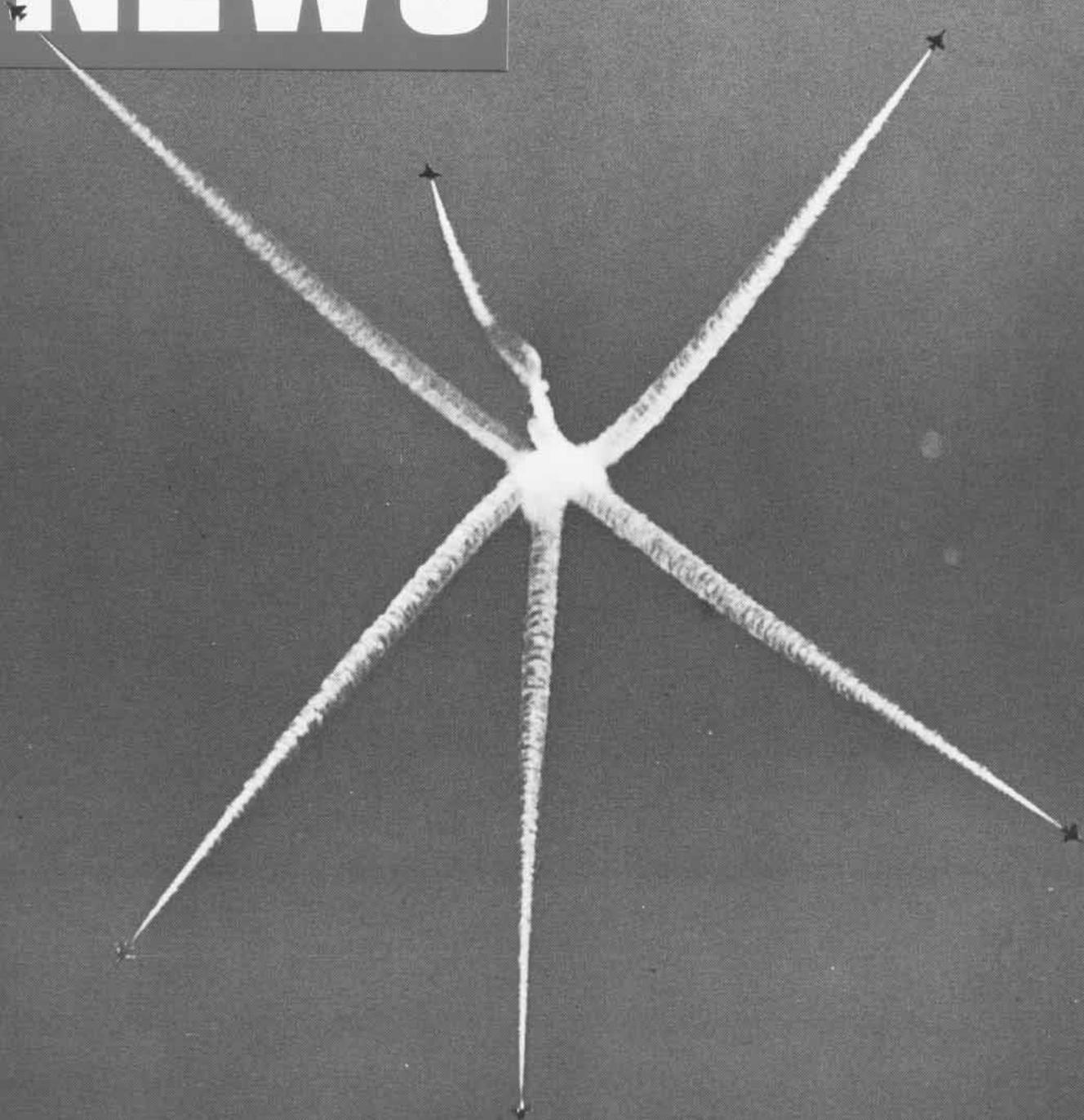


NAVAL AVIATION

NEWS



NOVEMBER 1975



COVERS — Cover views complement this month's features on Air Shows 1975. Blue Angel star burst was filmed by McDonnell-Douglas' Harry Gann, front. Montage on back includes SNJ and Stearman photos by PHCS(AC) R. L. Lawson whose Ottumwa Reunion story begins on page 8. Other back cover pictures are by Cdr. Rosario Rausa. This wingman's view of VF-2's Cdr. Joseph A. Brantaus and LCdr. Joel R. Graffman in their F-14 Tomcat was made by PHCS Lawson in 1973 off the coast of California.



NAVAL AVIATION NEWS

FIFTY-SEVENTH YEAR OF PUBLICATION

Vice Admiral William D. Houser
Deputy Chief of Naval Operations (Air Warfare)

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We're taking a roundabout route to make a point. Bear with us, if you will.

The home is a modest white frame structure. It stands on a tree-lined street in the small upstate New York town of Cincinnatus. The room is filled with ingredients of rustic, way-back-when comfort. Its walls are formed by weathered brick and burnished wood. Books rest on tabletops, fill shelves and are tiered atop a sturdy rolltop desk. Rifles and hand guns, some as old as the revolution, are mounted on the walls. A polished rank of shotguns stands at attention in a rack in one corner. The chairs are heavy and strong and have the feel of hand-worked quality.

It's a warm, quiet afternoon — a summer Sunday. Despite the weaponry, the sensations and sounds epitomize peace and tranquility. There is the soft click of the pendulum swinging below a vintage clock and the silky rustle of the lissome Irish setter on the blanket-draped daybed.

Art Currier wears a plaid shirt and khaki trousers. He is as lean as the 18th century muzzle-loader over the window and has a thick crown of silver hair. His eyes, though surrounded by the creases of age, are so vibrant you're prompted to ask him for the secret of long life.

He is in his eighties, breaks 90 at the local golf course with regularity and plans on hunting till he can no longer walk. And he's still walking with a lively step.

He collects more than guns and books. For example, he has a bed, circa 1740, once used by Stonewall Jackson in the Civil War. It features magnificently tapered posts which tower to the ceiling. There's also a massive mahogany table with ornately scrolled legs so heavy it takes two to hoist one end.

Art is considered a master at grouse hunting. Many come a lot of miles to accompany him on excursions across the rolling countryside. He will tell you that 75 percent of the joy in hunting comes from watching your dog work. He relates that ears, as well as eyes, are critical — you can sometimes hear the partridge running on the leaves before they burst into the air. And he warns that a good hunter must be ready for the four o'clock hills. The grouse sometimes work their way up into the hills and the hills seem to get steeper and steeper toward late afternoon. So one best have stamina and strong legs come four o'clock if game birds are on the supper menu.

His scrapbooks abound with the lore of field and stream. But there are other items. A yellowed page, clipped from the November 1919 issue of *Ladies Home Journal*, contains an article by Waldemar Kaempffert. He made some outlandish predictions about aviation, then in its infancy.

"You will fly across the U.S. in 20 hours.

"You will go skylarking just as now we go automobiling.

"You will fly to your office and land on top of your office building.

"Your house will have a platform roof.

"We shall have traffic cops in the air.

"You will tour Europe in a plane.

"You will go around the world in two weeks.

"There will be lightships in the air just as now there are lighthouses for the sea.

"You will see all the Alps in half an afternoon.

"You will live 100 miles from your office, and reach it in a few minutes.

"You will start for the theater ten minutes before the curtain rises and get there on time.

"Does it all seem impossible? Keep this article and read it ten years from now!"

There are two post cards of Charles Lindbergh, undated but probably printed shortly after the historic Atlantic crossing. "I followed his flight on the radio," recalls Art.

There is also a snapshot of the *Pride of Susquehanna*, an aircraft which closely resembled Lindbergh's *Spirit of St. Louis*. It was pictured at opening day ceremonies for the Norwich, N.Y., airport in 1935. "Bob Clements and I paid \$15 for a ride in that plane," remembers Art. "It was great. It's sad though. The pilot died when the plane crashed about a month later." Although the Ryan B-1 is not considered rare, there aren't many photos around of the 178 which were built.

The *Pride of Susquehanna* or Charles Lindbergh post cards aren't related directly to Naval Aviation. However,



they lead us to that point we're trying to make. The Naval Aviation History office doesn't have the staff to conduct a go-out-and-get-the-material program. Perhaps you know someone from the early days of flying — a machinist's mate, perhaps, or a flyer, or anyone who may have had some connection with aviation in the Navy or Marine Corps. There might be an anecdote or two, perhaps a picture, or some factual reminiscences which would help embroider the fabric of Naval Aviation history. Perhaps you could spend a Sunday afternoon with an old-timer. You just might turn up an item to enrich an already rich heritage. If you do, please send it along to Naval Aviation History, Room 1134, 801 North Randolph St., Arlington, Va. 22203.

Even if you don't come up with something, you just might learn a little about grouse hunting.

Battle Es Commander, Naval Air Force, U.S. Atlantic Fleet, Vice Admiral Howard E. Greer, has announced the winners of the Battle Efficiency Awards.

USS *Forrestal* (CV-59) won the ship category and departmental awards for operations, engineering and aircraft intermediate maintenance. Another winner in the CV category, USS *Franklin D. Roosevelt* (CV-42), received awards for her work in the air and communications departments. USS *John F. Kennedy* (CV-67) won the supply and medical departmental awards while USS *Saratoga* (CV-60) received the weapons department honors.

Winning squadrons are: VF-11 (F-4 *Phantom*), VA-105 (A-7 *Corsair*), VA-176 (A-6 *Intruder*), RVAH-6 (RA-5 *Vigilante*), VAW-123 (E-2 *Hawkeye*), VP-5 (P-3 *Orion*), VS-24 (S-2 *Tracker*), HS-3 (H-3 *Sea King*), HSL-32 (H-2 *Seasprite*) and VQ-4 (C-130 *Hercules*).

CNO Safety Awards The Chief of Naval Operations, in announcing the winners of the Annual CNO Safety Awards, extended his congratulations and well done to the FY 1975 winners.

This year's winners are:

NavAirLant: VFs 84 and 101, VAs 83 and 35, RVAH-5, VP-44, VS-24, VAW-123, HS-11, VRF-31, VC-2 and HC-6.

NavAirPac: VFs 111 and 121, VAs 97 and 165, VAQ-133, VS-21, VAW-115, VP-46, HS-2, HC-1 and VQ-1.

FMFLant: VMCJ-2, VMA-311, HMA-269 and H&MS-31.

FMFPac: HMH-462, VMAT-102, VMA-223, HMA-169 and VMFA-232.

CNATra: VTs 7, 26, 27, 31 and 86.

CNavRes: VS-72, VP-91, VR-52, HS-74, VA-203 and VF-201.

MARTC/4th MAW: VMA-142 and HMM-774.

VS-24, VRF-31, HC-6, VAQ-133 and VT-26 earned their second consecutive award and VMAT-102 and HS-74 won their third consecutive award.

Isbell Trophy Commander Laron "L" Stoker, commanding officer of HSL-33, received the Arnold Jay Isbell Trophy on behalf of his squadron in a ceremony at NALF Imperial Beach, Calif. Vice Admiral J. H. Doyle, Commander, Third Fleet, presented the award.

The Isbell Trophy has been given for overall excellence and superior performance in airborne antisubmarine warfare since 1958. The trophy, established by the Lockheed-California Company, is presented annually on the basis of operational readiness inspections and tactical performance.

HSL-33 was established in July 1973 as the first fully operational LAMPS squadron.

Hanson Trophy El Toro-based VMFA-323 has been named the most outstanding Marine Fighter Squadron of FY 1975 and winner of the Robert M. Hanson Award. The award is named in honor of the Marine captain and Medal of Honor fighter ace who was killed in WW II after shooting down 25 enemy planes.

During the last fiscal year, the *Death Rattlers* racked up 5,412 flight hours and achieved records in aircrew training with half their crews qualifying as air combat instructors. Squadron members flew 4,500 syllabus training flights including 2,100 ACM missions. All this was achieved with 55 percent of the squadron aircraft operationally ready each month.

Lieutenant Colonel Don K. Hanna was C.O. during the award period.

Admiral Clifton Award Fighter Squadron 32, home-based at NAS Oceana, Va., has earned the FY 1975 Admiral Joseph Clifton Award as the outstanding fighter squadron.

Skippered by Commander J. G. Knutson, the *Swordsmen* fly the Navy's newest fighter, the F-14A *Tomcat*, and are currently deployed in the Mediterranean aboard *John F. Kennedy* (CV-67).

VF-32 fired 18 missiles in four shoots, including the first fleet *Phoenix*, while extending its accident-free record to 69 months.

Sponsored by Litton Industries and first presented in 1969, the Clifton Award is given in memory of the late Rear Admiral Clifton who distinguished himself as a fighter pilot during WW II.

New Target System A new avionics system which could give night sight to Navy A-7Es has been developed by LTV Aerospace Corporation under a Naval Air Systems Command contract.

Called TRAM (target recognition and attack, multi-sensors) the system uses infrared heat-response sensors to detect vehicles, terrain features or naval vessels operating at night in the vicinity of U.S. fleets.

The TRAM system would permit an A-7E pilot to find, identify and attack by using a forward-looking infrared sensor system. It is combined with other avionics equipment in a pod on one of the plane's wing pylons.

Imagery patterns from the TRAM sensors are displayed to the pilot on a "night window" in his head-up target display. While radar has done this in the past, radar imagery has not been precise enough to identify ocean vessels.

