

**Air Force and Navy student pilots win their wings side by side in consolidated primary flight training.**

# Training Together

By John A. Tirpak, Senior Editor

**G**REEN flight suits tend to look alike, especially at a distance. Look more closely, however, at the pilots and trainees at NAS Whiting Field, Fla., and you will see Air Force silver wings on some flight instructors and on the skipper of the Navy's training squadron VT-3.

Then go to the Air Force's 35th Flying Training Squadron at Reese AFB, Tex. The commander wears the gold wings of a naval aviator, as do some of the instructors. Some of the students are Navy ensigns.

This is not a mere exchange program. The flyers in these two squadrons constitute the first wave of a consolidated primary flight instruction system for the Air Force and Navy. The 35th FTS and VT-3 are prototype units for the system. Eventually, such units will provide a common, eighty-nine-hour, basic course for student pilots. After taking the basic course, aircrews will get specific training to learn the special skills needed for their service's mission.

Unlike most of the "jointness" initiatives launched since the defense drawdown started in earnest five years ago, the joint flight training program is not aimed primarily at saving money



Photos by Randy Jolly

*Learning how "the other guys" train their flyers is an ideal way to develop "better fighting skills in the battlespace," say officials from the joint USAF-Navy pilot training program. For now, the primary aircraft used in the program are USAF's T-37 Tweet (opposite) and the Navy's T-34 Mentor (above).*

or consolidating force structure. Rather, the goal is to generate operational benefits; the Pentagon sees an advantage in having pilots who are well versed in how "the other guys" do business in airplanes.

"The goal is better fighting skills in the battlespace," explained Maj. Gen. Donald L. Peterson, director of



CAUTION  
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HANDLE  
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CAUTION: DO NOT OPERATE  
DECLUTCH HANDLE WHEN CANOPY IS  
OPEN UNTIL CANOPY IS RESTRAINED  
AND CAN BE LOWERED GENTLY.

MANUAL  
CANOPY  
OPERATION  
1. OPEN DOOR  
2. PULL HANDLE  
3. LIFT CANOPY

**DANGER**  
THIS AIRPLANE CONTAINS  
EJECTION SEATS,  
CANOPY REMOVERS  
AND EXPLOSIVE  
CHARGES. SEE  
T.O. 2 FOR  
INSTRUCTIONS.





**Both this T-37 and its home base, Reese AFB, Tex., are not long for the Air Force. The T-37 will be replaced by the JPATS aircraft shortly after the turn of the century, and Reese turned up on the 1995 base realignment and closure list.**

Plans and Operations for USAF's Air Education and Training Command (AETC), Randolph AFB, Tex.

General Peterson added, "The lessons we learned from [Operation] Desert Storm—in the cooperation between ourselves and our allies—made us believers" in the value and necessity of bringing jointness all the way down to primary aircrew training. "I was in fighters in the Pacific and in Europe," he said, "and it was clear to me that we had more commonality with our allies than with our own sister service. This will help bring us closer together."

### "Grow Up Together"

Since the 1991 Persian Gulf War, the Defense Department has conducted two analyses of the roles and missions of the armed services, and both ended up recommending further consolidation of fixed-wing pilot training. The steps were strongly recommended as a means of promoting an "intimacy with other-service procedures and techniques," General Peterson said.

The student pilots "grow up together and learn to fight together," he noted. "In many cases, an Air Force officer with very little active duty will spend his entire first assignment . . . with the Navy. So he will understand the sister service's techniques, culture, and institution very well."

The effect spreads "beyond the lieutenants and ensigns," General

Peterson continued. "Planning this out has brought us a lot closer [to] the Navy. There have been a lot of good ideas on both sides."

Though the goal is to create a common undergraduate pilot training (UPT) program, General Peterson emphasized that the objective is not to homogenize the services, or the culture of military aviation, but to strengthen mutual understanding and draw the best methods from both.

Capt. F. Brown Word, the Navy liaison officer to AETC, said good

ideas have already been picked up through the cross-training.

For example, said Captain Word, "the Navy likes the strong commitment in the Air Force to standardization" of flight instruction. "We like the way the Air Force grades [student pilots]," he went on. "It's very objective grading and gives a better picture of how a student progresses. We've taken that [lesson] away from this already."

He believes that, on their side, "the Air Force folks are seeing ways to be more flexible and less lockstep in their methodology. They are bringing more flexibility to their approach" to instruction, he said. "We've learned there are pluses to each system."

Navy and Air Force officials spent two years studying their services' basic flight instruction requirements and writing a joint training syllabus acceptable to both. The Air Force had separate screening and training programs, and the training element was in two parts—primary and advanced. The Navy's single program included screening, as well as an "intermediate" phase. The joint syllabus is still evolving as experience is gained with each class and with each of the two primary aircraft, USAF's T-37 Tweet and the Navy's T-34 Mentor.

