



Starboard wing up, port wing down, this North American SNJ-4 trainer peels off, showing its understructure in detail.

# Aviation Training and Expansion

## Part 2

By Capt. Matt Portz, USNR(Ret.)

*This is the second of a two-part story by retired Captain Matt Portz, which reviews the Navy's pilot training within the context of the wartime and national events as seen through the eyes of some who lived at the time. Capt. Portz served in a destroyer before entering flight training and then was a Primary and instrument flight instructor. He is currently vice president of Aviation Consultants, Inc., of Los Angeles, Calif.*

**T**he pilot training program was changed again in January 1943. Flight preparatory schools were opened at 20 colleges and universities where cadets began their training with three months of academic work, and then went on for two months of elementary flight and ground instruction under civilians at War Training Service (WTS) schools, as the Civil Aeronautics Authority (CAA) Civilian Pilot Training Program

had been renamed. They continued on at the preflight schools for three months and then on to Primary. The Great Lakes steamer *Wolverine* had been commissioned the previous August, and sister ship *Sable* in May 1943, to provide flight decks in submarine-free Lake Michigan for carrier training of pilots and deck crews. By now, Naval Aviation had more than 17,000 aircraft, 26,600 pilots, 23,300 nonpilot officers, and 156,000 enlisted personnel.

On other war fronts, new *Essex*-class carriers were seeing action in 1943, and the Grumman F6F *Hellcat* entered combat. The Germans had surrendered at Stalingrad, two attempts by German officers to kill Hitler failed, Japanese resistance ended on Guadalcanal, and Admiral Yamamoto was shot down. Italy was invaded by the Allies and the Italians surrendered and declared war on their erstwhile Axis partners. Roosevelt, Churchill, and Stalin met at Tehran and agreed that the invasion of France would get first American and British priority.

At the end of 1943, the Naval Air

Training Command, under the Chief of Naval Operations, was established with headquarters at Pensacola, Fla., to direct all Naval Aviation training of the Primary, Intermediate, and Operational air training commands. At this point in the war, naval aviation cadets had completed almost a year of training before reaching Primary. During the first four months, a prospective cadet, as a seaman "tarmac," did apprentice chores at an air station, theoretically, to bind him emotionally to Naval Aviation and, practically, to make him unavailable for the draft.

Gaining cadet status, he moved to a flight preparatory school at one of 17 (formerly 20) colleges for three months of military indoctrination, physical training, mathematics, physics, basic navigation, and aircraft and ship recognition. Next came 8 to 12 weeks at one of the now 92 colleges and civilian flight operators with CAA-WTS schools, which gave him 35 to 40 hours of flight instruction in light aircraft. Most of the inept were eliminated here; the rest were exposed to three months of physical training at the North Carolina, Iowa, Georgia, or California preflight schools.

Now came 11 to 14 weeks and 90 to 100 flight hours of Primary, usually in a Boeing N2S "Stearman," officially the *Kaydet*. Precision flight was drilled into him for the necessary transition to

