Wright and Packards, later the air-cooled engines, were incorporated in succeeding designs. Metal construction, including all metal hulls, replaced the wood of the earlier boats. And constant efforts were made to find the best hydrodynamic design. One area that seems to have been avoided was aerodynamic streamlining! In ad-

dition to the PN's, Boeing built the PB-1 in 1925 with tandem Packards.

The last of the PN series, the -11 and -12, were ordered in 1927. They incorporated all the learning of the earlier models, plus the new aircooled engines. Increased emphasis on fleet patrol operations also resulted in production orders for Douglas PD-1's, similar to the last PN's. Over the next few years, other prototype and production biplanes were built, gradually incorporating improvements such as enclosed cabins and some streamlining into the basic biplane formula.

Also in 1927, BuAer studies of a monoplane patrol plane design resulted in award of a contract to Consolidated



PROTOTYPE of the Catalinas of WW II fame was the Consolidated XP3Y-1 of 1936. Featuring the then-new P&W Twin Wasp of 800-hp, its maximum speed was 169 mph. Weight was 19,800 lbs. Range of streamlined boat was demonstrated in several distance record runs.



COMPETITIVE with XP3Y-1 was XP3D-1 using same engines. Wing was hull mounted.



TORPEDO-BOMBER was principal mission of 1937 twin-float Hall Aluminum XPTBH-2.



SIKORSKY XPBS-1, one of two 1938 four-engine prototypes; other developed into PB2Y.

(later Convair) for the XPY-1. This was a parasol monoplane flying boat using either two Wasp or three Whirlwind engines, and represented a major advancement in flying boats when it first flew in 1929. Production contracts for the PY were given to Martin, where another larger monoplane prototype was also being developed. The subsequent P2Y's of the early Thirties were the first of these new designs to be built in numbers. They made many headlines for long distance flights.

Small numbers of amphibian VP designs from Sikorsky and a large four-engine Hall-Aluminum prototype also appeared during this period. In addition, Douglas P2D-1's (twin engine biplanes originally designed as long range torpedo or bombing planes) served with various VP squadrons.

In late 1933, prototypes of the next advanced designs, the Consolidated XP3Y-1 and Douglas XP3D-1, were ordered. Both were all-metal monoplanes utilizing the new twin row radial engines and placing considerable emphasis on aerodynamic streamlining with retractable tip floats and a minimum of external strut bracing. The XP3Y-1 was selected for production as the PB2Y-1 which in later series was to achieve fame as the WW II *Catalina*.

Another program was initiated to provide a replacement for twin float P2D's. This was the Hall-Aluminum XPTBH-1, basically a torpedo and bomber airplane. After considerable redesign, the XPTBH-2 was tested, but not put into production.

With PB2Y's replacing the earlier types in service, two larger 4-engine

patrol plane prototypes made their appearance in the late Thirties, as well as a new twin engine design using larger engines. The four-engine PB2Y and twin-engine Martin PBM were put into production.

As the war approached, production of the PB2Y, as well as the later designs, was accelerated. An NAF version of the PB2Y, the PBN was also ordered.

Based on a concept of catapulting heavily loaded flying boats, the XPBB-1 was ordered from Boeing. A larger Martin, the XPB-2M-1 was also built.

Flying boats had come a long way since WW I, and great advancements were in sight. These advancements were to continue, but before 1941 was over, land-based patrol planes had entered service, foretelling the action that was to come the following year.



GULL WING of Martin XPBM-1, which initially flew in 1937, is still familiar on the P5M Marlinus operated in VP squadrons today. Prototype of the WW II Mariners was powered by two 1600-hp Wrights; With normal take-off weight of 40,500 lbs, max speed was 223 mph.



FHC L. H. SHANKEL AIMS 60-POUND CAMERA FROM HATCH OF SNB

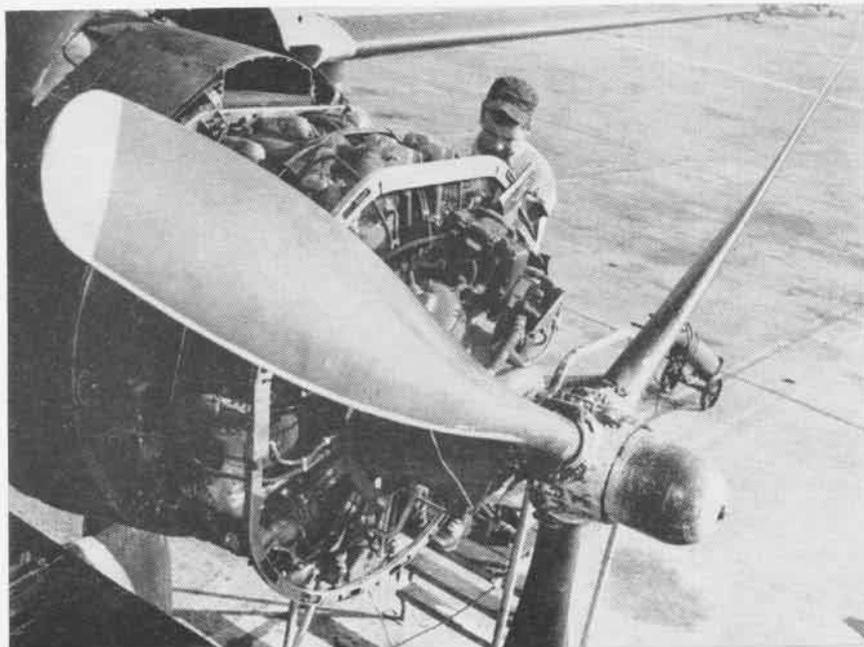
UTILITY SQUADRON FIVE (VU-5)

ATSUGI-BASED Utility Squadron Five is organized, equipped, and motivated to provide air service to elements of the Pacific Fleet, whether the mission be towing targets for ships or aircraft, providing photographic coverage, taking part in CIC crew training, or furnishing drones for air-to-air or surface-to-air missileery.

VU-5 aircraft come naturally by the title, "Work Horses of the Fleet," for,



JD-1 'TRACTOR' STREAMS ITS BUCKET IN PREPARATION FOR SEVENTH FLEET GUNNERY



S. C. JOHNSON, AD2, MINISTERS TO NEEDS OF JD-1, A HOLDOVER FROM WORLD WAR II

in towing sleeves for surface ship gunners, squadron JD-1's literally tow the "bucket." The bucket is a sleeve target, usually red, 20 feet long and two feet in diameter, designed to inflate like a carnival balloon as it trails at the end of 7000 feet of especially designed cable.

The tractors themselves deserve special acclaim, for in this day of supersonic aircraft, the venerable JD-1—a holdover from the days of WW II when it was operated as an A-26 bomber by the Army Air Corps—remains the ideal plane for towing target sleeves.

Four JD's are in service at Atsugi and a fifth is deployed with Detachment Alfa in the Philippines.