Super IPCS A new propulsion control system that could increase the efficiency of future high-speed aircraft made its first flight on board a variable-sweep wing F-111 at NASA's Flight Research Center at Edwards, Calif. The Integrated Propulsion Control System uses digital electronics instead of conventional hydromechanical controls of the supersonic aircraft's jet engine and engine inlet. The system is expected to allow aircraft to be flown at full performance limits.

The modified inlet and Pratt & Whitney TF-30 engine were operated from takeoff to landing under control of a Honeywell HDC-601 computer during the one-hour flight. Routine transfers between digital and hydro-mechanical control were made in all flight conditions as the F-111 was flown at speeds in excess of Mach 2.

Real-Time Radar As a result of a six-month program of research experiments conducted on a C-54 over the Atlantic Ocean near Wallops Island, Va., it may now be possible to design a compact radar system that will measure localized wind speeds and wave heights on a real-time basis.

Naval Research Laboratory and National Aeronautics and Space Administration scientists say such a system would provide immediate information for transports, small craft operators and meteorologists.

The joint airborne measurement program has already proved that wind speed and wave height can be measured remotely using a short-pulsed

(two nanoseconds) nadir-looking (straight down), wide-beam antenna (60 degree), three-centimeter radar system.

NRL developed the radar system two years ago for shipboard use where it differentiates between foreign objects and sea-clutter reflections from radar pulses. Now it may be used to measure waves to 15 feet and wind to 25 knots.

First KC-130R Delivered

In September, the Marine Corps took delivery of the first of ten KC-130R *Hercules* refueler transports at the Lockheed-Georgia flight line. Lieutenant Colonel J. M. Pierce, C.O. of VMGR-352, headed the contingent flying the plane to MCAS El Toro where it will be based.

Most striking difference between the old and new models is the addition of 1,360-gallon wing-mounted pylon fuel tanks between the inboard and outboard engines of each wing. The two tanks will add an 18,000-pound fuel giveaway capability for aerial refueling of fighter and attack aircraft. The aircraft can refuel two fighter planes simultaneously at a rate of 300 gallons per minute each. Other improvements include computerized navigation systems, which can provide worldwide position information, and a modern flight director system.

The advanced model tankers will supplement the KC-130Fs currently in the Marine Corps inventory.

Lightning Research

Naval Research Laboratory scientists say data gained by a joint federal/university research team investigating lightning danger at the Kennedy Space Center prior to the recent *Apollo* launch allows them to predict lightning danger at the launch pad up to several minutes prior to launch time.

They also reported that dangerous electric fields in clouds, which can be sparked into lightning bolts by spacecraft launches, can now be tracked through ground-based observation centers. Scientists now know how readings from ground-based sensors relate to electricity in clouds overhead. Fifteen kilovolts per meter inside a cloud signals the beginning of a danger zone. The use of the ground observation network for this purpose could obviate the need of aircraft as monitoring platforms.

In addition, they reported that dangerous electric fields at Cape Kennedy develop only in clouds which reach temperatures below minus five degrees centigrade at the upper level.

Dr. Lothar H. Ruhnke and Mr. Wolf Kasemir said the success in Florida paves the way for a larger national or international research effort to investigate the danger of lightning to rockets and aircraft as well as to forests and commerce.

Although no manned space flights are planned in the near future, unmanned spacecraft for scientific studies are still being launched from the Florida site and the lightning prediction techniques will again be used.

Research at the Kennedy Space Center was begun after a bolt of lightning temporarily affected instruments aboard *Apollo 12* in November 1969.

Scientists and aircraft from NRL, NASA, the National Oceanic and Atmospheric Administration and the New Mexico Institute of Technology were involved in the Florida atmospheric investigations.



grampaw pettibone

Gear Down and Locked, Solo

A student pilot was scheduled for a night local familiarization hop in a TA-4 *Skyhawk*. The student had approximately 190 total hours, 50 in the TA-4. This was his second hop of the day, having flown a formation flight during the afternoon.

The operations duty officer asked the pilot if he had received his night solo briefing and the pilot replied that he had. The pilot manned his aircraft following an uneventful preflight. He took off and conducted his area familiarization without any significant occurrence. He then decided to conduct a GCA to be followed by entry into the touch-and-go pattern.

The GCA was to be a missed approach and a turn downwind for the landing practice. The pilot, while making his approach, reported "Gear down and locked, solo." However, the *Skyhawk* just didn't feel right.

He noted his indexer lights were inoperative and his angle of attack (AOA) did not correspond to his airspeed for the configuration he thought the aircraft was in. He made a go-around and contacted the runway duty officer (RDO) and discussed his problem with him. The RDO transmitted that he would check the external approach lights on the second approach and waveoff.

The pilot was told that his approach lights were inoperative and to fly airspeed. The pilot did not check his landing configuration and, since the aircraft did not "feel right," he flew a compromise between the AOA and airspeed.

The *Skyhawk* touched down in a shower of sparks, *wheels up, flaps up*. Observing this and believing the aircraft was on fire, the RDO broadcast: "Eject, eject, eject!" The pilot ejected with the system working as advertised.



The aircraft, surprisingly, had only minor damage. The pilot was not injured.



Grampaw Pettibone says:

Thunderin' thunderings! I can't believe all the cues this gent had — no indexer lights, aircraft didn't feel right, external approach lights not working, and still it *never sunk in* that his wheels were not down. You could'a told him that his wheels were not down and he still wouldn't have believed it.

And what a lot of help he got from the RDO. Seems to me an RDO ought to be a suspicious cuss when a young fella is havin' all the problems this lad had! No one escaped having their "hand in the till" on this one. The

squadron "helped" in that the RDO was not fully qualified before standing this watch.

On and on and on. Where will the next wheels-up occur — in your unit? Never!!!

"Thorough" Preflight

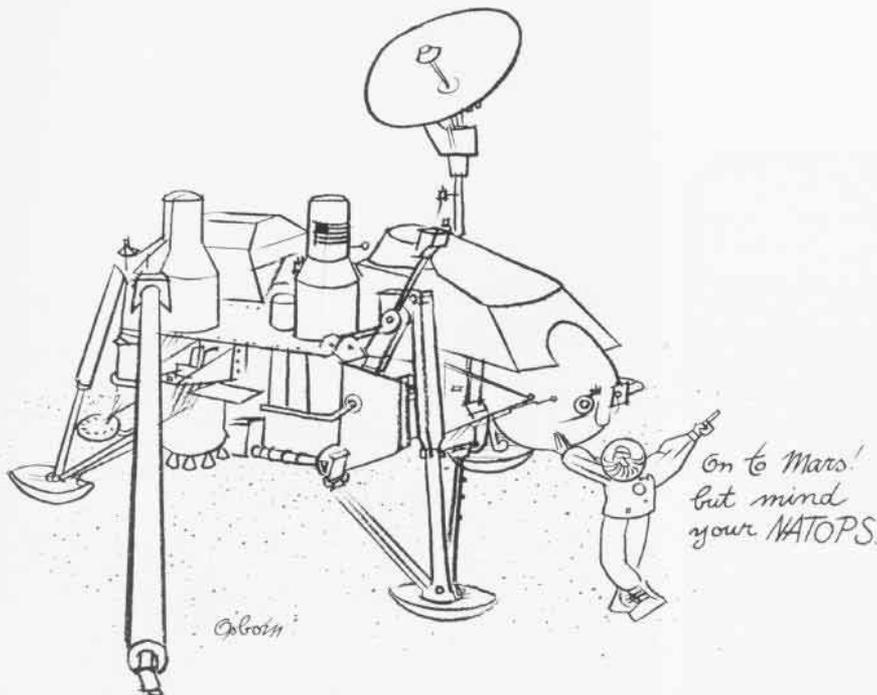
Two "senior type" pilots were scheduled for a proficiency day instrument flight in a T-28 *Trojan*. The first aircraft assigned was downed for electrical problems. The pilots placed their IFR clearance on hold and returned to the line where they were assigned a replacement aircraft.

The pilot-in-command preflighted the lower half of the aircraft while the copilot inspected the top half. During the preflight, the port engine cowling release handle was noted to be unfastened and the plane captain was directed to secure it.

The plane captain climbed on the wing and secured the port engine cowling release handle by securing the DZUS fastener. One of the pilots checked the slot of the cowling release lever DZUS fastener to see that it was vertical and aligned with paint marks on the cowling. No other discrepancies were noted during the preflight.

The pilots completed normal start, taxi and pre-takeoff checks. After receiving IFR clearance, they were cleared for takeoff. The initial portion of the takeoff was normal. However, immediately after liftoff, with the aircraft accelerating through 90-105 knots, the left engine cowl opened and was struck by the prop. The cowl tore from the aircraft and damaged the front canopy, vertical stabilizer and rudder in its rearward passage. (Later, upon examination, the cowl was found to be distorted and damaged beyond repair.)

Now somewhat over the surprise of



the cowl departing the aircraft, the pilot decided that there was insufficient runway remaining to land straight ahead. Since the T-28 was controllable, a turn downwind was elected and the *Trojan* landed without further incident.



Grampaw Pettibone says:

Holy mackerel! These gents were plain lucky — that cowl could've just as easily cracked the canopy, hit the pilot on the noggin — then hung up on the tail and sent the aircraft out of control. Can't happen? Baloney! The books are full of accidents that people said "can't happen."

When the pilot noticed the cowl was not properly secured, he directed the plane captain to secure the latch. However, neither the pilot nor plane captain checked to see if the shear pins were properly secured as required by Natops. Old story? You bet it is!

Takeoff Fiasco

A flight of six SB2Cs taxied out to the takeoff runway. Before the leader was ready for takeoff, the tower called and changed the runway in use. The leader acknowledged and started for

the new runway. Also at this time, five F6Fs which were waiting to take off began taxiing across the old runway toward the one newly designated.

In the meantime, the #2 pilot in the SB2C group had aligned his plane on the old runway ready for takeoff. He didn't receive the tower's signal on change of runway. When he saw his flight leader begin taxiing (to the new runway), he thought the leader was

taking off. Approximately 25 seconds later, he started his takeoff with full-gun. He didn't see the planes taxiing in front of him until he got his tail up.

He sheared the starboard wing off his flight leader's plane, cut the vertical stabilizer off one of the F6Fs and ended up in a sand dune with strike damage to his own plane. Miraculously, no one was injured!

This fiasco is an example of what can happen when standard operating procedures and safety precautions are ignored. The main errors made by this pilot were:

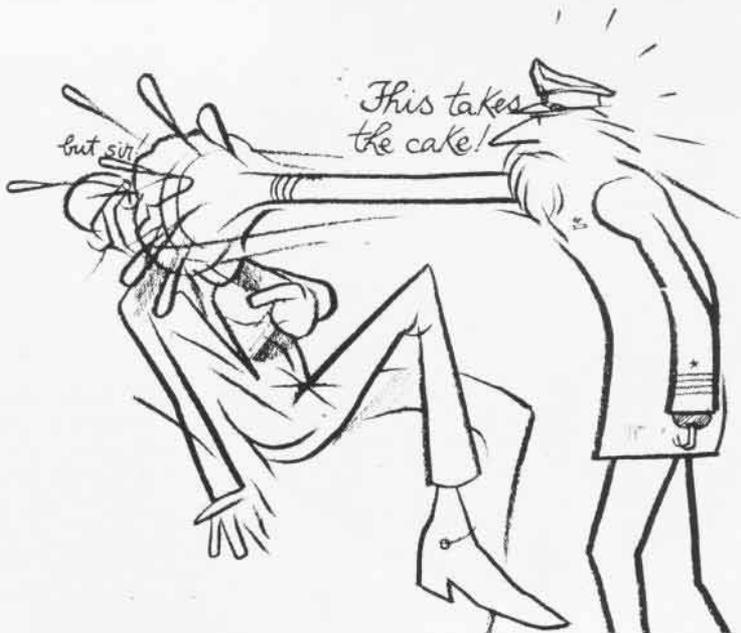
1. Assumed that his flight leader was taking off.
2. Failed to check the tower for a visual signal before taxiing into takeoff position, as required by local flight rules.
3. Neglected to cock his plane around to make sure the runway was clear before he started his takeoff.



Grampaw Pettibone says:

Under the circumstances, and not having gotten a clear signal from the tower or a takeoff signalman, I feel that the last mistake was the worst because it showed the pilot lacked both common sense and a sense of responsibility.

An airplane is a lethal weapon; a weapon too dangerous to be entrusted to an irresponsible pilot. And dangerous not only to the pilot himself but, as in this case, to everyone else within range. (August 1945)



AIR SHOWS 75



It was most gratifying to return to Ottumwa and observe the impressive salute to Naval Aviation. Seeing these vintage planes in the air again serves as a vivid and enlightening reminder of the role our flyers have played in the American heritage.

William D. Houser

Vice Admiral William D. Houser
Deputy Chief of Naval Operations
(Air Warfare)



Ottumwa



What do you mean you never heard of NAS Ottumwa? No, it's not where they get the water for Olympia beer—that's Tumwater! Ottumwa is a familiar name to more than 50,000 WW II Naval Aviators who learned to fly there. Two of the most prominent individuals of this group are the present Chief of Naval Operations, Admiral James L. Holloway III, and Deputy Chief of Naval Operations (Air Warfare), Vice Admiral William D. Houser. Both received preflight training there, in Stearman N2Ss.