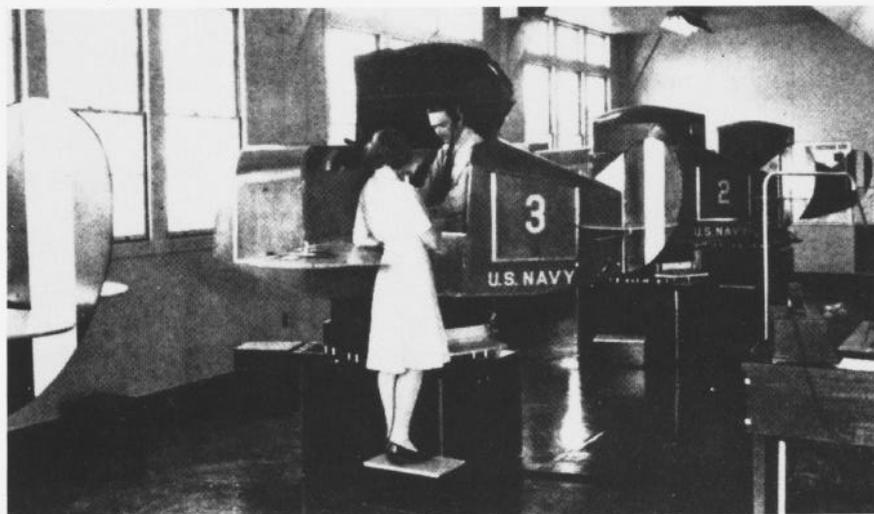
heavier and more powerful operational aircraft. After learning to handle an airplane in Primary, he moved to 14 to 18 weeks and 160 more flight hours in Intermediate at Pensacola or Corpus Christi, Texas. Time in higher horsepower trainers and instrument flight came before he specialized in carrier, multiengine sea or land, or observation-type aircraft designated, respectively, CV, VPB or VB2, or VO/VCS.

Intermediate trainers were the Vultee SNV *Valiant* (commonly called "Vibrator"), North American SNJ *Texan*, Consolidated PBV *Catalina*, Beech SNB *Kansan*, and Vought OS2U *Kingfisher*. Prior to graduation and commissioning, students selected as carrier pilots flew the SNJ while specializing in tactics for fighters, VF; torpedo-bombers, VTB; or scout/dive-bombers, VSB. Assignment of new

pilots to type squadron was based on "needs of the service" as well as his preference, with far more weight on the former.

Following Intermediate were two months of Operational training at one of 17 naval air stations along the Florida, Georgia, and Carolina coasts to give new Naval Aviators a 100-hour taste of combat-type aircraft as weapons. Among operational aircraft were the Grumman F4F, or General Motors FM-2, *Wildcat*; Grumman F6F *Hellcat*; Vought F4U, or Goodyear FG, *Corsair*; Douglas SBD *Dauntless*; Grumman TBF, or General Motors TBM, *Avenger*; Curtiss SB2C *Helldiver*; Lockheed PV *Ventura*; Consolidated PBV *Catalina*; and Martin PBM *Mariner*. Those destined for carrier assignment qualified aboard *Wolverine* or *Sable*, although a few used

**Shots from 1944:** right, Link trainers at NAS Livermore, Calif.; below, SNV-1, NAS Livermore; and below right, Howard NH-1 instrument trainer.



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the escort carrier *Charger* in the Norfolk, Va., area. From here, it was on to a squadron where training was always a constant.

An unforgivable sin in Navy flying then (and now) was "flathatting." Low-altitude buzzing over a girlfriend's house or exuberant low passes down a highway were bad news. Hot pilots liked to be seen and thought themselves appreciated by the populace. Those stupid enough to make a second pass frequently wound up on report. Those with no luck at all became fatalities after encounters with unseen wires, trees, and ends of box canyons.

In an attempt to control flathatting, some air stations placed stories in newspapers asking citizens to report the time, place, and number of any sighting where the plane's large identification numbers could be read. While this system may not have eliminated sinning, it definitely generated fewer second passes.

Vineyards covered much of the land near one California base; sheep

grazed on nearby hillsides where hot shots sometimes buzzed the animals. One jockey with a strange sense of humor forced a thousand men at another base to hit the deck during a Saturday morning inspection. A court martial gave this chap the rest of the war to contemplate his folly with a mop rather than an aircraft's control in his hands.

Many farmers and ranchers accepted property damage by aircraft as a contribution to the war effort. Aviators not on an immediate flight schedule were sometimes detailed by the station's legal department to pay a public relations visit to an injured party, who was asked to sign a conditional damage release. My destination on one such detail was to the Concannon Winery in the Livermore, Calif., valley where a fatal crash had torn up rows of choice vines. The lane wound through the vineyard to an old California-style house.