Detachment Alfa also uses the AD-5 Skyraider as a target-tow aircraft.

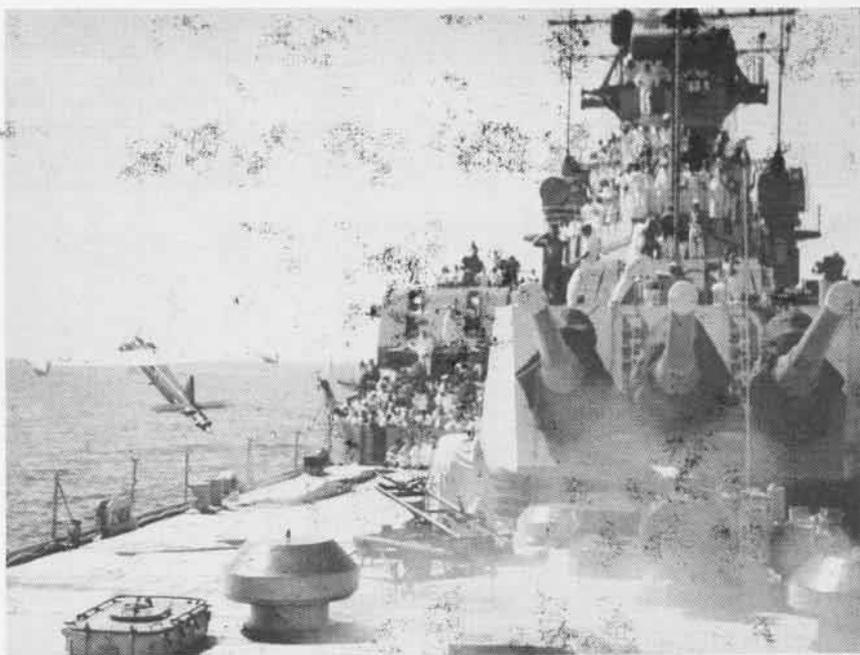
Target services for missile systems are furnished by the drone units of VU-5. The surface unit (KD-25)

located in Yokosuka, Japan, deploys on ships to launch tiny, speedy, pilotless aircraft from portable zero-length launchers. The air unit is based on Naha, Okinawa. It launches drones from a belly launcher on a specially adapted P2V *Neptune*.

Drones from both units are used as targets for surface-to-air and air-to-air missile systems, as well as for radar directed gunfire.

FJ-4 *Fury* jet fighters of VU-5 perform another important service for Combat Information Center crews of fleet units, which are charged with directing the interception of "bogie" aircraft detected by their long range air-search radars.

To keep CIC units proficient in this operation, a pair of *Fury* jets work as a team. One is vectored out as a bogie, and the other is directed as an interceptor by the ship's air controllers in detection and intercept exercises.



KD DRONE TARGET IS LAUNCHED FROM FANTAIL OF USS ST. PAUL FOR MISSILE SHOOT



A PAIR OF FURIES KEEP RENDEZVOUS WITH SEVENTH FLEET SHIP FOR CIC EXERCISES

pilots have earned safety honors.

Members of the squadron have endeared themselves to the populations of Japan, Okinawa, and the Philippines through their activities in behalf of the People-to-People program.

VU-5 is presently commanded by Cdr. R.J. "Rocky" Nelson, who qualified as an Ace by shooting down five enemy planes during the second World War when he was a fighter pilot.

A further mark of VU-5's diversification is the squadron's ability to provide other services, including complete aerial and ground photographic service through the facilities of the squadron photographic laboratory.

Units throughout the Western Pacific find ready support for any photographic requirement, including equipment repair. SNB-5P's are used by VU-5 on photo missions.

What with target-towing, drone launching, photo aircraft requirements and other missions, VU-5 employs JD-1's, a P2V, AD-5's, SNB-5P's and FJ-4's. In the years since 1954, when VU-5 began operations in the Far East, FJ-3 *Furies* and F9F-8 *Cougars* also have been employed.

In addition to providing "routine" air support services for U.S., Japanese and SEATO forces, VU-5 has taken part in many joint naval maneuvers. Squadron maintenance crews have kept aircraft availability high and squadron



CDR. ROCKY NELSON WATCHES PLANE CAPTAIN'S SIGNALS BEFORE STARTING ENGINES

Weekend Warrior NEWS



S2F FLIGHT crew from Alameda—Harold Brauch, ADR1, Lt. Carl Baxter, Lt. Don Burreston and Lee Alan, ATN3, check operations chart.



MAJ. DEAN H. MEDARIS, pilot of VMA-142 of NAS Jacksonville, checks out one of new birds that replaces Cougars, the A4D-1 Skyhawk.

Trained in Hawaii

Two anti-submarine warfare squadrons from NARTU ALAMEDA spent two weeks of active Navy training duty in the 50th state.

The S2F Tracker aircraft flown by VS-875 and VS-876 was transported to Barber's Point, Hawaii, by aircraft carrier in advance of the training. Squadron personnel were airlifted by three Navy transports.

First to make the cruise was VS-876 with Cdr. John Papedskis as Commanding Officer.

VS-875 and VS-876, flying around the clock operations, accumulated a total of 55 pilot hours for each aviator—an accomplishment in light of the fact that the squadrons were unable to log flight time to and from Hawaii. Cdr. William Eckert, commanded VS-875 as the last squadron to depart NAS OAKLAND for training.

Skyhawks for Marine Reservists

April 1961 opened a new era for Marine Air Reserve Training in Florida. Maj. Dean H. Medaris became the

first of the 55 reserve pilots from the three-squadron detachment at NAS JACKSONVILLE, Fla., to begin his check-out flight in the A4D-1 Skyhawk attack bomber.

The Douglas Skyhawk replaces the Grumman F9F-8B Cougars for the Marine Air Reserve of Jax.

Col. Frank R. Porter, Jr., C.O. of the Marine Air Reserve Training Detachment enumerated some of the advantages of the Skyhawk over the Cougar. Most important is that the Skyhawk is also being used by the



C.L. EARNHEART, ADRC; **E.S. Turner**, BMC; **T.G. Flanagan**, and **B.R. Hines**, PNI, of NARTU Dallas, were given awards by CNARESTRA.



PRODUCER OF EAGLES is Frank Noble, AD3, at NARTU Memphis, Scoutmaster of Troop 62 of St. Peter's Orphanage. Six are Eagles.

Fleet Marine Force thus increasing the mobilization potential tremendously since pilots will be ready to go directly into combat.

BARTU Seminar

A two-week Naval Weapons Seminar, composed of representatives from various BARTU units on the West Coast, was held at North Island.

During the two-week training period, several military establishments and civilian activities were visited.