Ottumwa is a quiet community of 30,000 people nestled in the cornfields of southeastern Iowa. Many of its citizens have fond memories of the "Navy guys" who came to their town from 1943 to 1945.

The naval station closed at the end of WW II and was inactivated in 1947. It is now known as Ottumwa Industrial Airport and provides facilities for scheduled airlines, general aviation and a variety of small industries.

During the last weekend of August of this year the field was transformed and once again donned its Navy blue and gold for the first annual NAS Ottumwa Reunion. It



AMN Brian D. Lawson, USA

Ex-Naval Aviator, John Ellis, performed aerobatics in his T-28B with Blue Angels color scheme. Above, an N2S-3 Stearman leads a PT-17, Army version of the Stearman, over Iowa countryside. The Naval Aviation Training Command Choir entertained, lower left.

Reunion

became one of the finest air shows seen in the United States this year. On the flight line, it seemed that time had turned around and marched backward. Resplendent in their WW II colors were 12 Stearman biplane primary trainers and virtually every type of carrier fighting plane used by the Navy in WW II.

The air was filled with the roar of powerful R2800 reciprocating engines. These engines drove huge Hamilton Standard props, and powered Grumman F6F *Hellcats* through WW II Pacific skies. Some Ottumwa graduates dominated those skies during vital battles which changed the course of history.

An SBD Douglas *Dauntless*, much like the one flown by Wade McCluskey, the *Enterprise* air wing commander who led the attack at Midway, was there. So were two FM-2 versions of the Grumman *Wildcat*. *Wildcats* won fame in the Wake, Guadalcanal and Coral Sea fighting and provided the crowd with a rare view of the early fighter planes which Navy aces Jimmy Thach and Butch O'Hare flew to fame and glory.





Blue Angels Skipper, Cdr. Tony Less, introduces his team at the reunion banquet. Adm. Houser shares a memory of his Stearman flights at Ottumwa with Jim Leahy, left.

Also on display were the Grumman TBM Avenger, J2F Duck, F8F Bearcat, Chance Vought F4U Corsair, North American SNJ Texan and T-28 Trojan. All of these are owned and piloted by civilians enthusiastic about Naval Aviation.

Organizing and making the Ottumwa Reunion possible took the efforts of a group of dedicated aircraft lovers known as the Antique Airmen. They worked in cooperation with Ottumwa and airport authorities. Supporting outfits were the Warbirds of America

U.S. Army's demonstration team do their thing in OH-6A Cayuse helos.





This young man's thoughts seem to be way up there with the Blues. Below, former Ottumwa flight instructors gather around a Stearman: (left to right) R. S. Thwaiter, J. H. Vaughn, J. Van Boxtaele and J. E. Smoot, Jr.





Mustachioed John Ellis returns to the line in his T-28 following aerobatic demonstration. Stearman trainers are viewed from behind tail section of Blue Angel A-4F.



and the Confederate Air Force. Many private individuals also provided aircraft.

Five hundred NAS Ottumwa graduates and ex-station personnel attended the two-day event. More than 15,000 area residents were on hand each day.

The U.S. Army contributed its unexcelled parachute and helicopter demonstration teams, the *Golden Knights* and *Silver Eagles*. Iowa National Guard helos exhibited vertical assault techniques. Civilian aerobatic demonstrations were made by such performers as Joe Hughes, Jim Leahy, The Four Jokers, John Ellis, John Gosney, and Bob Lyjack. In this Ottumwa salute to the Navy it was fitting that the *Blue Angels* highlighted the aerial events.

Cooperation from the Navy Department made it possible for many Iowa citizens to catch their first glimpse of present-day Navy aircraft. On display were a VP-5 P-3C, VP-90 P-3A, VF-124 F-14A, an NAS Glenview T-34B and a Pensacola-based T-2C and T-34B. The Naval Aviation



Wearing USS Yorktown and Torpedo Squadron Five paint scheme, TBM-3 Avenger rolls down Ottumwa runway.



F6F Hellcat lands. Fighter has Air Group One markings from USS Bennington (CV-20) World War II days.



This SNJ-5 was flown in the film, "Tora, Tora, Tora," simulating a Japanese Kate bomber. Line is used to stream smoke.



Golden Knight hits the deck, above. Wide assortment of old, yet not-so-old, warriors wait in ranks at Ottumwa's flight line, right. Center, Bombing Squadron Two markings adorn SBD-5 Dauntless. Far right, in A-4F Skyhawks, Blue Angels execute one of their maneuvers.



Training Command Choir and the Camp Lejune-based Marine Drum and Bugle Corps gave musical lifts to the audience, which responded as enthusiastically to these units as they did to the flight maneuvers.

NAS Ottumwa? Well, it may not rank with North Island, Pensacola or Norfolk in Naval Aviation history—but it remains in the hearts and memories of those who were stationed

there. More importantly, it is recognized by many Midwestern Americans as the place where Navy men received the training which helped win WW II.

**Story and photos
by PHCS(AC) R. L. Lawson**



I'll Take Sunday

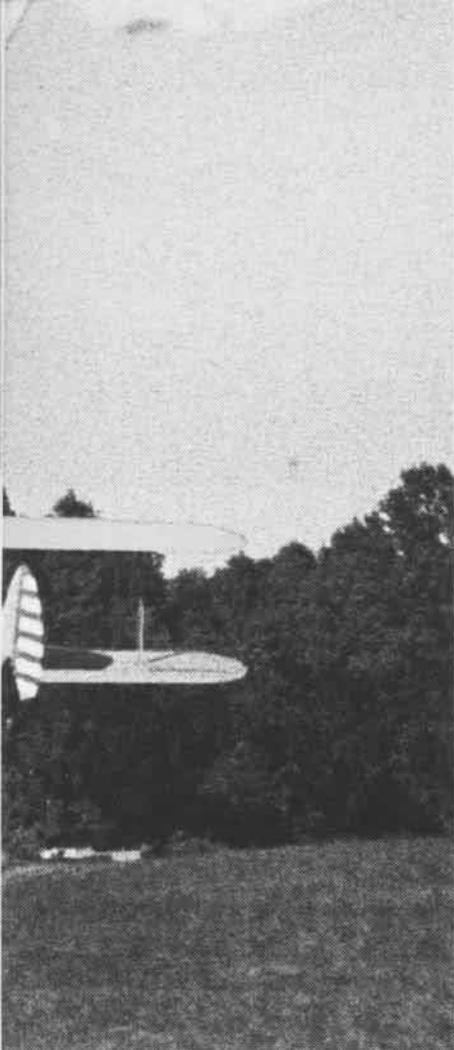


It's a Sunday in early autumn. The Virginia countryside has held onto the greens of summer. The pure blue sky is untarnished by impure metropolitan haze. A scattering of popcorn clouds are pushed across the clearing by a generous warm wind. Some of the people wear light cardigans, others are in shirt sleeves.

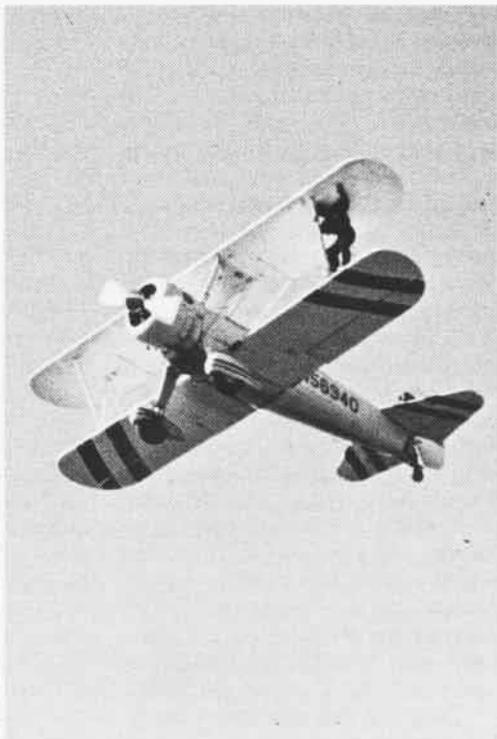
The sounds are pleasingly incongruous. Heads pivot skyward at that deep sputter of an engine as a *Stearman* or a *Sopwith Pup* or a *Tiger Moth* arcs toward the field, then banks lazily away over the stand of trees in the distance. In the intervals of silence between swooping aircraft, insects snicker in the grass.

He arrives at midmorning, a tall Lincolnesque figure in leather and khaki. Styled wings from an earlier generation are embroidered over his left breast pocket. Handsome brown boots gird the length of his limbs from below the knees. He pulls on his cloth





Left, biplanes launch. Shelly and Stearman, above. Hank Henry, USMC, takes an airborne walk, below. Shelly averages twelve riders on a Sunday, below left.



helmet, climbs into the rear cockpit, sets the goggles over his eyes and cinches the straps across his lean frame.

A young man standing by the nose of the *Stearman* grasps a prop blade with both hands. The brightly polished biplane wears red and white colors patterned like a sunburst. Against the verdant carpet of wild grass, it resembles a thing of beauty from a Walt Disney movie.

The pilot raises his arm and signals thumbs up.

"Contact!" he shouts.

"Contact!" returns the youth. He pulls the blade through. Once, then again. The engine growls into life and quickly settles down to a stable mechanical purr.

A moment later the man in the goggles eases the throttle forward. Like an anxious colt the biplane jolts, rolls and bounces gently away. It sinks from view down a slope, rises again and then swings into the wind.

Full power, right rudder, a check of the gauges. The *Stearman* surges forward, gathering speed. The wind rushes along the fuselage, whips in invisible coils into the cockpit and briskly embraces the flyer.

The machine leaps from the grass and rises across the clearing. Over the tree-rimmed perimeter of the field, the pilot banks away. He eases the stick back. The nose lifts gently. Like an eagle in pursuit, the *Stearman* climbs into the waiting sky.



And in the cockpit, Commander Ron Shelly smiles. He is in his Sunday element and all is right with the world.

Some time ago, Ron passed the inevitable milestone which awaits all Naval Aviators — termination of flight status. As his day approached, Shelly looked around for a way to continue flying on his own.

"I got wind of the Flying Circus," he recalls, "found a *Stearman* which I eventually purchased and, about a year ago, began my apprenticeship."

Ron had to help service planes, strap passengers into cockpits, take tickets at the gate and "shovel up after the elephants," so to speak.

Ordinarily this might be a come-down for a combat-experienced Navy pilot with five thousand plus hours in the air, mostly in *Trackers* and *Sky-warriors*, and about 300 carrier landings. For Shelly it was a refreshing transition. "I'm lucky," he said. "I have been able to go through a phase of flying that I had bypassed."

The Flying Circus operates from 200 plus acres of farmland near Bealeton, Va., about an hour of pleasant driving from the nation's capital. A collection of 30 or so shareholders, not all pilots, do their thing before 500 to 2,000 people every Sunday from late May through October. Participants include businessmen, car dealers, a free-lance broadcaster, airline pilots, a couple of ex-Naval Aviators — with the airlines now — a Marine sergeant, an Army major and sergeant, and even an Episcopal minister.

"We try for a profit," admits Ron, "but not if we have to sacrifice fun to achieve it. I give passenger hops for a fee to help offset my operating costs and average about twelve passengers a Sunday."

It's a family avocation for the Shellys. "My wife, Joan, works the hot dog stand and some of my kids pull plane captain duty or work the bomb pits — where we have the pyrotechnic gear." He adds, "The apprenticeship is important because the Circus wants people who are dedicated to the enterprise."

Although the Federal Aviation Administration closely observes activities, the mood is entirely relaxed at the aerodrome. The grandstand, situated behind a waist-high picket fence, consists of several rows of rustic wooden benches. Most visitors forsake these for a few square feet of ground upon which they park themselves along with blankets, picnic baskets and beverage coolers.

Narrator Ron David, acrobatic pilot and budding parachutist, sustains a constant chatter with the audience. He also exchanges verbal fisticuffs with a Teutonic figure in a faded black uniform, spiked helmet and upturned mustache. This omnipresent villain is a prowling, growling, venom-laced espouser of the Kaiser. He scowls his way through the crowd, clearing his way with jabs from a mysterious dog leash at the end of which is an elaborate, silver-studded canine harness — but no dog. He is Baron Von Anger. As Dick Anger, six days a week, he captains Eastern Airlines jets.

At the pre-show briefing, flyers assemble casually at the hangars whose worn-wood bays wear celebrated titles — *Fokker*, *Sopwith*, *Spad*. The brief ends with a command from the Baron, "Ve vill do vot der briefer sez to do!"

Moments later the pilots, in their jodphurs, are strapping in. The planes are parked wing to wing, a stone's throw from the waiting crowd. In an almost synchronized group start, en-

gines whirr into action. Behind the aircraft, patterns of bent grass are formed by the rush of propeller-powered wind. The formation is soon trundling its way to the approach end of the clearing. Engines wind up. John King, Jr., in his Waco UPF7 leads the *Stearmans* in a V-formation takeoff. Ron David proclaims over the microphone, "Stand by for the greatest show off earth!" Aloft, the V swings wide into a long oval which will bring it back over the pasture.

Meanwhile, Army Sgt. Jim Bradley has been tipped upside down in a *Super Stearman* at 2,500 feet and pitched earthward. Tree-mounted loudspeakers boom out *The Star-Spangled Banner*. Bradley's chute erupts into a spray of red and white, an American flag unfurls from his leg and a fluorescent red stream of smoke writes his descent through the sky.