A servant answered my knock and ushered me into the home's cool interior. There I was received by a fatherly gentleman, Joseph Concannon, son of

the vineyard's founder, who questioned me about my knowledge of wine. When told I knew nothing about it, he suggested that I might want to sample his product. Cheese, crackers, and several varieties of delicious white wine were brought out. While we sipped, the vintner explained about the varieties of grapes used in wine making. The grapes' history and the manufacturing process were fascinating. So was the taste.

Only when this pleasant activity came to a natural conclusion did Mr. Concannon ask, "Now, son, where is that paper you want me to sign? We lost a few vines. They can be replaced, but those two young men killed in that crash can never be." I left with a signed document and warm feelings which last to this day for Mr. Concannon and his art.

Information about the numbers of training accidents as compared to those in the fleet is unavailable. Probably there were more of the former. Overall Navy flight statistics for 1945 are available and the numbers are impressive. That year, 15.5-million



Cadets and instructors check the flight assignment board at NAS Livermore, 1944.

hours were flown. More than 13,000 major accidents occurred; half resulted in destroyed aircraft. The more than 3,000 fatalities were at the rate of 20.5 per 100,000 hours flown. Current statistics show Navy flying as being much safer. In the 2,238,777 flight hours in 1989, there were 55 Class-A accidents (involving fatalities or damage of at least \$1 million) with 54 aircraft lost and 78 fatalities – a rate of only 2.46 per 100,000 hours.

Flight students lived in barracks, and by the rules, which read in part: "Cadets are to form details and return to barracks following noon chow. It is mandatory that cadets fall in details of four men or more. Cadets are required to attend all musters for meal formations. They must be in full uniform and will be marched to the mess hall at all times. Caps off in cadet regiment. Hands out of pockets at all times. Cadets are urged to attend Divine Service held in the chapel each Sunday; 0630 and 0830 Roman Catholic mass; 1000 Protestant divine services. Cadets are required to have regulation haircuts. Cadets will use the barber shop supplied by Ship's Service." There were dozens of others.

The otherwise well-disciplined life of flight students was interrupted occasionally by juvenile high jinks. One character followed a regular evening routine – a before-taps shower followed by a naked run through the barracks screaming the Tarzan call. Reaching his upper bunk, he'd swing from a handy pipe into his sack.

One evening during the shower phase, his barracks mates replaced the basic springs with light twine, warned the man in the bunk below, and waited. Right on schedule came the naked dash, the Tarzan yell, the swing into the sack ... and crash. Some pleasures were simple then.

Women Appointed for Volunteer Emergency Service, WAVES, served on most training bases in about every kind of nonflying job. They did their jobs as well as the men. WAVES also served on the "Stearman" flight line. That aircraft's engine was started by cranking an inertia starter by a person standing on a wing from where the cranker's posterior pointed directly at the instructor and student. This fact

seldom went unnoticed when the cranker was female. Many romances were observed to blossom on the flight line.

Starting procedure required the fuel valve to be on and the engine primed. When the cranker's muscles got the starter to speed, crank handle was removed, ignition thrown on, and starter engaged. If the engine didn't start immediately, the probable cause was a cockpit goof. Such trouble was minimized by the offending cadet cranking during the next start attempt.