Cdr. W.P. Kennedy, BuWeps, Pac; Lt. R.J. Reich; LCdr. J.L. Snell and LCdr. R.L. Wall, BARTU 778; and Cdr. B.C. Ames, Cdr. S.E. Smith, LCdr. W.H. Stillwell, Lt. W.J. Cook and Lt. S.P. Ramsay of BARTU 776, attended the seminar.

Dallas Reservists Honored

Four Naval Air Reservists of NAS DALLAS were presented awards at the Annual Military Inspection and Review conducted by RAdm. Arnold W. McKechnie, Chief of Naval Air Reserve Training.

C.L. Earnheart, ADRC, of Dallas, Texas, Leading Chief of VR-71, was voted the outstanding Chief Petty Officer among the Reserve units. He has a record of perfect attendance at drills and annual training duty.

E.S. Turner, BMC, of Dallas, head instructor in the Recruit Training Section at NAS DALLAS was voted the outstanding enlisted man attached to the station for his cooperation with the Weekend Warriors. T.G. Flanagan, ATNAN, a member of VP-702,

was voted the outstanding non-rated man in the Reserve units. Billy R. Himes, PN1, of VP-701, was voted as the outstanding rated Petty Officer. He has a perfect attendance record since 1955. Each received a watch.

Weather Forecasting, Minneapolis

Twin City weather prognosticators at NAS MINNEAPOLIS now have added assistance for accurately tracking threatening storm conditions in the northwest area.

The system went into effect 14 May when a low cloud cover moved into the region with ominous overtones of a severe storm and probable tornadoes.

Marine Air Control Squadron 16, manned by Reservists from the community, were requested to assist in the tracking of the pending storm. Co-operating with local weather facilities, the Reservists tracked by radar the large thunderstorm's progress towards the Minneapolis-St. Paul area.

Commanded by Maj. James M. Christie, USMCR, squadron members gauged the length, depth, velocity and possible destructive force of the storm with height and range-finding electronic equipment.

Possible injury and property damage were averted as the information was relayed to Navy Aerology at Wold-Chamberlain International Airport.

In addition, both civilian and military aircraft flying in the area were given advance warning of the storm.

As a result of the accurate information received, Marine Air Reserve radar equipment, in the future, will be

geared to supplement regular weather forecasting facilities when dangerous storms are within a 200-mile radius of the Twin City area.

'8-Balls'—But Not Behind!

Anyone who has seen the fabulous Harlem Globe Trotters or the dazzling Blue Angels admires their concentrated teamwork. Having admired, a Chicago NAR team has put this principle to work.

In the summer of 1960, VS-722, stationed at NAS Glenview, assigned four men with widely diversified backgrounds to fly together as a tactical anti-sub team. This team, called "8-Balls," consisted of Lt. L.J. Liebe, an engineering student, plane commander; Lt. J.J. O'Neill, a science student, copilot; Chief W.R. Braun, a lieutenant of the Chicago Fire Department arson squad, electronic gear operator; and H.C. Englebrecht, AT-1, a Public Utility Company machine maintenance mechanic, radar operator.

These four men flew 21 missions and logged in excess of 60 aircraft hours in a period of approximately 90 days. They discovered that progress toward the goal of combat readiness was greatly accelerated only when they lost their individuality and became members of the team. Lt. O'Neill compared his personal feeling toward the highly integrated crew with the sense of confidence one has in old and trusted friends.

The "8-Balls" stand ready for the day when they may be called upon to "sink that 8-ball in the corner pocket!"



A RYAN electronics expert explains to BARTU seminar representatives the Doppler navigation system as part of their two-week program.



THE EIGHT BALLS (left to right) Chief Wally Braun, Lt. Jack O'Neill, Lt. Harry Liebe and Howard Englebrecht fly as anti-submarine team.

WORLD RECORDS CONTINUED

Date	Pilot	Plane	Place	Hrs	Min	S
With 1000 kg Payload						
6 Jun 23	Lt. R.L. Fuller	DT-2	San Diego, Calif.	2	45	9
25 Oct 24	Lt. G.R. Henderson	PN-7	Baltimore, Md.	5	28	43
8 Jul 27	Lts. B.J. Connell and S.R. Pope	PN-10	San Diego, Calif.	11	7	18
25-26 May 28	Lts. Z. Soucek and L. J. Maxson	PN-12	Philadelphia, Pa.	17	55	13.6
With 1500 kg Payload						
7 Jun 23	Lt. H.T. Stanley	F5L	San Diego, Calif.	2	18	0
With 2000 kg Payload						
7 Jun 23	Lt. H.E. Halland	F5L	San Diego, Calif.	0	51	0
25 Oct 24	Lt. O.B. Hardison	PN-7	Baltimore, Md.	1	49	11.9
8 Jul 27	Lts. B.J. Connell and S.R. Pope	PN-10	San Diego, Calif.	11	7	18
11-12 Jul 28	Lt. A.W. Gorton and CB'N E.E. Reber	PN-12	Philadelphia, Pa.	16	39	0

SPEED

25 Oct 24	Lt. G. Cuddihy	CR-3	Baltimore, Md.	188.08	mph
For 100 Kilometers					
25 Oct 24	Lt. R.A. Ofstie	CR-3	Baltimore, Md.	178.25	mph
For 200 Kilometers					
28 Sep 23	Lt. D. Rittenhouse	CR-3	Cowes, Eng.	169.89	mph
25 Oct 24	Lt. R.A. Ofstie	CR-3	Baltimore, Md.	178.25	mph
For 500 Kilometers					
6 Jun 23	Lt. M.A. Schur	DT-2	San Diego	72	mph
22-23 Jun 24	Lts. F.W. Wead and J.D. Price	CS-2	Anacostia, D. C.	73.41	mph
25 Oct 24	Lt. R.A. Ofstie	CR-3	Baltimore, Md.	161.14	mph
For 1000 Kilometers					
12 Jun 23	Lt. M. A. Schur	DT-2	San Diego, Calif.	70.49	mph
22-23 Jun 24	Lts. F.W. Wead and J.D. Price	CS-2	Anacostia, D. C.	74.27	mph
21 May 27	Lt. R. Irvine	O2U-1	Hampton Roads	130.932	mph
For 1500 Kilometers					
22-23 Jun 24	Lts. F.W. Wead and J.D. Price	CS-2	Anacostia, D. C.	74.17	mph
Speed With 500 kg Payload—100 Kilometers					
25 Oct 24	Lt. G.R. Henderson	PN-7	Baltimore, Md.	78.057	mph
23 Apr 27	Lt. S. W. Callaway	O2U-1	Hampton Roads, Va.	147.263	mph