"If all goes right," says Shelly, "the anthem ends as the jumper hits the deck and we sweep by in formation." And more often than not, things do go right.

Flyby completed, the V disintegrates into a daisy chain of biplanes. In single file the pilots dive toward rising balloons let loose from center field. Propellers become whirling guillotines bent on bursting the colored spheres. "We only get two tries," says Shelly, "then we land to make room for the next act."

Which is Father John Frizzell, Jr., in his *Tiger Moth*. At altitude, the minister tosses a roll of paper kitchen towels overboard. The roll unrolls and becomes a floating vertical snake. Executing a series of tight turns, Father Frizzell bisects the snake several times until only white shreds flutter in the ozone.

Miss Fifi — real name, Cindy

Far left, air race is one of the Flying Circus events. Zero makes attack, left. Baron Van Anger, right, infuriates the audience. Far right, visiting aviators are always welcome at Bealeton.



Kuhn—waits in midfield. She wears a flight suit and harness and is about to be "tailhooked" aloft by a passing Corben, flown by the notorious Dr. Otto Bogart, real first name, Hal. The plane whizzes by. Alas, instead of being yanked into the air, Fifi's uniform is torn away. Well-shaped but undraped, she screams in embarrassment for beneath the flying gear remains only a frilly, 1920s version of the bikini.

And so it goes at the Flying Circus on a Sunday afternoon. Space precludes listing all the events but here are some highlights.

Major Bob Murphy drops in by parachute, sheds his harness, disappears into the parking lot and drives quickly to nearby Fauquier airport. There he mans his AT-6, modified and painted like a Japanese Zero. (The Zero was used in the film *Tora, Tora, Tora*.) He flies to the Circus aerodrome and loiters out of sight and sound until it's time for his attack on Pearl Harbor.

Somehow the Baron gets airborne in an aircraft identified as the D-7 and 1/2 *Albatrocity*. He races three other antique birds, loses, of course, and is sent to an ignominious end in an ensuing dogfight. He has been bettered by Sir Reginald Welborne, 28,000 flight-hour DC-8 Captain Bill Menefee, in his *Sopwith Pup*.

The Baron has nevertheless survived and is later viewed on the ground shaking his fist at an Allied plane. The Allied bomber spots him, dives, releases his charge and scores a bull's-eye. There is a wild black-orange explosion and, after the smoke has wafted away, there stands the Baron, still shaking his fist.

Menefee runs his *Pup* through a series of aerobatics inside a pocket of

airspace not much larger than Phineas Fogg's balloon. Marine Sgt. Hank Henry, a jumper as well, takes a walk atop the wings of the white *Super Stearman* and doesn't seem to mind the 90 miles per hour of wind trying to push him off.

Charlie Kulp, in hayseed mufti, wins a fictitious raffle and steals a *Piper Cub*. He does an airborne dance up and down the runway—and a precarious few feet above it—which resembles the late Navy Captain Dick Schramm's rendition of *The Flying Professor*.

The Zero blasts onto the scene, barely nicking the treetops and evokes the appropriate oohs and ahs from the stands.

The Baron appears again and finally scores a victory. He aims his pistol at point-blank range toward the nose of a DH-2. A shot punctuates the air. There is a silence. The voice, some of the venom now gone, gathers strength for a final proclamation: "Der engine is now dead!"

Shelly and company go up again for what might be called a poor man's fleur-de-lis. Stunt pilot extraordinaire, Norm Moore, in his *Stearman*, is flanked by Fred Wilson's *Stearman* and John King, Sr., in a *Waco* with Shelly in the slot. They sweep by, break the formation and perform a combination of loops and exaggerated wingovers in what, even for *Blue Angel* followers, is sheer beauty in slow motion.

Ultimately the planes return and are parked wing to wing, this time facing the audience. Ron David invites the visitors to come forward for a closer look. But he warns: "Do not touch the airplanes, please. You may, however, fondle the pilots."

Lou Davis is spokesman for the Fly-

ing Circus and, during the work week, heads public relations for the Air Line Pilots' Association. Says Lou, "People go to museums, like the Smithsonian, and look at the old planes in a static environment—suspended from the ceiling or sitting in some quiet corner. Out here they can see and literally feel what the early days of flying were really like. As our brochure says, we relive the 'Golden Years of Flight.' I like to think we show that those early days were full of adventure and excitement."

Adds Davis, "Young people get a real sense of flying when they watch these planes perform. The simplicity of these antique aircraft is appealing as compared to modern planes with gigantic dimensions and row after row of gauges and switches. There's a sort of magic and charm to gatherings like the Flying Circus."

As for Ron Shelly, he'll be back at his desk in the Washington Navy Yard by 0800 Monday morning. He is the CNO Natops coordinator for all VA/VF aircraft at the Navy Tactical Doctrine Activity. He helps produce the books on airplanes which he can no longer fly.

"Sure I miss Navy flying," admits Ron. "Making a full-stall landing in a cow pasture is a far cry from grabbing a wire on the flight deck in an A-3. But at this stage of the game I wouldn't change places with anyone. Flying my *Stearman* is what it's all about. I love the feel of it, the smell of it, and all that fresh wind against my face—especially on Sundays."

Story and Photos by Cdr. Rosario Rausa

PATUXENT RIVER

It may not be the great granddaddy of air shows, but NAS Patuxent River's annual open house certainly ranks with the best. The 1975 version was held on September 20 at the comparatively remote Maryland air station and drew 102,000 visitors.

Commander Tony Less and his *Blue Angels* capped the all-day exhibition with stunning maneuvers which, somehow gain luster with each performance, year in, year out.

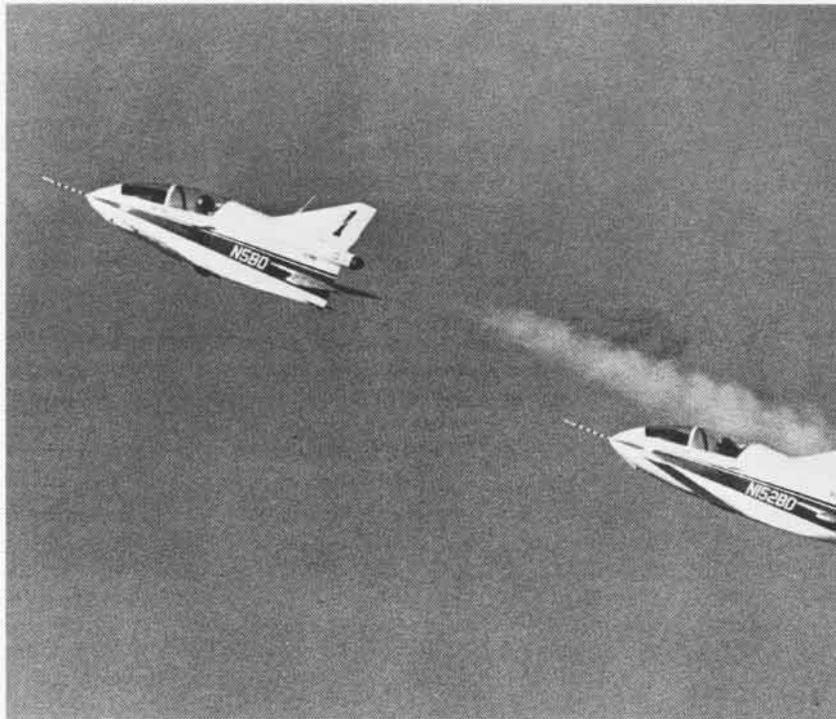
On the Friday before the show, a shroud of dark weather hung over the base. The ceiling lifted slightly in later afternoon allowing the *Blues* to fly a limited rehearsal flight. A huge Royal Air Force *Nimrod* arrived, but otherwise things were placid at the airfield.

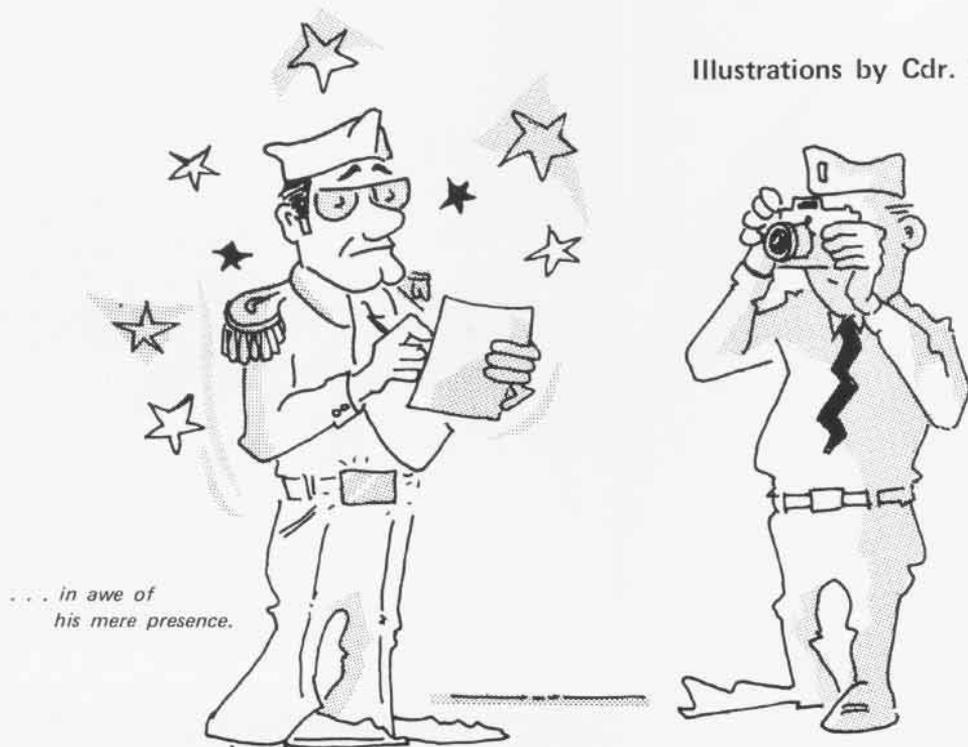
Early next morning, clouds filled the sky, but the sun shone through, the clouds broke up and the people came. By 0900 *Blue Angel Skyhawks* and their support companion C-130, *Fat Albert*, were joined by a panorama of fleet aircraft on static display. The flying and jumping — by the Norfolk-based frogmen of the Navy's Parachute Team — began at noon.

Test Center jets, props and helos showed their prowess, fire-fighting techniques were demonstrated, modelers buzzed their charges through acrobatics, and a pair of mini-jets, called BD-5s, showed they could perform like the big boys and, in fact, added new dimensions in crowd-pleasing adventure.

NAS Patuxent personnel handled their show so well that, even at the end of the day saturated with aviation events, the visitor left hoping that September and *Air Expo 76* will come early next year.







A Day of Reckoning

By LCdr. Charlie Sapp

The briefing room is silent. Studley Flybetter, ace of the base and stick extraordinary, has swaggered through the door. Veteran and nugget alike stand in awe of his mere presence. He wears the standard naval flyer's uniform of the day: boots made of skin from prize pig knuckles, hand sewn by a bevy of Arkansas maidens; flared triple-knit, tailor-made khaki trousers, with matching shirt; a 4x6-inch "been there" belt buckle depicting six major Pacific campaigns in which Navy air was a deciding factor; a fore and aft cap two oil changes behind schedule and, protruding from his back pocket, a dog-eared copy of Fritz Applehofer's great wartime saga, *I Flew Fokkers for the Fuhrer*.

Studley's been away at the ship for a while (on the back burner, as we like to refer to it) serving in one of

those career-enhancing proficiency flying billets. Now, after three agonizing years in washed khakis, talking in monosyllabic words, our hero has returned to his beloved cockpit, fulltime.

Studley's first task will be to face the most diabolical torture instrument devised since the Spanish Inquisition. Beneath his facade of calm arrogance there festers a gnawing fear, a fear instilled into warriors of his ilk, a fear of that cloth shield for instrument training . . . the bag!

Flybetter fares well during the brief and preflight. He has had the good fortune to be scheduled with Ned Nugget, a "stash" sent directly from Nav-TraCom to the instrument RAG. Ned is sufficiently intimidated by this veteran jock in nomex green.

As the J-52 begins to rumble and the canopy smoothly closes around

him, however, Studley's confidence starts to wane. Beads of sweat form on his brow, his ears ring. The old spud locker feels the fluttering of an air wing of butterflies preparing for an alpha strike. Taxiing to the runway takes an eternity, a little like the last mile at San Quentin. All too soon the moment of reckoning is upon him.

He raises the canvas womb and, as the bright natural sunlight fades, he feels isolated from the rest of the world. He is alone and lonely in the confines of the cockpit. The stick, the gauges and a few other flying tools are his only companions. As the green and white subsonic tricycle rolls down the runway, the ICS crackles with the cool voice of the nugget, "OK — you have the airplane . . ."

Taking the controls, knuckles blanched, heart ripping at his chest,

Studley forces his steed into the air. Flybetter, the eagle, is once again soaring in his natural element. Like a modern Icarus, he turns and flies toward the sun, albeit with minimum concern for heading or attitude.

But, what's this? The lowly departure controller sees from his scope that the *Scooter* is breaking the speed limit. It is also at an unassigned altitude. (After all, they were not cleared to fly toward the sun.)