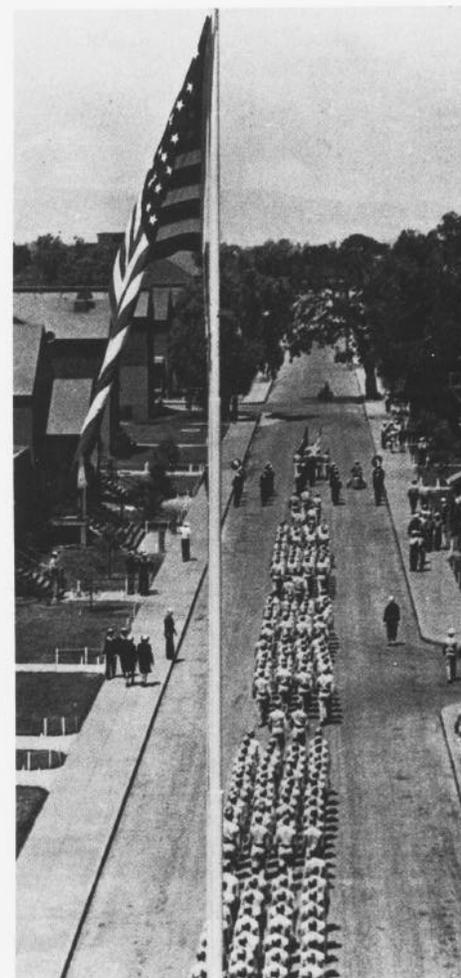
The Marshall Islands were occupied with support from six heavy and six light carriers in 1944. Carrier strikes against Japanese-held islands intensified, and Navy planners fixed total pilot output for 1944, 1945, and 1946 as 20,000, 15,000, and 10,000. The Chief of Naval Operations issued plans to make drastic reductions in pilot training. Some students in preflight and earlier training stages were to be transferred to other duties. Enough were retained to maintain a preflight course expanded to 25 weeks. So called "deselection" and voluntary withdrawal from flight training began in June, the month of the Normandy landings in Europe and the beginning of the Mariana Islands campaign in the Pacific. These reductions brought an end to the CAA-WTS and flight preparatory school phases of pilot training, and release of a number of training stations in September.

Before these changes began, the Naval Air Primary Training Command consisted of Naval Air Stations (NASs) at Bunker Hill, Ind.; Dallas, Texas; Glenview, Ill.; Grosse Ile, Mich.; Hutchinson and Olathe, Kans.; Livermore, Calif.; Memphis, Tenn.; Minneapolis, Minn.; New Orleans, La. (instructors school); Norman, Okla.; Ottumwa, Iowa; and St. Louis, Mo. Total aircraft numbered almost 3,600 and personnel, including students, 46,700.

At the same time, the Naval Air Intermediate Command included the Naval Air Training Centers at Pensacola and Corpus Christi; as well as the instrument instructors school at NAS Atlanta, Ga. The Pensacola cen-

ter included Naval Auxiliary Air Stations (NAASs), Barin, Bronson, Corry, Ellyson, Saufley, and Whiting fields. The center at Corpus Christi consisted of NAASs Cabaniss, Chase, Cuddihy, Kingsville, Rodd, and Waldron fields. Command aircraft numbered 4,200 and personnel, including students, almost 73,000.

The Naval Air Operational Training Command in March 1944 comprised NASs Banana River, Daytona Beach, Deland and Fort Lauderdale, Fla., and Beaufort, S.C.; NAAS Cecil Field, Fla.; Marine Corps Air Station, Edenton, N.C.; and the carrier qualification unit at NAS Glenview, Ill. Also in the command: NAAS Green Cove Springs, Fla.; NASs Jacksonville, Melbourne, Miami, Sanford and Vero Beach, Fla.; and St. Simons Island, Ga. (radar school). Other stations were the Naval Air Navigation School,



Marching cadets at NAS Livermore in 1944.



Author Matt Portz, then a Ltjg., posing with a Waco UPF-7, Lockport, Ill., 1943.

Shawnee, Okla. and NAAS Mayport, Fla. Command aircraft numbered more than 2,900, personnel almost 54,500.

More than 48,000 pilots were on Naval Aviation roles in 1944, as well as 31,000 nonpilot officers and 275,000 enlisted personnel.