"The joint syllabus is a little closer to [that of] the T-37 than [that of] the T-34," a program officer observed, "but they were pretty close to begin with."



**As the joint syllabus develops, students and instructors at the 35th Flying Training Squadron at Reese (above) and VT-3 at NAS Whiting Field, Fla., glean valuable concepts from each service's methods and culture.**



## Two Ways of Wining

While the Navy screens its pilot candidates in its early T-34 instruction phase, the Air Force uses the T-3A Firefly to weed out those not likely to succeed. "The Navy tries to teach flying skills and build on them . . . right away," noted the program officer. "The Air Force doesn't do that. The Firefly is not a trainer. We use it to find out who the right people are to send on to flying training. . . . It reduces attrition in the more expensive airplane."

The first pilots have come through the joint primary program. Compared to those pilots on the regular pilot training track, they are doing "equally well," General Peterson said.

Syllabus development has been going on in concert with the development of the Joint Primary Aircraft Training System. Plans call for JPATS to provide common hardware and courseware to complement the common flying schoolhouse.

The centerpiece of the JPATS program is the aircraft, which will replace the Navy's T-34 turboprop and USAF's T-37. Raytheon's Beech Aircraft Division won the JPATS competition last June with its variant of the Swiss Pilatus PC-9, called the Beech Mk. II. The company will serve as the aircraft producer and system integrator. Protests of the award by Rockwell and Cessna were resolved last month, clearing the way to award Beech the contract for what ultimately will be a \$7 billion program. Plans call for 372 planes for USAF and 339 for the Navy.

Beech will be the "single point of contact" with the government for all JPATS procurement and as system integrator will choose a subcontractor to supply what is known as the Groundbased Training System. The company expects to award a GBTS contract—covering simulators, course materials, and all other training aids—sometime this fall.

Barring any program delays, the first JPATS-equipped USAF squadron will begin operations in 2001. The first such Navy squadron will begin in 2003. The final Air Force squadron will be equipped in 2011, and the Navy's in 2017.

Initially, delivery of the aircraft was to be the pacing factor for the speed at which the services converted squadrons to joint status. Thus far, however, the joint program has worked



Staff photo by Guy Aceto

**Before USAF begins training its flyers, it sends them up in the T-3 Firefly (above) to determine which candidates are likely to succeed as pilots. This "reduces attrition in the more expensive airplane," says one program officer.**

so well that the pace will be accelerated, regardless of the JPATS delivery schedule, General Peterson said.

The T-37, he said, is "working well" in the new joint training operation, adding, "We don't have to wait for JPATS" to convert units. Likewise, despite its advanced age, the Navy's T-34 can handle the requirements of the program until it is relieved by JPATS.

## Greater Optimism

General Peterson said that the T-37 will last until it is replaced by the JPATS airplane "without too many" modifications. It may need some structural enhancement, but an avionics overhaul or engine change is not deemed necessary to get it to last another fourteen years.

This prediction is considerably more optimistic than the Air Force's projections during the 1980s, when the service was trying to convince Congress to fund the T-46. That aircraft program was canceled as a result of technical and budget problems.

By 1998, the Air Force and Navy will be exchanging roughly 200 students annually, according to current service plans. Though that is "not a small number," a program official said, "it means that a lot of pilots are going to be trained strictly within their own service as this progresses. . . . We are doing this gradually, and the joint experience will begin to be

more common among the operational crews."

The JPATS aircraft will enable students from the Navy and Air Force to receive nearly identical training, and this will yield cost savings as logistics and support tails are consolidated. The JPATS aircraft is also expected to be cheaper to operate per flying hour than the mix of aircraft now used. Thus, even though saving money wasn't a primary aim of the joint program, it's a "good by-product," General Peterson said.

He also noted that working with the Navy on the JPATS aircraft selection—making sure that the aircraft picked would serve the purposes of both services—was a valuable exercise in itself.

"The requirements and plans came together on JPATS," General Peterson said. "We built a relationship, . . . and it was a good lesson for us all."

The transition to JPATS will be slow—a squadron or two every two or three years—because of limited funds for equipment purchases, so there will be no sudden, neck-wrenching turns in Navy or Air Force flying culture. As the aircraft are received and shaken out, the syllabus will be refined so that each service gets aviators ready to move on to advanced training.