Date	Pilot	Plane	Place	Hrs	Min	S
With 500 kg Payload—200 Kilometers						
25 Oct 24	Lt. G.R. Henderson	PN-7	Baltimore, Md.	78.057	mph	
With 500 kg Payload—500 Kilometers						
30 Apr 27	Lt. J. D. Barner	O2U-1	Hampton Roads, Va.	136.023	mph	
With 1000 kg Payload—100 Kilometers						
25 Oct 24	Lt. G.R. Henderson	PN-7	Baltimore, Md.	78.507	mph	
With 1000 kg Payload—200 Kilometers						
25 Oct 24	Lt. G.R. Henderson	PN-7	Baltimore, Md.	78.507	mph	
With 1000 kg Payload—2000 Kilometers						
25-26 May 28	Lts. Z. Soucek and L. J. Maxson	PN-12	Philadelphia, Pa.	80.288	mph	
11-12 Jul 28	Lt. A. W. Gorton and CB'N E. E. Reber	PN-12	Philadelphia, Pa.	81.043	mph	

With 1500 kg Payload—100 Kilometers						
25 Oct 24	Lt. O.B. Hardison	PN-7	Baltimore, Md.	68.4	mph	
With 2000 kg Payload—100 Kilometers						
25 Oct 24	Lt. O.B. Hardison	PN-7	Baltimore, Md.	68.4	mph	
With 2000 kg Payload—2000 Kilometers						
11-12 Jul 28	Lt. A.W. Gorton and CB'N E.E. Reber	PN-12	Philadelphia, Pa.	81.043	mph	

CLASS E—HELICOPTERS

Altitude with 5,000 kg Payload						
9 Nov 56	MAJ. R.L. Anderson, USMC	HR2S-1	Windsor Locks, Conn.	12,212	feet	
Greatest Payload to 2000 Meters						
10 Nov 56	MAJ. R.L. Anderson, USMC	HR2S-1	Windsor Locks, Conn.	6010	kg.	
Speed						
11 Nov 56	MAJ. R.L. Anderson, USMC	HR2S-1	Windsor Locks, Conn.	162.64	mph	
Three kilometer straightaway						
*17 May 1961	Cdr. Patrick L. Sulli, van and Lt. Beverly Witherspoon	HSS-2	Windsor Locks, Conn.	192.9	mph	
100 kilometer closed course						
*24 May 1961	Cdr. Patrick L. Sulli, van and Lt. Beverly Witherspoon	HSS-3	Windsor Locks, Conn.	174.9	mph	

*Unofficial Record

RECORD RECORD DAY

When all foreign entrants withdrew from the 1924 Schneider Cup Race to be held at Bay Shore Park near Baltimore, Md., the United States chose to cancel the race rather than accept a "flyaway" victory. In its place the Navy staged a series of record attempts in which the scheduled contestants and others put 17 world records in the book for

U.S. Navy Class C Seaplanes.

Two pilots of the racing team, Lts. G.T. Cuddihy and R.A. Ofstie, gave ample evidence of the winning potential of the CR-3's that had been groomed for the race. Cuddihy broke a maximum world speed record of almost two years standing; Ofstie broke three more over the 100, 200, and 500 kilometer distances. Lts. G.R. Henderson and O.B. Hard-

ison, piloting PN-7 flying boats brought in for the purpose, established nine new records and broke four others in speed over 100 and 200 kilometers and in distance flown, all with payloads varying from 250 to 2000 kilograms.

When the day's work was finished, the long count showed that the Navy held 20 of the 34 world records for seaplanes.

Enterprise Men Win Rates Of 190 Tested, 99 to be Advanced

It pays to be enterprising, the men of CVA(N)-65 learned when the results of the February advancement in rating examinations were announced in May. The months, and sometimes years, of hard study done in preparation paid off for over 50% of the men taking the tests.

Of the 190 *Enterprise* sailors who took the Navy-wide competitive examination, 129 passed. Of these, 77 have been advanced and 22 more will be promoted to Chief Petty Officer over the next eight months.

Thirty men could not be promoted owing to lack of available vacancies.

One of the 'Oldest' Retires Served NADC Johnsville 37½ Years

An illustrious 37½ years of Federal Service ended in April when Michael Kaplan, a pioneer in the development of drone aircraft, retired from the U.S. Naval Air Development Center, Johnsville.

He began his career in the Naval Aircraft Factory in 1918 when he was hired as an aeronautical draftsman. In his first 11 years at NAF, he worked as squad leader and supervisor on the F5L flying boat; the VE-7, an all-wood, fabric-covered aircraft; and a number of others, including the PN-11 hull.



500 DEMON NIGHT traps and almost 800 day landings with nary an AAR are part of the VF-31 Tomcatters' achievements on their recent European deployment aboard USS *Saratoga*. Centurions? Of course! All pilots in the picture are at least Centurions; six are double day and one is a rare night variety. Cdr. T.J. Johnson, C.O., who relieved Cdr. Red Tucker in January credits the successful cruise to sound maintenance, RAG training and plenty of night FCLP.

From 1929 to 1934, he worked for the B.J. Aircraft Corporation of Baltimore, then returned to NAF. His first project after reinstatement was supervision of the N3N-1 trainer.

He was subsequently assigned to Project Fox in which he played an important role in the initial development of radio-controlled target drones and related equipment.

Arriving at Johnsville in 1944, he continued his work, supervising the

design of the F6F-3K and -5K drones. He took part in the preparation of the F6F-3K drones and control planes in Operation *Crossroads* at Eniwetok in 1946. For excellence in this mission, Mr. Kaplan received a letter of commendation from General Elwood Quesada, Commander of the Tactical Air Command at the time.

Later he was commended by Adm. A.W. Radford, then Commander in Chief of the Pacific Fleet, for contributing to the integration of guided missiles into combatant forces. F6F-5K assault drones were used by Guided Missile Unit 90 aboard the USS *Boxer*.

Five Shacks in Three Days Record Made by 'Savage Bombers'

The *Savage Bombers* of VAH-5 are still racking up the "shacks" according to the latest word from the squadron. A "shack" is a direct hit.

The direct hits were scored with the A3D *Skywarrior* from both high altitude and pop-up runs. In the pop-up run, the aircraft comes in on the deck and makes a maximum rate climb to medium altitude where it momentarily levels off and drops its ordnance.

The *Savage Bombers* now have scored 13 direct hits in ten months, a new record for heavy attack squadrons according to VAH-4. Five of the perfect runs were scored during one three-day period in May.

During that three days the squadron flew 63 sorties, for a total of 225 flight hours, without an abort.



LOW AND SLOW, this 5800-lb T2J Buckeye jet trainer is carried by an Army H-37 Mojave below from NAAS Kingsville to NAS Corpus Christi. Disabled jet was then loaded aboard USS *Antietam* and transported to NAS Pensacola for repair. Cooperative effort which saved dismantling and lengthy flatbed move of jet was arranged by Army Maintenance Center and 45th Helo Battalion of Fort Sill upon the request of Leo Emmert, BuWeps Fleet Support Representative.