Verbal abuse and snide remarks fill the air. "And your mother wears com-



... alone and lonely

bat boots, turkey!" replies Studley to the controller who has flippantly inquired where Studley was going. Ned Nugget, who has recovered from the six-G takeoff and over-inflation of the starboard leg of his G suit, politely reminds the senior in the back that "We don't talk that way to taxpayers, sir."

After several gyrations about all known axes the unruly aircraft is finally settled down. Studley, still enmeshed in his cloth cloud, is thinking that this may not be so bad after all. I will show that young squirt up front a thing or two, he says to himself.

They race into the operating area and Ned puts his unwilling passenger through the works. He demos patterns of all manner — S, Yankee, Charlie and Delta. He shows Flybetter the nuances of partial panel, aerobatics, slow flight, stalls, turn patterns, unusual attitudes. Ned points out verbally a multitude of different power settings, airspeeds, and numbers on gauges that Studley can't even find.

"My God," cries our hero, "will this never end?" The oxygen mask is making his beard itch. Rivulets of

sweat make all those invisible shaving cuts sting like fire ants. The helmet has tripled in weight and his survival gear fills up what little extra cockpit space there is. Misery abounds, and to make matters worse, the three cups of coffee he drank during the brief want out.

Alas, the end is not in sight. Down the penetration radial flies Studley. From three miles up, he hurtles his steed toward a ground he cannot see, at 6,000 feet per minute. He does a hundred things in his cocoon in preparation for the UHF rendezvous with the final controller. Studley quickly judges, by the tone of the woman's voice, that the controller cares not whether Flybetter lives or dies.

"Affirm, 605, this is your final controller." The female voice splits Studley's brain. Female controllers!? "Is that you, Hotlips?" he asks. "Say again," answers the anonymous and very impersonal voice. "Never mind," says Ned trying to maintain a modicum of decorum in the cockpit.

A broad variety of approaches are made by Studley — surveillance, precision, no compass and low fuel. He is drained of all energy. Worn to a frazzle, defeated, he rides through the landing. He leaves the despicable bag

up for fear someone will recognize him while taxiing back to the line.

Assured in his own mind that he will be branded from this day forth as "St. Patrick, ground killer of all snakes in 605," he sneaks into the ready room. Humiliated, frustrated, agitated, dehydrated and alienated, he falls into a chair, a mass of flaccid flesh. What was once a proud warrior is a leftover piece of humble pie. What everyone earlier admired as a cocksure warrior now seems a hulk of a man, a mere shadow of a Naval Aviator.

The debrief is over. Poor Studley still has not regained his composure. He sulks into the parking lot and gazes up toward the big holding pattern in the sky, wondering what all this instrument flying is about. Heavy thoughts pass through his mind.

Finally, he concludes that today's experience was one of a thousand which bond the brotherhood of flyers together. He straightens his wracked body, gaining strength from a quick surge of pride. He sets a wry grin on his lips and heads for the radar shack to see if Hotlips really looks as good as she sounds. Studley Flybetter, in the spirit of Naval Aviators past and present, has gotten his second wind.



... frustrated, agitated, dehydrated



VS-28 and VS-32 recently became the fourth and fifth squadrons to transition to the S-3A *Viking*.

In September, members of VC-8, NS Roosevelt Roads, were involved in search and rescue operations following Hurricane *Eloise*. The H-3 *Sea Kings* took off into marginal weather conditions to recover people stranded by floods and mud slides. Rescuees included 12 elderly people from Guanijibo, a small village near Mayaguez, and a family of four at Maricao.

Changes of command:

Office of Naval Research: RAdm. R. K. Geiger relieved RAdm. M. D. Van Orden.

VR-1, Norfolk: Capt. T. G. Higgins relieved Capt. T. E. Davis.

ComFitWing-1, Oceana: Cdr. G. L. Riendeau relieved Capt. L. R. Myers.

Naval Aerospace Medical Research Laboratory, Pensacola: Capt. R. E. Mitchel relieved Capt. N. W. Allebach.

ComHSWing-1, Jacksonville: Cdr. W. E. Aut relieved Capt. W. O. Wirt.

Deputy Director of Naval Reserve: RAdm. P. W. Rohrer relieved RAdm. R. G. Altmann.

VX-5, China Lake: Capt. R. N. Livingston relieved Capt. E. O. Crow.

ComLAWing-1, Cecil Field: Cdr. M. D. Reynolds relieved Capt. T. Watson.

Light Attack Weapons School, Pacific: Cdr. H. J. Schwarzenbach, Jr., relieved Cdr. G. W. Lubbers.

CVW-9, Lemoore: Cdr. H. F. Lynch relieved Capt. J. M. Seely.

VA-97, Lemoore: Cdr. R. P. Nicolls relieved Cdr. B. Terry.

VA-93, USS *Midway*: Cdr. W. Dougherty, Jr., relieved Cdr. U. Roeser.

VA-37, Cecil Field: Cdr. G. K. Coyne relieved Cdr. J. W. Keathley.

NAF Mildenhall: Cdr. W. K. Sandke relieved Cdr. T. C. Bird.

The crewless ship rides at sea awaiting a signal from 30 miles away which will fire, remotely, one to three of six deck-mounted target drones. Landing Craft Utility 1637 is a shoebox-like ship which was converted into the at-sea simulator platform (ASSP), the first multi-launcher of BQM-34A drones. It can launch six BQMs individually or up to three simultaneously, conduct classified underwater evaluations and test radar. The ship's engines, navigation and drone firings are all electronically controlled. The ASSP was designed by the Threat Simulation Department at the Pacific Missile Test Center.

AWCM J. R. Hemrick has assumed his new duties as Master Chief Petty Officer of the Force for ComNavAirLant.

He relieved OSCM R. J. Walker who is now the Master Chief Petty Officer of the Navy.

A simple, time-saving method of testing and repairing intercom and headset cord has been developed by two of HC-3's aviation electronics technicians at NAS North Island. AT2s L. C. Johnson and L. Z. Rodney have been awarded \$310 and may receive more if their suggestion is adopted Navy-wide. Their test set is inexpensive, lightweight and adaptable to any AN/AIC 14 intercommunication system, and most Navy and Marine helicopters. It is portable, contains its own power source and can be operated by one man. It is estimated that the set will save the squadron 108 man-hours each month, and \$5,184 a year.

A highly efficient ASW sensor, still in the development stage, is the dwarf sonobuoy — a dwarf in size only. It performs the same functions as the standard-A size, while taking up only one-third the volume. Use of dwarf sonobuoys would increase the range of patrol aircraft because of reduction in weight. Also, fewer aircraft would be needed in certain missions since a single plane could carry three times as many sonobuoys.

NADC Warminster has tested the dwarf in two configurations. Interface efforts ensure that it will be compatible with present and future ASW aircraft and ships. Present plans call for it to be in the fleet by 1981.

From the LAMPS community: HSL-31 was welcomed aboard North Island during the summer, followed in September by two operational squadrons, HSL-33 and HSL-35. HSL-31 is a replacement training squadron, while HSL-33 provides operational detachments for the Pacific Fleet.

HSL-33 Det 2 has returned from a WestPac deployment under OinC LCdr. H. Harzan, a Canadian Navy exchange officer who is a plank owner in HSL-33.

HSL-35 Det 2 returned to San Diego from a Pacific cruise which took it over two oceans and four seas.

The third operational LAMPS squadron in the Pacific Fleet, HSL-37, was commissioned in July at NAS Barbers Point.

When Royal Navy's 829 Squadron aboard HMS *Argonaut* visited Norfolk, its flight commander was greeted by LCdr. B. P. Prendergast, RN, on exchange to HSCW-1 and by Lt. J. Cassidy of HSL-30, formerly on exchange to 829 Squadron. The Royal Navy uses the *Wasp* helo in the MATCH program which is similar to LAMPS.

Safety records: Patuxent River squadrons VP-30, VXN-8, VQ-4 and VX-1 were cited by ComNavAirLant for accident-free operations during FY 75.

VR-21, Barbers Point, has accumulated over 350,000 hours of accident-free flying since its commissioning in July 1957.

In August, VP-22 passed the 180,000-hour mark in accident-free flying. The record was acquired over 21 years in the P-2 and P-3.

VF-11 has passed the 10,000th accident-free flight hour, achieved during a three-year period.

VA-83's 20,000 major accident-free hours cover three years. It is the first A-7E squadron to carry the LB-31 camera pod externally mounted on a wing pylon, making possible the quick removal of exposed film during the short turnaround period of cyclic carrier operations.

The *Dragons* of VP-56 celebrated their silver anniversary in September. They were the first operational P-3C squadron and, since June 1964, have compiled over 84,000 hours of accident-free flying.

Recent decisions on DOD air transport consolidation have included continued Navy operation of C-9s in an airlift role. Two three-plane naval reserve C-9 squadrons are scheduled to be established, one at Alameda in April 1976 and the

second at Norfolk in July 1976. They will use Selected Air Reserve crews and maintenance personnel with a minimum of active duty manning. These squadrons will provide airlift support to both active and reserve naval components.

Adak's SAR unit responded recently to a plea for help for a 17-year-old sailor on a Swedish ship. The helo reached MS *Daphne* plowing through a churning sea. The sailor was airlifted to the station dispensary where a successful appendectomy was performed.

AcDuTra: VP-66, NAS Willow Grove, operated out of Rota with fleet units in the Atlantic and Mediterranean during its two-week training cruise.

Reserve Unit NAS 1904 had its on-the-job training at NAS Willow Grove. A reserve unit of this kind is trained to augment an active naval air station in a crisis.

On completing two weeks of active duty, a VAQ-208 *Skywarrior* made a 6,100-mile, non-stop flight from Rota to Alameda in 13 hours. This is believed to be the longest nonstop flight of a carrier-based aircraft. The plane refueled over Gander, Newfoundland, from another squadron KA-3B.



AT2 Fred Carrigan, Lt. George Sigler and Lt. Mike Grant, left to right in photo, were the crew members on the nonstop flight.

HC-9 has made its debut in the reserve community at San Diego. Its mission, a different one for the Naval Air Reserve, is to develop and maintain readiness for SAR and civil disaster relief.

Twenty-five Royal Canadian sea cadets observed U.S. shipboard operations



aboard *Lexington* during a two-week training period in August.

Several Ringling Brothers and Barnum and Bailey Circus stars boarded *Coral Sea* to visit a former co-worker, now a Navy man attached to the ship's company. YM1 J. M. Parker, alias "Diamond Jim" in the clown profession, greeted them and took them on a tour of the carrier. *Coral Sea* is in the Long Beach Naval Shipyard drydock for overhaul and repair.

Records: AWC R. T. George of HS-11 has surpassed 4,000 flight hours in the SH-3 *Sea King*. HS-11 is embarked in USS *Kennedy* in the Med.

It took 13 years but NAS Meridian recently counted its 250,000th ground controlled approach. The record landing was made by Capt. T. L. Jackson, C.O.

Honors and Awards: In ComLatWing-Pac Bombing Derby IX, VA-27 took the Golden Bomb for best performance in visual weapons delivery, the Silver Bomb for best overall performance in A-7Es and the Black Bomb for best team in all-weather delivery. VA-27's C.O., Cdr. J. A. Kenney, won the night visual dive bombing trophy for individuals.

VA-304 captured the Silver Bomb Award as the best attack squadron in its class. This is the third straight win for VA-304, its fourth award in five years. Skipper Cdr. R. Blake also won the visual lay-down delivery award.

Cdr. G. M. Hickerson's VA-12 received top score in the ComLatWing-1 Bombing Derby 1-75. Top Gun was Capt. Vance Phillips, USAF.

At ComNavAirLant, Richard Porritt, Rockwell-International Corporation representative, has received the Meritorious Public Service Citation, Navy's second highest civilian award, for his "outstanding efforts in support of the intelligence centers aboard Atlantic Fleet carriers."

VT-9 is the recipient of the Meritorious Unit Commendation for the period April 13, 1972, to December 1, 1974.

AZ2 F. J. O'Neill, VA-304, has been selected Naval Air Reserve Alameda Sailor of the Year.

Three of Brunswick's Navy air traffic controllers have received the FAA "We Point with Pride" award normally given

only to FAA air traffic controllers. The recipients, ACCM F. N. Boppel, ACC E. F. Lord and AC1 M. W. Reider, were honored for their efforts in saving the life of a civilian pilot lost in an area of thunderstorms in Maine.

Fighter Country Pilot and Naval Flight Officer of the Year awards were announced at the first annual Fighter Country Fling aboard NAS Oceana. Lt. J. Daughtry, VF-43, and LCdr. T. Finta, VF-32, took the honors.

VAQ-137 has won the annual electronic warfare competition between non-deployed NAS Whidbey EA-6B squadrons.

MSgt. T. J. Guthrie, Jr., VMGR-352, has been named Fixed-Wing Aircrewman of



the Year by the Marine Corps Aviation Association. He was nominated because of his part in an emergency mission involving a MARTD *Skyhawk* with landing gear problems and almost no fuel.

Capt. J. M. Wolff, C.O., NARF Alameda, has been selected by President Ford to receive the 1974 Presidential Management Improvement Award. It is the highest recognition of outstanding contributions in improving effectiveness and economy of government operations.

VF-154 recently won 52 individual Es during a series of missile shoots at the Pacific Missile Range. The shoots, part of the turnaround training cycle, were held under ComFitAEWWingPac.

Air Controller of the Year

To Art Boileau it was a simple matter of helping an aircraft get from one place to another. Navy and Marine air controllers do it thousands of times daily, on land and at sea. No big thing.