Reassignment of missions of a number of training bases in 1944 should have signaled that the need for pilots was winding down. Those of us instructing in the system didn't read the signs. Perhaps we could be excused: fighting in Europe and in the Pacific was at its bloodiest. Japanese resistance on Iwo Jima was crushed by the Marines in March 1945; American fighter planes flew from airfields in Japan's front yard; our high-speed carrier task forces operated at will; the Philippines were in our hands; Boeing B-29 *Superfortresses* were incinerating Japanese cities; and the invasion of Okinawa had begun. In Europe, U.S. Army troops crossed the Rhine at Remagen into Hitler's disintegrating Third Reich. Naval Aviation now num-

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bered 41,000 aircraft, 60,000 pilots, 33,000 nonpilot officers, and almost 338,000 enlisted personnel.

Attrition among Navy flight students had been increasing by plan for a year. With the end of the war in sight, cadet washout rates climbed. Granting of extra instructional time to those who flew down-checks was severely restricted. Extra instruction to smooth out flight deficiencies had been routine. No more; things had changed drastically. Many who earlier would have made it, did not. Flight or ground school, psychological or medical unfitness, or any of a dozen reasons caused washouts.

Before the axe fell on the hapless, his record was reviewed by a board of ranking officers whose recommendations were usually approved. Those eliminated, depending on the individual's background, went to officer or aircrew training. The few who had held ratings or rank before becoming cadets normally returned to their former status.

Events continued to overtake flight instructors like me. In early May, the base shifted to a work schedule of 6 days on with Sundays off, rather than the more strenuous 10 days working and 2 days off. On May 7, 1945, the Germans surrendered to General Eisenhower at Rheims. V-E Day was observed the following morning by the executive officer reading us an expression of gratitude from our national leaders for victory, and of the determination to quickly defeat the Japanese in the Pacific. I flew as usual with cadets that day, but within a week had orders to a "refresher" course to prepare for return to the fleet. The "refresher" turned out to be a holding pattern until it was clear whether those like me would be needed against Japan. Replacement pilots on hold were experienced, young, and eager.

Not until years later when top secret war plans were declassified was the holding pattern understood. The Joint Chiefs of Staff had plans for the invasion of Kuyushu on the first of November 1945, and four months later the Tokyo Plain. Some 2,700 ships, more than 100 of them carriers, would participate.

By now, most realized the war was nearing an end. Hiroshima was atomized by the bomb on August 6, 1945, dropped from the B-29 "Enola Gay," flown by the same Colonel Paul Tibbets with whom I had hitched a ride in 1944 when returning from instrument instructors school at Atlanta. The bomb hit Nagasaki August 9, most hostilities ceased August 14, and the surrender was signed aboard *Missouri* September 2.

World War II had ended. Demobilization was rapid. Within a few months, most Naval Aviators went home to civilian life, some stayed in the Navy, and many went into the Naval Air Reserve. During the war in Korea that came in five years, fleet carrier air groups, by June 1951, found that every third air strike against the Communists was flown by a reservist. *Princeton*, *Boxer*, and *Bon Homme Richard* were in action with air groups of 50, 90, and 100-percent reservists.

But that is another story. This one ends here. ■

### 50 Years Ago – WW II

October 5: The Secretary of the Navy placed all divisions and aviation squadrons of the Organized Reserve on short notice for call to active duty and granted authority to call Fleet Reservists as necessary. On the 24th the Bureau of Navigation announced plans for mobilizing the aviation squadrons, which called for one-third to be ordered to active duty by 7 November and all by 1 January 1941.

October 23: Within the Atlantic Squadron, an administrative command was set up for carrier aviation entitled, "Aircraft, Atlantic Squadron."

October 24: An administrative command for patrol aviation in the Atlantic Squadron was set up under the title, "Patrol Wings, Atlantic Squadron."

October 28: The Chief of Naval Operations reported that aircraft with some form of armor and fuel protection were just beginning to go into service use, and that within a year all fleet aircraft, except those assigned Patrol Wing 2, would have such protection.

*Next issue: Technical development before the war*