A LOOK FROM THE 'ENEMY'S' ANGLE

HOW THE "enemy sees it" can be illuminating. Looking at Anti-Submarine Warfare from an unaccustomed point of view was the experience of the Commanding Officer of Anti-Submarine Squadron 29, Cdr. James T. Bitting, and LCdr. Robert E. Thomas, Commanding Officer of the submarine, USS *Remora*.

The Commanding Officers of two "opposing commands" decided to get a closer look at the "enemy" in action. Each assumes the role of "enemy" only in training, for actual operations they are well coordinated parts of a



THOMAS GIVES BITTING SCOPE BRIEFING

combined ASW force in the San Diego area.

The skippers declared a truce during day and night exercises, so that they might get a first-hand observation of their opponent in action. Cdr. Bitting was invited aboard the *Remora* for a day's visit, and LCdr. Thomas donned flight gear for an aerial view of anti-submarine operations. This opportunity for the exchange of visits occurred when the USS *Remora*, attached to Submarine Flotilla One, and VS-29, a squadron of CVSG-53, were assigned operations together during training exercises. Both units were undergoing intensive training periods in preparation for future deployments.

Cdr. Bitting's visit to the *Remora* included a complete tour of the ship, inspection of the radar and ECM used for aircraft detection and tracking, and a demonstration of the maneuvers and equipment used during evasive tactics. During part of his trip, Cdr. Bitting had the chance to observe his



COMMANDERS INSPECT S2F ASW GEAR

squadron S2F aircraft through the periscope.

At NAS NORTH ISLAND, LCdr. Thomas inspected the S2F aircraft and its various types of airborne detection equipment. He participated as a crew member in a regular squadron MAD tactics training flight which demonstrated the precise coordination required between aircraft for low-level hold down tactics.

VS-29 anti-submarine pilots had been training with the *Remora* in flights that included searchlight illumination, MAD tracking and hold down, sonobuoy patterns and other advanced ASW tactics. The *Remora* had also been the opponent during combined hunter-killer operations when VS-29 worked with surface units and anti-submarine helicopters.

Both commanding officers agreed that future exchanges of this type are not only desirable but highly necessary for all units which are involved in anti-submarine warfare.

Pre-flight Record is Broken Marine Registers a Perfect Score

For the first time in the history of the Pre-flight program at Pensacola, a student has earned a perfect score on the outgoing physical fitness appraisal test.

Marine 2nd Lt. G. F. Robert Hanke, a member of Yale's 1959 Eastern Intercollegiate Swimming championship team, earned the maximum 88 points, breaking a 2½-year record of 87 points.

The test consists of jump reach, sit-

ups, speed agility, chinning and an endurance run. Jump reach is a measure of explosive power, the ability of the body to develop power relative to the weight of an individual.

Sit-ups measure abdominal muscles' ability to perform strenuous exercise and to endure extended periods of physical strain. Speed agility measures large muscle coordination.

The candidate jumps over two hurdles, picks up a wood block, dodges a post, deposits the block in a box, scales or vaults a six-foot wall, dodges a second post, picks up a block, then sprints and deposits the block.

Chinning, a familiar exercise, measures arm and shoulder strength.

The endurance run measures general physical fitness. A man runs four minutes, walks four, then repeats both.

After earning maximum scores on all these, Lt. Hanke broke the over-all swimming and physical fitness record.

Helo Pilot Creams Course Named Top Neptune Pilot by VP-30

Lt. E. M. Stone, a replacement pilot in Patrol Squadron 30, won the "outstanding pilot" award of his class by posting better than average marks in familiarization, instrument navigation, and tactical phases of the training syllabus, as well as scoring high in written tests.

Two months earlier, the former helicopter pilot had never seen the inside of a P2V *Neptune*.

On graduation from the Replacement Training Squadron, Lt. Stone was assigned to Norfolk's VP-24.



SOOTH CARRIER LANDING by LCdr. W.T. Zebrowski (c) aboard USS *Essex* earns congratulations from Capt. S.S. Searcy, ship C.O., and Cdr. M.C. Griffin, C.O. of VA-32. Of his 500 carrier landings, 230 have been in A4D's.

IN FOREIGN SKIES

VA-12 Refuelers Assist French

Pioneers of A4D night air refueling now participating with a sister squadron in the evaluation of a modified night refueling drogue, Attack Squadron Twelve was called upon to assist the French Navy with an in-flight refueling project.

Refinement of the refueling equipment for the French supersonic *Etendard IV* led the French Navy to request assistance from the United States Navy. VA-12 aboard USS *Franklin D. Roosevelt* was selected to provide the aerial refuelers.

A two-plane, six-man detachment led by VA-12 skipper, Cdr. Richard J. DePrez arrived at the French Flight Test Center at Istres Air Field near Marseille, France. Solutions to equipment problems and the exchange of refueling techniques highlighted the week of experimentation with Cdr. DePrez and Lt. Paul F. McCarthy flying A4D in-flight refueling equipped aircraft and top French test pilots flying the sleek carrier based fighter-bomber, *Etendard IV*.

Eleven separate flights were flown in the course of the week long project and the French *Etendard* and the U.S. Navy *Skyhawk* became well known refueling buddies over southern France.

Assisting in the equipment evaluation and aircraft and refueling store maintenance was Mr. John C. Rosen, Douglas Aircraft Corporation representative with Attack Squadron 12.

VP-56 Host to Norwegians

Patrol Squadron 56 at NAS NORFOLK has been host to six men of the Norwegian Air Force.

The Norwegians were assigned to VP-56 to observe anti-submarine warfare tactics and learn the use of ASW equipment.

This training was essential because the Norwegian Air Force will receive several Grumman UF-2 *Albatross* aircraft to modernize their ASW team. The first will be delivered in August this year. Until this time, the Norwegians have been flying the PBY-5A *Catalina* with limited WW II ASW equipment. The new UF's will come equipped with the latest in ASW search and tracking gear and will add greatly to the ability of the NATO countries to protect themselves from any submarine threat.

During the flights in VP-56 planes, the Norwegians observed the use of the most modern and complicated ASW equipment and participated in the tactical problems, showing great proficiency with the technical gear.



ROYAL VISITOR, RAdm. M.C. Galuarnadis Diskul (L), Commandant of the Royal Thailand Marine Corps, is met by MGen. Avery R. Kier, CG Marine Aircraft Wing, upon his arrival at Marine Corps AF Iwakuni, Japan.

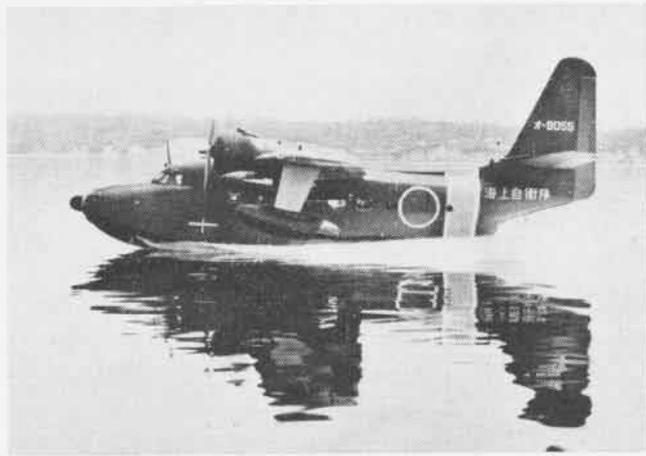
RN's Guided Missile Destroyer

Britain's second guided missile destroyer *Hampshire*, launched in March, is expected to join her sister ship H.M.S. *Devonshire* next year.