Others saw it differently and last September ACI Boileau was awarded the first annual Vice Admiral Robert B. Pirie Award citing him as the outstanding Naval Air Traffic Controller of the Year. The new award, named after Vice Admiral Robert B. Pirie, DCNO(Air) from 1958 to 1962, was recently established by the Secretary of the Navy to recognize individual Navy and Marine Air Controlmen for individual excellence in support of Naval Aviation. Nominations are based on individual contributions ranging from sustained outstanding performance to life-saving emergency action.

On January 9, 1975, Boileau was the watch supervisor at Fleet Area Control and Surveillance Facility, San Diego, where he is assigned. On duty in the darkened space were air controllers who monitor and control thousands of aircraft movements in the southern California area, including offshore operations.

An S-3 *Viking* was having mechanical difficulties off the coast. The crew reported electrical problems. Their UHF radio was faltering and the navigation equipment and the fuel indicating system were giving erroneous information. Even the transponder aboard the antisubmarine plane failed. In a short time the radio quit except for guard channel.

Recalls Boileau, "I had a gut feeling that trouble was ahead." He alerted a rescue helicopter, coordinated actions with FAA and notified the S-3's squadron at North Island. He contacted a carrier-based A-6 *Intruder* and an E-2 *Hawkeye* which were in the area and requested their assistance.

Sensing that time was running short, Boileau scanned his maps for the nearest suitable field. He pinpointed the aerodrome at Ensenada, Mexico, and, in a commanding and assuring

voice, said, "Turn right" to the *Viking*, and followed that with precise vectors and nav data.

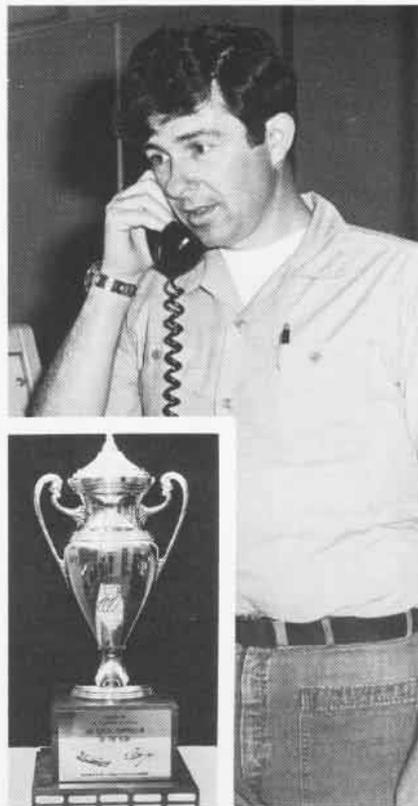
Ensenada had 4,900 feet of hard-surfaced runway. The *Intruder* made a low pass over the field to ensure it was safe for landing. Boileau helped guide the S-3 until the crew spotted the field. An expeditious descent, approach and landing were made. Seconds after touchdown, both engines flamed out due to fuel starvation.

In addition to the S-3 and its aircrew, Boileau has been further credited with helping save 52 lives in the past year. He directly coordinated 16 medivacs and two search and rescue missions in this period.

Boileau, who was accompanied by his wife, was feted at ceremonies in Washington, D.C., with Adm. Pirie on hand and Navy Secretary J. William Middendorf II presenting the impressive trophy. Captain J. J. Ortega, Head, Flight Operations Branch, DCNO(Air Warfare), read the citation. Adm. Pirie was a major force in the formation of the recent National Airspace Systems following enactment of the Federal Aviation Act of 1958 and in preserving the Navy's role in the system. Also participating in the event held at the Mayflower Hotel were Vice Admiral William D. Houser, DCNO(Air Warfare), Vice Admiral Kent L. Lee, ComNavAirSysCom, and Mr. Winfield E. Fromm, President of AIL, a division of the Cutler-Hammer Company which manufactures air traffic control and other electronic equipment. AIL sponsored the award. Adm. Pirie gave the principal address to an audience which included numerous other Navy and civilian personnel. Mr. Fromm, Secretary Middendorf and Adm. Houser made remarks to the gathering.

Adm. Houser pointed out that for our carrier pilots it is "reassuring on dark and stormy nights to have a professional help bring you in . . . men like Boileau."

Adm. Pirie stressed the critical role air controllers play in safety, citing Boileau's achievements. He also noted



the controllers' importance in the command and control systems used by U.S. forces.

Boileau considers his job a challenge and admits there's a lot of action in the air-controlling business. He accepted the trophy on behalf of all Navy and Marine controllers and stated that they should share the credit with him for the award.

Boileau was asked if pilots and air controllers have changed much in his 18 years of service. Answered Boileau, "There have been many changes since I started but I feel that both the aircrews and the air controllers have shifted gears together along the way."

Before returning to his home unit, Boileau stopped off at the Naval Air Technical Training Center, Memphis and presented the Admiral Pirie Trophy to the Air Controlman A School which will be its permanent home. Captain J. L. Girard, C.O. NATTC, accepted the trophy in the school's behalf.

En route from Memphis to San Diego, AC1 Boileau was also honored at the 19th Annual Tailhook Association Banquet in Las Vegas, Nev. He was presented a plaque proclaiming him the reunion's "Official Case Three Recovery Controller."

NAS Atsugi

By Russell A. Stone

*Piled up at the base in 1945
are discarded Japanese planes
of World War II vintage.*



Ironic twists of fate have transformed the farmland and pine groves around Atsugi, into a truly international aviation community which meets the security needs of Japan and the United States. Atsugi has been many things to many people:

- The strategic last line of aviation defense for the faltering loser as World War II drew to a close,

- Site of a revolt by kamikaze pilots and other military personnel who refused to accept the word "surrender" which Emperor Hirohito had uttered,

- The place where General Douglas MacArthur first set foot on Japanese soil en route to attend the formal surrender ceremony,

- A veritable ghost town guarded by a handful of security guards,

- A U.S. Naval Air Station which came alive during the Korean Conflict, and

- A home away from home for thousands of American servicemen and their dependents.

Attention was first drawn to this area on the sweeping Kanto Plain in 1938 when the Japanese Naval Air

Force was looking for a site to construct an airfield capable of handling the large aircraft that were envisioned for the future. Work began shortly thereafter and 12 twin-engine planes were assigned to the base for use as training aircraft. At that time there was an urgent need for new pilots. Funding problems hindered the completion of the full runway. Operations were on a small scale but, as the war developed, construction picked up at a rapid pace. Slated to accommodate six units of carrier bombers, the base was to be completed in 1943. Thus, Atsugi Naval Air Base was officially activated on April 1, 1943, with an initial force of 48 carrier fighters and a dozen "night fighters" which were used for training. The aircraft were also to be used to defend the skies above the Kanto Plain, an area which includes Tokyo and Yokohama.

Later the base served as a training site for aircraft mechanics and maintenance officers. By February 20, 1944, the Atsugi Naval Air Group consisted of 72 carrier fighters, 24 night fighters and 12 reconnaissance

planes. This air group was the first to receive the order to defend mainland Japan "to the end."

There was a great deal of anxiety about enemy air raids—the Truk Islands had come under heavy attack by an American task force and the situation in the Marianas was critical. Japanese military leaders realized that if the Marianas fell, B-29 raids on the mainland would be inevitable.

In preparation, the Japanese Navy poured its best and newest aircraft into Atsugi and assigned Cdr. Yasuna Ozono (also translated Kozono) as the commanding officer. A hero in the Solomon Islands and Rabaul, he was the man who devised the system of mounting a pair of 20mm cannons diagonally to the body of a *Gekko*, thereby allowing him to shoot down American bombers at high altitudes.

Fear of the B-29s and their destructive capabilities drove the Atsugi inhabitants underground. Nearly 2,000 officers and enlisted men, aided by scores of civilians, undertook the tedious task of digging large caves which would serve as subterranean hangars



A Skyhawk is displayed during an Armed Forces Day Open House at Atsugi.

and barracks. After six months of sweat and blood, the 12 immense caverns were finished.

In November 1944, the Marianas finally fell to the U.S. About the same time, the raids became a reality when B-29s began bombing Tokyo. Pilots of the 302nd Naval Air Group, who had waited impatiently to challenge the huge bombers, jumped into their *Zeros* and *Gekkos* to defend the capital.

According to Masaya Minami, who wrote portions of the book *U.S. Forces' Bases*, the defenders were able to deal serious blows to intruding bombers. Additionally, since November, pilots of the First and Second Sagami Squadrons — including kamikaze flyers — had been diving at the U.S. task force which was choking Japan's lifelines.

Despite the heroics, Tokyo and other cities were turned into ruins by August 1945. Ironically, Atsugi was not touched. Although the base escaped the heat and blast of military bombs, trouble of another sort was building up within the installation.

When Emperor Hirohito announced

the surrender on August 15, Ozono issued an order to his officers and men that they would renounce the declaration as well as any official orders handed down by military authorities who out-ranked him. The Atsugi men had already organized the Tokko (suicide) Group, for they felt it was their duty to fight till death. As the commanding officer told his men, "The treason orders issued by central and higher headquarters are considered invalid to us, as they have already lost their ordering authority. Consequently, we declare that said orders coming from those sources hereafter will be rejected." The Atsugi Revolt was under way.

That afternoon, sedans were dispatched to distribute handbills which explained the men's stance, and *Zeros* also took to the air to scatter the message in populated areas. Citizens who were stirred by this show of courage donned their national uniforms and gathered at the main gate where they could hear the roar of engines and the enthusiastic shouts of the military men who were holding a pep rally.

Vice Admiral Kinpei Teraoka, commander of the 3rd Air Force at Kisarazu, rushed to Atsugi. His pleas to the rebellious group fell on deaf ears.

On the 17th things got worse. MacArthur's headquarters in Manila sent word that he wanted an official delegation to report to him to work out the terms of the surrender agreement. In Japan, it was feared that if the Atsugi pilots learned of this, they would blast the delegation's plane from the sky. Fortunately for the vice admiral, two planes took off secretly from Kisarazu on the 19th and were not intercepted on their flight to Sadamisaki on the more southerly island of Shikoku, where the delegation was to meet U.S. escort planes.

But VAdm. Teraoka was again forced to turn his attention toward Atsugi for he had received word that Ozono had gone out of his mind. Although authorities considered the use of force to quell the dissidents, the discontent abated and there existed an aura of calm.

Meanwhile the delegation dispatched to MacArthur's headquarters ran into

a stumbling block when they talked of when and where the first wave of occupation troops would land on Japan's mainland. U.S. negotiators wanted the advance party to land at Atsugi. The Japanese — realizing the situation at the base was explosive — tried to hedge by claiming the runway wasn't big enough to safely handle large transports and that an alternate site such as Kizarazu or Konosu would be better.

The Americans showed the Japanese officials a reconnaissance photo — taken by the Americans — which clearly showed a large Japanese transport on the Atsugi runway. It was agreed that Atsugi would be the site of the landing on the 26th.

On August 21, the airfield area of Atsugi was incredibly quiet. About 50 aircraft were lined up, radiating more heat into the calm air. In the afternoon, two vehicles manned by working parties sped to the planes and personnel began tearing off propellers

and draining out the fuel. Suddenly, a mob rushed to the aircraft. Pilots wearing khaki uniforms and waving swords surged toward the workers, pulled them from the planes and climbed into the cockpits. The aviators' shouts turned to tears as they sat in their beloved aircraft. The workers' first response was to lie in front of the planes. But — as though suddenly overwhelmed with patriotic emotion — they finally stood up and waved their caps to pilots as the engines roared and 33 planes took off, one after another, their destinations unknown.

The confusion continued. Captain Ozono, who had been confined to his bed in the dispensary, ran outside brandishing his sword. Other officers, also waving their legendary steel symbols of authority, gathered around the remaining aircraft. Some scrambled aboard and aimlessly fired the machine guns. Others picked up rifles and fired wildly into the air. The situation seemed uncontrollable.

VAdm. Teraoka and his party tried to persuade the rebels to put down their arms. But as night fell, random firing became more intense. Then someone set fire to the remaining aircraft, but guards managed to extinguish the flames.

The next day, personnel began to demobilize, but continued their angry shouting. Security guards and the Yokosuka Security Force formed circles around the dissenters and restored order.

Then 8,000 people from the Koza Naval Arsenal picked up all the debris, including discarded swords, in preparation for the arrival of the Americans.

Two days later, on the 28th, the American C-46 arrived. This advance party was headed by a Colonel Dunne who was surrounded by well-armed American personnel. After refusing to drink the chilled juice offered to the party, the Americans began the talks. The colonel had two immediate re-



Gen. MacArthur talks with newsmen after arriving at Atsugi with first occupation troops in August 1945.



In the early years, a TBM aircraft lands at the Atsugi strip as other planes prepare to take off.

quests. He asked that passenger cars be provided for high-ranking officers and that the runway be widened and a 1,500-meter taxiway for large transports be constructed by the following evening. Understandably, the latter request was a prodigious task, but it was carried out.

According to records, 123 transports landed at Atsugi on August 30, carrying U.S. military personnel and their equipment. General MacArthur was taking over. The war — and the Atsugi revolt — were history.

The base then entered a period of relative disuse. Following the first landing of occupation troops, elements of the 11th Airborne Division moved out to occupy Yokohama and other areas in the Kanto Plain. The 187th Airborne Infantry Regiment remained at the base and assumed responsibility for the occupation there until early 1946 when it moved to Hokkaido, Japan's northernmost main island.