Hampshire has a standard displacement of over 5000 tons, an over-all length of 520 feet and a beam of 54 feet. She will carry one *Seaslug* guided weapons system, four radar-controlled 4.5 inch guns in twin mounting situated forward, and two *Seacat* close-range guided weapons systems fitted abaft the after funnel. For anti-submarine work, the ship will be fitted with the latest underwater detection equipment and a Westland *Wessex* helicopter carrying dipping asdic and homing torpedoes has been assigned.



WHEN RADM R.L. TOWNSEND, Commander of the Seventh Fleet Ready Hunter-Killer Group, Capt. P.W. Jackson, skipper of the Task Group flagship *Kearsarge*, and Cdr. M.W. Wall, Commander of Destroyer Escort Squadron Three, entertained 200 Japanese dignitaries, civic leaders, businessmen and their ladies, and tours of the ship were made.



THE FIRST FOUR of six Grumman *Albatross* being built for the Japanese Maritime Self Defense Force have been delivered under terms of a Military Assistance Program contract. Japan plans to use the rugged amphibians for air-sea rescue purposes. The aircraft shown is taking off from the mouth of Huntington Bay, near Long Island Sound.

VA-34 FLIES A4D'S ABOARD ESSEX



DOUGLAS A4D-2 SKYHAWKS WERE NEW TO MANY ESSEX CREWMEN

Attack Squadron 34, based at NAS Cecil Field, claims to be the first VA jet attack squadron to operate off a CVS. The carrier was USS Essex (CVS-9), commanded by Capt. S.S. Searcy.

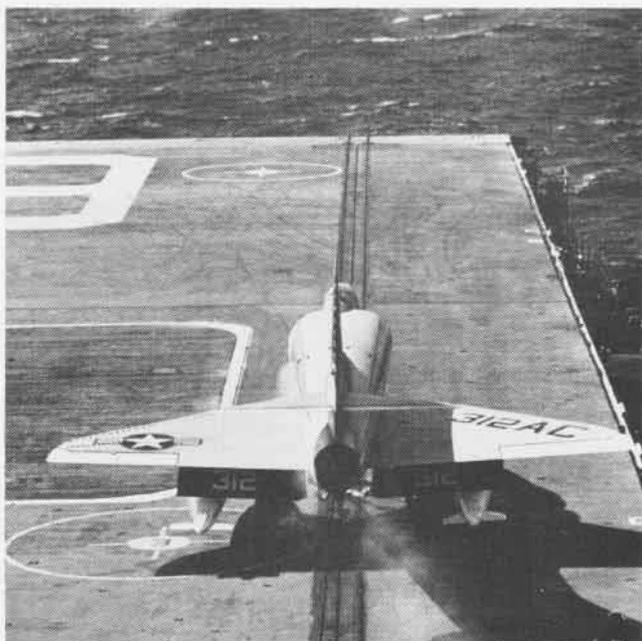
These operations took place in order to test the desirability of operating A4D Skyhawks with an ASW air group composed of S2F Trackers, HSS-1 helicopters, and AD Guppys. It was a new and unusual sight for Essex flight crews, for many of their number had never seen an A4D up close. But after a few days of operations, they were old pros with the jets.

During the 19 flying days aboard the Essex, VA-34 with 12 aircraft and 16 pilots compiled a total of 768 flight hours and 512 arrested landings. Commanding Officer at the time was Cdr. Mitchell C. Griffin who was recently relieved by Cdr. W.J. Forgy, former executive officer.

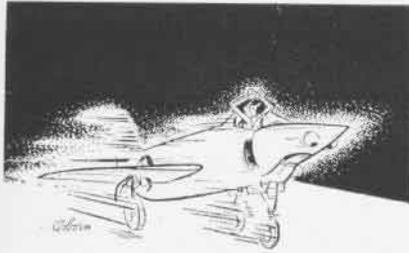
During the cruise, Cdr. Forgy, X.O., and LCdr. Zebrowski, Operations Officer, each made his 500th carrier landing, and Lieutenants Stump, Augustine and Pirie each came in for his 300th carrier landing.



SEARCY, FORGY, GRIFFIN AFTER FORGY'S CARRIER LANDING #500



READY FOR FLIGHT, AN A4D IS SHOWN ON THE ESSEX CATAPULT



X000th LANDINGS

Aboard USS *Antietam*, No. 10,000 consecutive accident-free landing, by Ltjg. Arthur K. Smith, Jr., a student, in a T-28C trainer.

Also aboard USS *Antietam*: No. 92,000 arrested landing, by Ltjg. Andy Longton of VS-30, in an s2F *Tracker*; No. 94,000, and the pilot's 100th, by Lt. E.C. Truax of VT-28, in an s2F *Tracker*.

Aboard USS *Bennington*, No. 64,000, by LCdr. J.V. Mone of ASW Air Group 39, in an s2F *Tracker*.

Aboard USS *Coral Sea*, No. 94,000, by Lt. William F. Burke of VAH-2, in an A3D *Skywarrior*; No. 95,000, by Ltjg. James L. Kistler of VFP-61, in an FSU-1 *Crusader*.

Aboard USS *Franklin D. Roosevelt*, No. 101,000, by LCdr. Jim Roberts of VA-12, in an A4D *Skyhawk*. Now LSO for Air Group One, LCdr. Roberts has made 350 landings aboard 11 carriers.

Aboard USS *Hermitage*, LSD-34, No. 1000 helicopter landing, by Marine 1st Lt. Hendrik A. Gideonse of Sub Unit One, HMR(L)-264, in an HUS helicopter. The landing was made on the 19th anniversary of the Atlantic Fleet Amphibious Force, and in the 50th Year of Naval Aviation.

Aboard USS *Shadwell*, LSD-15, No. 3000 helicopter landing, by Marine Maj. Jack Cosley, C.O. of Sub Unit One, HMR(L)-262, in an HUS; No. 4000, by 1st Lt. Richard V. Gaines of the same unit, also in an HUS.

Aboard USS *Shangri-La*, No. 32,000, by Ltjg. Carlo F. Zezza, Jr., of VA-176, in an AD-6 *Skyraider*.

Aboard USS *Wasp*, No. 43,000, by Lt. Jesse El Markham of VS-31, in an s2F *Tracker*.

Aboard USS *Yorktown*, No. 73,000, by Cdr. Jerome L. Wolf, Jr., X.O. of VS-23, in an s2F *Tracker*. Copilot was Ltjg. George McGreer.

And while we're on the subject of

X000th landings, here's another:

Edward G. Pannash, PR1, of the Naval Parachute Facility at El Centro, made the Facility's 19,000th parachute landing. We didn't get enough facts to verify whether or not his landing qualified as a new Navy record.

New PMR Labs Dedicated Can Test Full-Size Naval Missiles

Two new laboratories have been placed in operation at the Naval Missile Center at Headquarters Pacific Missile Range, Point Mugu.

The main lab building will house facilities to perform such tests as measuring the radar reflectivity of naval aircraft, missiles and target drones, and the infrared radiation characteristics of various targets.

The Simulation Laboratory will be able to make snow, tropical heat, or simulated space conditions at 100 miles altitude. A 90-foot climatic hangar, capable of taking complete naval aircraft or missiles, is the largest unit of the laboratory.

RAdm. F.L. Ashworth, Assistant Chief of the Bureau of Naval Weapons, dedicated the two new buildings.

FAdm. Nimitz Gets 'Wings' Is Made Honorary Naval Aviator

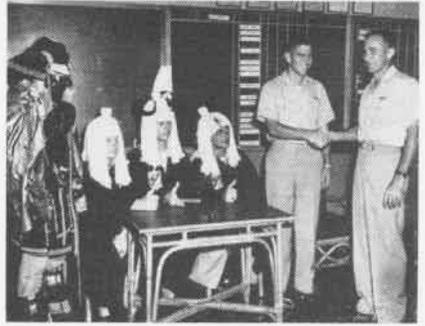
Part of the festivities at the 50th Naval Aviation Anniversary Ball held by the Twelfth Naval District at the Claremont Hotel, Berkeley, included special recognition for Fleet Admiral Chester W. Nimitz.

VAdm. F.N. Kivette, Commander Western Sea Frontier, presented Adm. Nimitz with a letter from the Secretary of the Navy, John B. Connally, which made him an honorary Naval Aviator. Cdr. J.L. Burge, NAS ALAMEDA, handed Adm. Nimitz his Golden Wings.

More than 800 Navy and Marine Aviators gathered at the Claremont.



LETTER MAKES FADM. NIMITZ NAVY 'FLIER'



BLACKSHEEP COURT IN RARE 'NOT GUILTY'

Blacksheep Set Safety Mark VMA-214 Logs 15,000th Safe Hour

Marine Attack Squadron 214, the storied *Blacksheep* squadron, has passed a memorable safety mark with completion of 15,000 accident free hours.

Present Commanding Officer, Maj. H.V. Huffstutter, is the third since the start of the safe flying period in June of 1959. While building the record the squadron has phased through two sets of pilots, transPac'ed both ways from their homebase at MCAS KANEHOHE, and qualified aboard several Pacific Fleet carriers.

A significant factor in the squadron's vigorous safety program is its "Blacksheep Court," which was initiated in 1958 following a tour in Japan.

Safety violators are prosecuted by the most loyal *Blacksheep* protector, "Oki Shogun," (big boss) who is dressed in an ancient Japanese Samuri uniform.

Pilots found guilty of violations are fined by the "Chi sai Shogun" members of the court.

The *Blacksheep* fly the FJ-4B *Fury*.

No Flubs in 15,000 Hours Skipper Credits Standardized Plan

Marine Helicopter Transport Squadron 263 pilots have flown more than 15,000 hours without an accident. Crewmen of the HUS which established the round-number hour were 1st Lts. Paul E. Cameron and Douglas S. McIntosh, and SSgt. Theldon C. Horn.

The MCAF NEW RIVER squadron has flown three types of helicopters during its safety span: Kaman HOK's, and Sikorsky HRS and HUS types.

Maj. J.A. Dorsey, squadron commander, attributes the squadron's success to strict adherence to standard operating procedures and constant standardization for pilots and crew.

LETTERS

SIRS:

The skipper and members of the VA-146 *Blue Diamonds* rejoiced at the obvious good taste of the editors for their selection for the inside back cover of *Naval Aviation News*, April 1961 [VA-146]. However, the skipper was the least enthusiastic of this proud group, probably because he goes by the handle of J. R. Faulk vice J. R. Saulk.

B. D. WOODS

PIO, VA-146

SIRS:

In your April issue of *Naval Aviation News* you have a picture on page 14 of the USS *Hancock* with a caption reading "Note the LCVP's in tug roles."

Having gone ashore in a liberty party many times in LCVP's I can assure you that they sure don't look like the ones that you have pictured! True, the ones pictured may have been altered slightly but even an airdale can tell an LCVP from an LCM.

R.N. OBERHOLZER, AT2

TACRON 13

Improved Radars Ordered VF, VA, ASW, AEW Craft Benefit

Three Navy contracts have been awarded for airborne and ground support radar and electronics equipment.

From Texas Instruments will come AN/APS-88 radar, to be installed in carrier-based patrol planes. Lighter and more compact than previous, similar systems, the -88 will be used for ASW, weather warning, and general purpose search.

It includes a plan position indicator which provides a visual display of targets, sonobuoy beacon replies, and IFF replies. It also can be used to map the extent of storm fronts and to detect land features such as mountains, islands, and coast lines.

Collins Radio Company is providing two items: a communication, navigation, identification system for use aboard jet aircraft, and ground support equipment for the airborne equipment. Called CNI, the system provides the pilot with ultra-high frequency radio communication, electronic navigation aids, and equipment for identifying the plane to friendly tactical control units.

CNI systems will be aboard the F4H-1 *Phantom II* fighter, the A3J *Vigilante* attack bomber and the A2F-1 *Intruder* low-level attack bomber.

Gunnery Record Shattered Ens. Rodgers Hits 77% at Whiting

An ensign going through flight training has registered the highest gunnery score ever recorded by an instructor or a student, according to VT-3.

Ens. William Rogers, Jr., scored 54 hits out of 70 rounds of ammunition for an unprecedented 77 per cent.

The record he beat was established by his VT-3 instructor, Lt. J. Loeb.

Memphis Milestone Noted GCA Unit #27 Logs 65,000th Pass

GCA Unit #27 at NAS MEMPHIS has completed its 65,000th ground controlled approach since commissioning. The memorable pass was flown by Safety Officer, Cdr. Paul C. Carolali in a T2V jet. GCA Director was R. Nebeling, AC1, and GCA Controller was J.G. Dominick, ACCA.