Also, in 1946, the Eighth Army established a Replacement Training Center at Atsugi. The center continued to be the principal activity at the base until March 1949, when it was discontinued.

When the North Korean Commu-

nists invaded the Republic of Korea on June 25, 1950, U.S. Naval Aviation at NAF Yokosuka was closest to the scene of battle. The Yokosuka facilities had been used by the Navy for some time after the surrender, but the buildings, hangars and landing area had gradually been turned over to the U.S. Army. Thus, in June 1950, it was little more than a beachhead with accommodations for a limited number of seaplanes. In all of Japan, there was no Navy installation which could provide for land operations of patrol squadrons.

The Commander in Chief, U.S. Pacific Fleet selected Atsugi for the establishment of the one major naval air station in the Far East. In October an advance echelon from Mobile Construction Battalion Two arrived.

LCdr. W. J. McFarland, MCB-2's commanding officer, and 12 men found themselves looking at a deteriorated base. The runway, originally of inferior construction, was useless. The 220 buildings on the 1,200-acre base were a shambles.

On November 5, 1950, elements of Fleet Aircraft Service Squadron 11 moved into Atsugi and began constructing a 6,000-foot runway where

the former strip had been.

On December 1, 1950, Naval Air Station, Atsugi was commissioned. Three officers and 50 enlisted men were on hand as the base's first commanding officer, Captain R. C. Sutliff, read his orders.

In January, Patrol Squadron Six became the first squadron to operate from the station. Shortly thereafter, a detachment of Fleet Aircraft Service Squadron 120, based at Oppama near Yokosuka, was ordered to the other section.

Commander Fleet Air, Japan, Rear Admiral G. R. Henderson, moved his headquarters from Tokyo to Atsugi in April. Also in April, Captain Sutliff assumed the additional hat of ComFAirJapan. At the same time, Commander, Fleet Wing Six moved his headquarters from USS *Pine Island* to the installation.

As the number of personnel swelled, support and recreational facilities at the base also came into being. The base mushroomed into a true military aviation community with the completion of a new photo lab, control tower and parachute loft. The finishing touches on a nine-hole golf course were envisioned for spring of 1952 to

meet recreational needs.

By November the first dependents of the Atsugi servicemen arrived.

Squadrons in the VP, VU and VS categories frequently rotated in and out of Atsugi.

Other recreational facilities were added, including a bowling center, a station theater and a swimming pool. Intramural and inter-station sports programs kept station personnel occupied when not on duty.

During 1953 and 1954, a large number of units moved to Atsugi to provide necessary fleet services. They included Marine Aircraft Group 11 which moved into the East Camp. By September 1955, MAG-11 had 94 aircraft and over 2,000 officers and men at the base.

In November 1954, Rear Admiral J. M. Carson, who wore two hats as ComFAirJapan and Commander, Naval Air Bases Japan, picked up a third "cover" when Commander, Fleet Air Western Pacific was established and headquartered at Atsugi. That position still exists and is the senior U.S. billet aboard Atsugi.

In early 1955, additional units of

the First Marine Aircraft Wing were withdrawn from Korea and based at Atsugi. By this time, the total onboard count was approximately 4,745. At one point there were as many as 250 aircraft assigned.

The station remained the same for a few years, with the contingent of Marines slightly out-numbering Navy personnel. The biggest change at the station came in 1957 when high-performance jet aircraft replaced the older models. New planes included the F3H, F4D, F8U, FJ-4 and F11F. It became necessary to use mobile arresting gear when the runway was wet in order to ensure that the planes didn't overshoot the strip. Other Naval Aviation units included VR-23, FASRon-11 and VU-5.

The average number of carrier groups serviced by the base remained relatively constant after the end of the Korean hostilities, about 28 annually.

Conditions remained basically unchanged, but in 1961 two important adjuncts to the base, one near and one quite distant, changed their status. The airfield at Kisarazu, about 25 miles away, became an auxiliary landing

field. The runway at Kisarazu was equipped with M-1 arresting gear which increased the field's capability for mirror landing practice for carrier-type aircraft. Since the communities around Atsugi were growing rapidly and were densely populated, this was an effective noise abatement measure.

Also, 48 acres of land adjoining the base, formerly under the control of the Joint Technical Advisory Group were turned over to NAS Atsugi, giving the congested base some breathing room. New housing was built on the area.

Aviation activity remained basically unchanged until July 1965, when MAG-11 was officially transferred to MCAS Iwakuni.

In September 1966, a milestone was recorded when GCA Unit 26 talked down its 150,000th aircraft. The landing was made by a VR-21 Atsugi Detachment C-1A.

In 1967, the units assigned to Atsugi included Fleet Air Reconnaissance Squadron One, responsible for supplying timely and accurate reconnaissance information to the Seventh Fleet; Fleet Composite Squadron Five which pro-

Japanese guests congregate around aircraft on display during a recent open house at the naval air station.





Former American POWs greet the first troops of the 11th Airborne Division as they arrive at Atsugi.

vided pilotless target aircraft, high-speed, high-altitude towed targets, conventional target sleeves, aerial photographic services, carrier-on-board delivery and other services for the fleet; Fleet Tactical Support Squadron 50 which provided air logistic support to naval forces in the Far East; and Helicopter Combat Support Squadron Seven which supplied utility and search and rescue services for the NAS and the Seventh Fleet.

In 1968 VC-5 moved to Naha, Okinawa, at about the same time a detachment of Fleet Tactical Support Squadron 21, home-based in Hawaii, moved to Atsugi. The detachment's C-130 *Hercules* performed long-range, rapid delivery of cargo and personnel throughout the Western Pacific.

Also in 1968 the last A-1 *Skyraider* assigned to the area returned to the States after many years of yeoman service in WestPac.

In April 1969 Atsugi was involved in an international confrontation

which had the entire world edge. An EC-121 reconnaissance plane assigned to VQ-1 at Atsugi was reportedly blasted from the skies over the Sea of Japan by two North Korean MiGs. All 31 Navy men aboard the plane were killed in the incident. The base became a bustling community when President Richard M. Nixon ordered an armada of Navy vessels to assemble in the Sea of Japan. Many Atsugi personnel toiled long hours to give the 29 ships logistic support, but gradually the tense situation abated and the ships returned to normal duties.

As the Sixties closed, the NAS was phasing down, preparing to become a naval air facility. Plans were made to relocate VQ-1, VRC-50 and HC-7.

In January 1970, a detachment of MAG-36, home-based at Okinawa, began providing logistic support to Camp Fuji, on the slopes of Mt. Fuji, using CH-46 *Sea Knights*.

At the same time, the Japanese Maritime Self Defense Force was

moving in. It had been agreed that the base would be shared by aviation elements of both nations. Atsugi became an NAF in 1971.

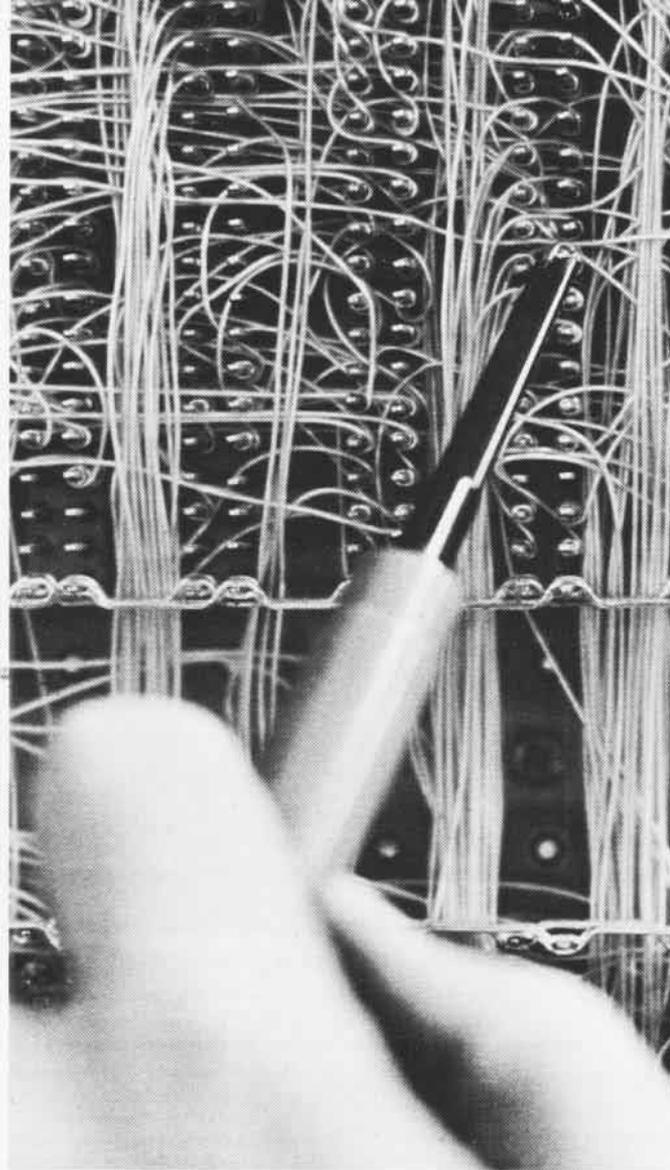
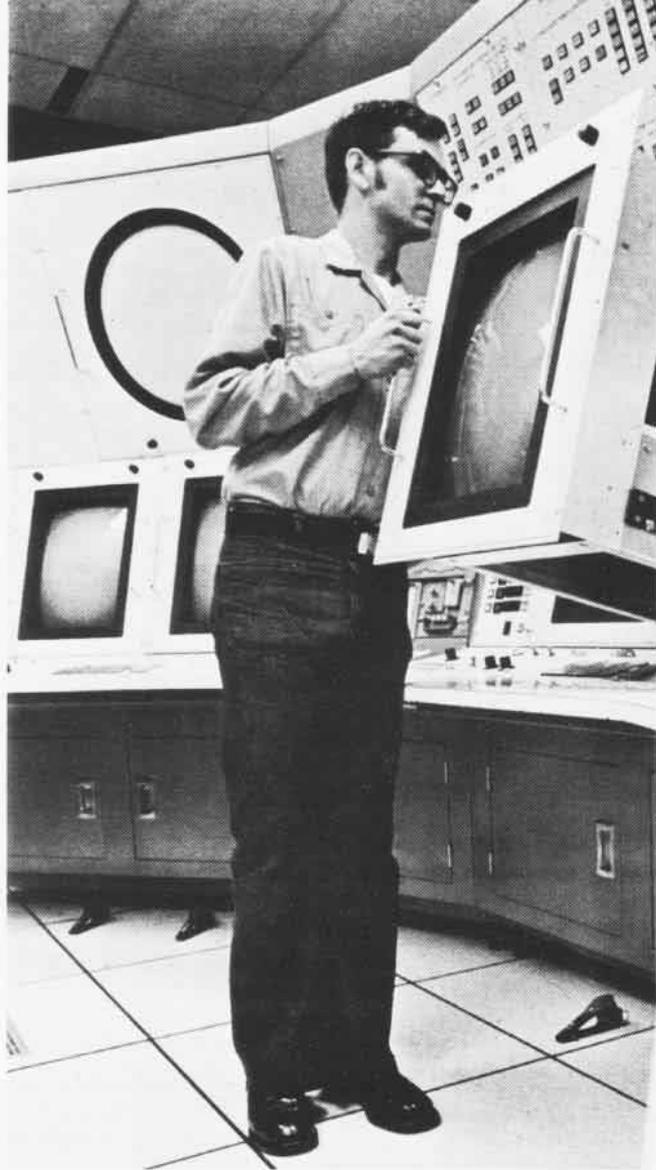
Though there wasn't the activity of former years, JMSDF aircraft, mostly patrol, accounted for a large number of flights. The airstrip was now under the administrative control of the JMSDF.

U.S. flights were limited to planes belonging to the detachments maintained there by VQ-1 and VRC-50. The pace quickened when carriers pulled into Yokosuka because many of the embarked aircraft flew to the NAF for routine or specialized maintenance.

In 1973 when USS *Midway* was home-ported at Yokosuka, Atsugi became a support base for *Midway's* planes.

Since that home-porting, NAF Atsugi has changed very little.

Today, Atsugi continues to support the U.S. Seventh Fleet.



THE TRADESMAN

By Bob Moore

**ENLISTED
RATING
SERIES**

Walk to the flight line and strap on a plane. Fire it up, clear with the tower, taxi out and move onto the runway for a cross-country flight. Take 'er up to 30,000 feet and go. Shoot a few GCA approaches, simulate an emergency, then cruise back to home station—all without leaving the hangar.

You can make the whole trip in one of 300 major aviation training devices now being maintained and operated by a Navy specialist called the Tradesman (TD).

Let a TD instructor take you on a simulated hop. Go ahead and take off. At 120 knots, pull your stick back. Then raise your wheels when safely airborne.

Acknowledge your instructor's or-

ders and watch your airspeed increase. Hear the whine of the jet engine and the rumble of wheels on the runway. As you pull back on your stick, the wheel sound ceases. And as you pass 300 feet, the instructor reminds you to pull your flaps up.

Leave on 100 percent power and let your airspeed increase to 300 knots. OK—reduce power and establish your climb at about 4,000 feet per minute. Level off at 15,000 feet.

Soon you are practicing air work and making standard rate turns in both directions. You make speed changes, climbs, descents and manipulate your dive brakes.