VF-142 Makes 7 Records Set on Yuma Weapons Deployment

VF-142, composed of the *Fighting Falcons* who fly F8U-2 *Crusaders*, lays claim to several records during a weapon deployment at MCAAS YUMA, Ariz. The squadron submits this accounting:

1. Highest score on one banner at 20,000 feet: Ltjg. Mac Lupfer—65 hits for 140 rounds or 46 per cent.

2. Highest score on one banner at 30,000 feet: Ltjg. Mike Denham—41 hits for 140 rounds or 29 per cent.

3. Highest over-all average at 30,000 feet: Ltjg. Mike Denham—104 hits for 500 rounds or 20.8 per cent.

4. Highest percentage on one banner: 156 hits for 907 rounds or 17.2 per cent. The sharpshooters were Cdr. Jock Stetson, LCdr. Al Williams, LCol. Jillsky, Lt. John Holm, Ltjgs. Mac Lupfer, Tony Longo and Bruce Craig.

5. Greatest number of E winners: Ltjg. Mike Denham (2), LCdr. A.L. Williams, Lts. John Holm and Bob Loomis, and Ltjg. Tom Scott.

6. 16,296 rounds fired for a total of 1327 hits or a squadron average of 8.3 per cent at 20,000 feet.

7. 7400 rounds fired for a total of 477 hits or a squadron average of 6.4 per cent at 30,000 feet.

In conclusion, the report states, "The world famous *Fighting Falcons* now hold the coveted AirPac 'E' and are striving to retain it."

Skipper is Commander J.B. Stetson.

Pacific Barrier Squadron Reports 53,000 Hours First Year

Airborne Early Warning Barrier Squadron Pacific, formed to conduct all Pacific barrier operations after the decommissioning of VW-12, VW-14, and VW-16, has racked up some impressive statistics on its first year as a consolidated activity.

The squadron has completed more than 805 circuits of the barrier between Midway Island and the Aleutians. Each squadron Lockheed WV-2 "Warning Star" *Super Constellation* has average 150 hours per month for a squadron total of 53,000 hours.

Consumption of "a record amount of in-flight food" has been reported.

Randolph Launches S2F-3 AD-5W Replaced in ASW by WF-2

The first S2F-3 *Tracker* and the last AD-5W *Skyraider* were catapulted from the decks of USS *Randolph* as the ASW carrier lay at anchor in Hampton Roads. The *Randolph* has completed six months availability in the Navy yard.

The S2F-3 was flown by Lt. Charles Berthe and Ltjg. Chet Nagle of VS-26; the AD-5W by Lt. Gary O. Cooper and flight crewman B.G. Brown, AM1.

Grumman WF-2's are replacing the AD-5W's in anti-submarine work, as improved *Trackers* replace S2F-1's.

NAO(C) Logs 4500 Hours Believed Tops for WV-2 Non-Pilots

Ltjg. Junior C. Sturm has just completed 4500 flight hours. Sturm, an NAO(C)—Naval Aviation Observer (Controller)—has logged all this time in WV-2 *Constellations* since November 1955.

Airborne Early Warning Barrier Squadron Pacific personnel believe Sturm's total to be the most hours ever logged by a non-pilot in WV-2's.

Sturm began flying with the Atlantic Barrier forces when he was an Aviation Chief Electrician's Mate. After 1200 flight hours he was commissioned Ensign, and ordered to Combat Information Center School at Glynco, Ga.

On completing the CIC course, Sturm was assigned to the Pacific Barrier forces in May 1958.

He now flies as officer-in-charge of the airborne CIC in the squadron's WV-2 aircraft. Sturm has completed 250 Pacific Barrier flights between Midway Island and the Aleutian chain.



'PROFESSIONALS' OF HEAVY ATTACK THREE NOW DO MOST TRAINING IN A3D-2T, EIGHT PLACE, 'SEVEN MILE HIGH CLASSROOM'



SQUADRON INSIGNIA

VAH-3 of CVG-4, Atlantic Fleet replacement air group, trains VAH pilots, bombardier/navigators and third crewmen in sunny Sanford. Cdr. K. F. Rowell is the Commanding Officer.



INSIGNIA SHOWS HEAVY ATTACK MISSION



STUDENTS PRACTICE IN F9F-8T BEFORE DOING 'LOFT' MANEUVER IN A3D SKYWARRIOR



VIGILANTE FLEET INTRODUCTION BEGAN AT VAH-3 IN JUNE. VAH-7 WILL BE FIRST A3J FLEET SQUADRON THROUGH TRAINING

FIRSTS AND FOREMOSTS

Hammondsport, N. Y.

RECORD U. S. NAVY AEROPLANE No. A1, DATE July 1, 1911, to July 5, 1911

DATE	WEATHER	WIND		BAR.	THER. DRY.	NO. OF FLIGHT	OPERATOR		PASSENGER		TIME AT BEGINNING OF FLIGHT	DURATION OF FLIGHT	APPROXIMATE ALTITUDE ABOVE SURFACE	EXTRA LOAD CAR. RIED.
		Direction	Force				NAME	WEIGHT	NAME	WEIGHT				
July 1	Clear	S.S.W.	1											
" 2	Clear	S.S.W.	3			5	St. P. S. Elyson	170			6 ³⁰ p.m.	17 ^m	350'	
" "	"	"	"			6	"	"			7 ²⁰ p.m.	16 ^m	300'	
" "	"	"	"			7	S. H. Curtiss	195	Capt. W. S. Chandler, U.S.N.		7 ³⁰ p.m.	10 ^m	50'	
" "	"	"	"			8	"	"	E. G. Wetmore		8 ⁰⁰ p.m.	5 ^m	25'	
" "	"	"	"			9	"	"	A. F. Zahm		8 ¹⁰ p.m.	10 ^m	50'	
" 3														
" "						10	St. P. S. Elyson	170	Capt. W. S. Chandler	155	6 ⁰² p.m.	17 ^m	-	

NO. OF FLIGHT

REMARKS

July 1 Captain W. S. Chandler, U.S. Navy, in charge of naval aviation, arrived on inspection trip.

July 3 Ran A1 engine on Hook 15 minutes.

July 2 St. P. S. Elyson, U.S.N., qualified for aviation pilot's license.

St. P. S. Elyson, with Captain W. S. Chandler, U.S.N., attempted to fly from Hammondsport to Penn Yan, N.Y., 22 miles, 50 H.P. motor. There was no wind and it was impossible to leave water, but the trip was made on the water. Stopped at Keuka, 8 miles from Hammondsport, then made rest of the run without mishap.

July 5

The return trip to Hammondsport was made by St. Elyson alone. Stopped at Keuka after dark for oil. It was very dark when Hammondsport was reached, and as there was no light as an aid, the distance from the water was very misleading. The first attempt to land was a failure, the machine striking the water and rising again. On second attempt a successful landing was made.

Recounted in this issue are some significant entries by Naval Aviation in the log of world record achievements which attest to a notable half century of engineering genius and piloting skill. Up front we salute two men who wrote the latest mark in the record book while here, on our back cover, almost 50 Golden Years to the day, we note with nostalgia and some awe the very first Naval Aviator's neatly penned entry of 2 July 1911 when all of this got underway.