A computer solves your flight equations, making instruments in the cockpit and instructor console reflect your

airspeed, bank angle and other data. Your stick and pedals almost feel like those in a real plane.

The Navy has 114 different types of flight simulators to prepare fledglings for their first flights or help an experienced crew conduct refresher work or transition to a new aircraft.

In the safety of a simulator you can lose one engine or even four. The turbulence of a storm or an inflight fire may be simulated. The Trademan locates and describes ground radio signal navigation aids and serves as your controller during GCA landings. By watching a graphic automatic flight recorder, he can map your progress and plot your track through the sky.

The Navy has had pilot-makers since WW I. The first Link trainer was ordered in 1931. These basic cockpit simulators failed to make a mark but 30 E-Specials started an era eight years later.

The remarkable E-Special had the same stubby fuselage as the first training devices, but wings and tail gear

were mounted on a raised platform containing powered instruments which automatically duplicated bank, spin and nose attitude. Some even had a closed cockpit with a ventilation system, radio compass, marker beacon and cross-pointer indicator and an electric control monitoring desk with a plot board.

To complement this first successful simulator, the Bureau of Aeronautics soon developed special training methods. On April 30, 1941, Rear Admiral John H. Towers (then head of the bureau) created a special devices desk in the bureau's engineering division with this reasoning:

- By producing instinctive response, synthetics would increase the quality and quantity of training. Safety in flight would be enhanced.
- The use of training devices would allow instructors to freeze the action while pointing out errors to large groups of students.
- Valuable equipment would not be tied up as training aids.

To expand the new division, in 1942 Link Trainer instructors were designated as Navy specialists and an appropriation of \$1 million was obtained in January. A \$10 million supplement followed in March. And, by the end of the year, synthetic training funds rose to over \$36 million with these developments:

- The twin-engine PBM seaplanes'

control spaces, mission and emergency conditions were duplicated so well that a malfunctioning engine became more of a nuisance than a disaster.

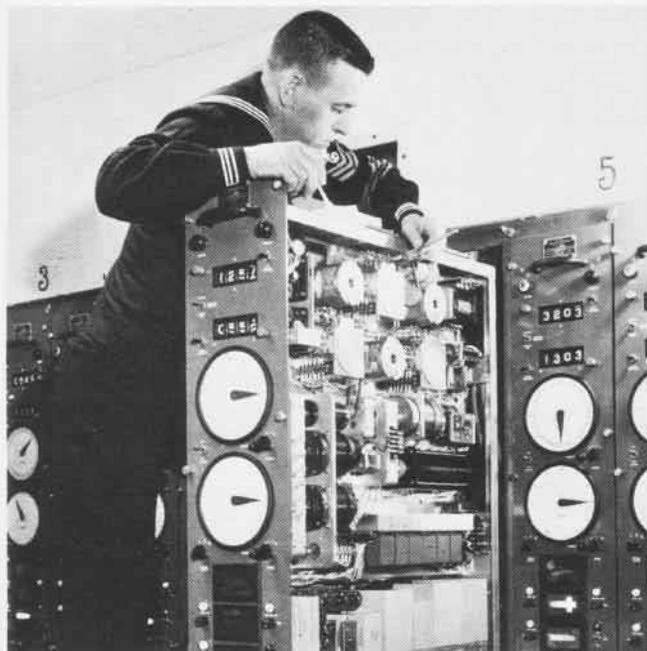
- Device 3A2 gunnery trainers simulated aerial combat so faithfully that veteran gunners often got the shakes.
- A mockup of a B-24 bombardier compartment was so realistic it was oiled just to make it smell like the genuine article.

In WW II, the Navy had synthetic instrument panels, bombing and recognition trainers, three-dimensional weather charts and a navigation instruction device.

As Navy men became better trained at less expense, a grateful service rewarded the man most responsible. Commander Luis de Florez, often called the "father" of training devices, was promoted to captain and then to rear admiral. He was given the Legion of Merit, the Distinguished Service Medal and Distinguished Flying Cross. In 1944, he received the Robert J. Collier Trophy for his "contribution to the safe and rapid training of combat pilots and crews."

A congressional committee said that the time Navy flyers spent in training devices represented the equivalent of hundreds of hours of conventional training. "The invention, development and production of synthetics have been little short of miraculous."

Left, TD1 Bill Wilburn checks a circuit on the E-2C instructor console while the steady hand of TD1 Charles Woofers tests computer circuitry. Below, a TD adjusts the electronic warfare simulator at the Naval War College. Right, TD2 Edward McDaniel monitors the electronic countermeasures scope while TDAN R. G. Rogers checks the sonobuoy parachute load in the S-2F simulator at FAETUPac.



These miraculous synthetics needed the care of trained specialists and led to the development of the Tradevman rating in 1948. To keep pace with the growing sophistication of Naval Aviation, the TDs would need to train airmen to become technicians and operators — then engineers and weapons systems managers. Navy flyers would ultimately become a management team, responsible for system implementation and operation.

By the end of the Korean War, Navy simulators bore little resemblance to the "blue boxes" of WW II. The day of the mass-produced, general-purpose flight trainer was nearly over.

Digital computers were an improve-

ment over analog computers. They stored more data, retrieved more types of data, retrieved it faster and enabled the simulator to react with startling realism.

The Tradevman instructor's station was being equipped with complex electromechanical computers, automatic graphic flight recorders, simulated radio aids and navigation equipment for specific aircraft types. Modern trainers placed students in virtually any tactical situation by storing land-mass data on the entire world.

Although the first trainer sold to the Navy for \$1,500, modern simulators range in price from a \$50 thousand ejection seat to a \$20 million electronic warfare range. And with

a present inventory of over \$600 million, it's still less expensive than learning aboard operational ships and aircraft.

Today's pilots, NFOs and maintenance men are screened to be good enough for Navy planes before their skills are honed to match their aircraft's potential. Then they are schooled with closed-circuit TV and computerized response consoles in ultra-modern classrooms; a "learn-simulate-fly" cycle adds tailored blocks of knowledge, in advancing tiers, to a

Left, TDAN Mary Needles operates a P-3 Orion trainer at FAETULant. Right, TDAN John R. Fordham sits at a helicopter instrument training device control panel.



pyramid of mastery in every aspect of aircraft operation.

The Trademan puts pilots and crews through a realistic wringer where communications, navigation and specific oxygen systems are exact. Lighting and cloud cover are simulated while engines are heard to start, taxi, take off, fly and land through audio-oscillators and sound generators.

Operating a duplicate set of instruments, indicators and recorders, a Trademan can accentuate mission realism by manipulating flight environment and tactical controls. An independent tactics flight generator permits him to initiate heading, altitude and ground speed for tactical problems. Once flight conditions have been fed

into the computer, the TD can enliven the exercise by adding unexpected conditions or malfunctions at any point in the problem.

The Trademan teaches instrument flight procedures, navigation, voice procedures and civil air regulations. He operates several different types of radar, antisubmarine and electronic warfare trainers. He is a flight safety instructor, using rapid decompression chambers, ejection seats and the Dilbert Dunker ditching device.

A typical TD's day might look like this:

0600 — Day crew arrives. Load flying tape into computer and check trainer. Correct discrepancies or log for instructor briefs.

0700 — Building cleanup and coffee on. Pull student cards and place in instructor room.

0800-1600 — First student arrives. Instructor briefs on type of hop and answers any questions. Hops all day. TDs not instructing attend rating and digital instruction program until 1000. Pull repair units for workbench overhaul and order supplies.

1600-2400 — Night crew finishes any scheduled hops and works off discrepancies noted during the day. Preventive maintenance on all systems. Clean, test and check completely.

The TD is normally assigned to a fleet aviation specialized operational training group or he may be assigned to an operations training division if





Tradevman flight safety instructors train pilots in the Dilbert Dunker.

his air station doesn't have a FASO detachment. The Tradevman may also serve at submarine fleet ballistic missile training facilities at New London, Conn.; Charleston, S.C., and Pearl Harbor, Hawaii, or a weapons control system simulator at Dam Neck, Va., or the naval training equipment center at Orlando, Fla.

There are TD billets at Norfolk, Va., Pensacola, Fla., San Diego, Calif., and Pearl Harbor, Hawaii, in education and training support centers and in a support detachment.

Wherever he serves, the Tradevman





works with projection equipment, training techniques and training aids. He deals in records and reports and reads all the publications of his profession. He understands physics, aerodynamics, instrument flights, air traffic control, communications, charts and navigation. He handles mechanical, electrical and electronic maintenance while working with ship systems and aviation physiology.

The Trademan knows all the synchro, servo, visual, motion and computer systems which make up a modern, state-of-the-art weapons system trainer. He can operate and maintain devices as diverse as their many modes and he knows the complexity of their computerized innards like the back of his capable hands.

Below, TD3 Roy Dupont instructs Ens. Thomas Rowe in the TF-9J Cougar trainer at the NAS at Kingsville, Texas.



DH-4s over Momotombo

The Nicaraguan airmail stamp used in the article "Rescue, Relief and Refugees" in the July 1975 issue of *Naval Aviation News* has an interesting background.

In 1927, Aircraft Squadrons, Second Brigade, was stationed at Managua, Nicaragua, and a ham radio station was operated by the squadron communications officer, Capt. Francis E. Pierce. It was used by the C.O., Maj. Ross E. Rowell, to pass urgent messages to the officer in charge of aviation at Headquarters Marine Corps. Communication would be established with a ham station operator in Washington, D.C., who would telephone Maj. Edwin H. Brainard. Often in less than half an hour the matter would be resolved with the answer being handled in the same manner.

A distinctive design was desired for the QSL card (written verification of the call) which was mailed to each ham station the squadron communicated with. It was not possible to get two DH-4s to fly correctly with the volcano Momotombo in the background, so the photographic officer, 1st Lt. Hayne D. Boyden, USMC



Courtesy Major Elliott

(Brig. Gen., Ret.), made a composite picture glueing two prints of the same aircraft on a print of the volcano and then adding the call sign of the station. These cards were circulated for several years until the station in Nicaragua was abandoned.

When a design was being chosen for the first Nicaraguan airmail stamp, this picture was chosen and five values were issued in 1929. To the philatelist they are identified by Scot catalog number C 4-6 and C 18-19. This same design, with numerous changes in value, overprinting, errors, etc., continued to be issued until 1937. Close examination of the stamp shows it to be a DH-4B-1 of VO-1M,

which evolved into today's VMA-231, flying the *Harrier* at MCAS Cherry Point, N.C.

In 1939 a series of five stamps was issued by Nicaragua to commemorate the goodwill tour of Will Rogers to Managua after the 1931 earthquake. One of these stamps shows a group of Marines with the famed humorist. Lt. Boyden is the Marine officer on the left in the group.

This series of airplane stamps is unique in that it is the only known foreign stamp to portray an identifiable U.S. military aircraft. It is also a tribute to the manner in which a military force conducted itself while operating in a foreign country.

Maj. John M. Elliott, USMC (Ret.)

Addendum

Information on obtaining JMEmS and JTCG/MEs ("Books for Bombers," August 1975, p. 39) was not complete. The following should be noted:

Requests by Navy activities for Air-to-Air and Air-to-Surface manuals shall be submitted by letter to Commander, Naval Air Systems Command (Air-52013E), Department of the Navy, Washington, D.C. 20361, giving justification of need. Requests for Surface-to-Surface and Surface-to-Air manuals shall be submitted by letter to Commanding Officer, Naval Ordnance Station (Code 804), Louisville, Ky. 40214. A completed DD Form 1348 addressed to Commanding Officer, Navy Publications and Forms Center, 5801 Tabor Ave., Philadelphia, Pa. 19120, must be forwarded for each manual requested, in accordance with the current NavSup 2002 (from TH 61-1-2, *Index, Special Technical Handbooks for Joint Munitions Effective Manuals (JMEM) and Related Publications*, of June 18, 1975).

VP-46

I agree wholeheartedly with LCdr. Fahs' letter in the April 1975 issue concerning your omission of reference to P5 squadrons at Sanglely Point (August 1974). However, his letter does omit VP-46 from the squadrons he was familiar with at that station.

In 1954 I was a Martin rep attached to VP-46 for a tour at Sanglely. We flew P5M-1s there and, in my mind, P5Ms and Sanglely are inseparable.

Bob Evans
3511-G Weimberly Lane
Winston-Salem, N.C. 27106

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One of the Navy's newest air facilities also has one of the newest CNO-approved insignias. The Hachinohe Horse is the main theme of the insignia of Naval Air Facility, Misawa, Japan, commissioned on October 1.

Hachinohe was the eighth fortified port city established for the protection of the Northern (Tohoku) area of Japan. It was responsible for the area which encompasses the present Misawa air base. Misawa was originally established as an Imperial horse farm in 1623. Later it became an army post, a navy air base and, finally, a U.S. Air Base after WW II.

The history of the Hachinohe Horse goes back to the year 1220 (the second year of the Shokyu era) when a horseback archery contest (yabusame) was established at Nejo, Hachinohe City. The contest has been held once each year since then. Soon after the establishment of the contest, local artisans began producing the Hachinohe Horse in color and design, symbolizing decorations and armor.

The Hachinohe Horse is recognized throughout Japan as the symbol for the Tohoku area, typifying the frontier spirit of Northern Japan. It is considered appropriate to represent NAF Misawa, the northernmost operational naval air facility in Japan.

Captain W. S. Myers is commanding officer of the new air facility.