Reese AFB appeared on the last base realignment and closure list, so USAF plans to start joint pilot train-





## The Aircraft

Contractor .....	Beech Aircraft Corp.
Basic design .....	Pilatus PC-9, modified
Production site .....	Wichita, Kan.
Propulsion .....	Turboprop
Cost .....	\$7 billion (budgeted)
Planned run .....	711 (USAF, 372; USN, 339)
Predecessors .....	USAF T-37B, Navy T-34C
Advances .....	Missionized ejection seats, improved birdstrike protection, electronic flight instrumentation, digital cockpit display, pressurized cockpit
First flight .....	December 1998
Squadron IOC .....	USAF, 2001; Navy, 2003
Note .....	Cessna and Rockwell protested the Beech contract award, but the choice has been upheld by the General Accounting Office.

the two; whenever a Navy officer is in command, a USAF officer will serve as the top deputy and vice versa.

At the request of participating countries, the Euro-NATO Joint Jet Pilot Training program will not be affected by the Air Force and Navy move toward consolidated training.

## Empty "Bank" Account

The demand for pilots in the active Air Force has started to increase after several years of downsizing. During that period, more pilots were produced than could be accommodated in aircraft. Some of these pilots were awarded their wings but went directly to nonflying jobs. When a flying opportunity arose, they were recalled from the "pilot bank," given refresher training, and sent to their operational aircraft.

The last "banked" pilot will soon be in training for an operational airplane, and the UPT production rate is on its way up. In 1994 and 1995, about 500 active pilots graduated. In 1996, the figure will be 525, and in 1997, 650 will be needed.

The requirement is expected to peak in 2002 at some 1,100 pilots per year. With Guard, Reserve, and foreign trainees added, the production rate will be about 1,500 pilots per year.

Pilots are not the only rated members affected. All navigator/weapon system officer training is going joint, with navigator candidates to start at

ing operations at Vance AFB, Okla., in July. The next base likely to get a joint squadron is Laughlin AFB, Tex.

The Air Force and Navy divide the specialized training work, as well. Because the Navy operates more types of turboprops than USAF does, it is responsible for training all turboprop-bound pilots, such as C-130 crews. The basic turboprop training is done in the Navy's T-44 at NAS Corpus Christi, Tex. The Air Force trains all "heavy" jet pilots for the Navy; these pilots will fly the E-6 Take Charge and Move Out (TACAMO) aircraft, a variant of the 707, in its "tanker/transport" specialized track.

As they are created, each joint training squadron will be staffed roughly fifty-fifty with officers from both armed services. Leadership of the squadrons will rotate between



*The Air Force is set with the T-1 Jayhawk (above) to handle the tanker/transport end of its advanced training, and the Navy has the T-45 Goshawk for its advanced training. The Air Force will also stick with the T-38 until the 2020s.*

Staff photo by Guy Aceto



NAS Pensacola, Fla. "In some ways, the back-seater training is way out in front of the pilot training," General Peterson noted.

At Pensacola, students will get academics and airmanship basics in the T-34. After that, the navigator track "splits, like it does for pilots," General Peterson said. Those continuing on to be fighter back-seaters will continue at Pensacola, while those headed for "panel nav" positions, such as offensive systems operators on the B-1, go to Randolph AFB for further training.

General Peterson pointed out that the joint program is already well under way, but the navigator instruction program will be the last element to receive JPATS aircraft, with deliveries expected around 2017.

Helicopter pilot training is also changing. The Air Force is now sending helicopter pilots through UPT before dispatching them to helicopter training at the Army's Fort Rucker, Ala., facility.

"Our [helicopter] mission is different from the Army's," General Peterson observed. "We fly more on instruments. A good deal of our helicopter pilots end up in special operations. . . . and we find that that extra flying experience pays off."

Having a fixed-wing UPT education allows a helicopter pilot, later in his or her career, to return to the cockpit of a fixed-wing aircraft, the General said.

"We've brought back to fixed-wing some of the helo pilots. . . . and there's not a problem in them having to unlearn [habits]," he noted. "It's fairly transparent to them."

The Navy conducts its own helicopter training, and there are no plans to integrate with that training because "the Navy uses its helicopters differently" than the Air Force and the Army do, and little benefit can be derived from collocating or merging helicopter training with the Navy.

General Peterson said no serious consideration has been given to bringing Army fixed-wing pilots into the Air Force's UPT effort, despite the joint effort with the Navy.

"The Army has very little in the way of fixed-wing aircraft," he said. Though the Air Force does do some training of foreign pilots headed for the C-12 aircraft, "we're getting out of that." With the Army, "there's no



**Advanced training for the two services will not merge anytime soon because of their vastly different missions. For example, USAF pilots are rarely called on to make carrier landings as this T-45 is doing. But both sides are pleased with the effectiveness of joint primary training.**

common mission or platform," so joint pilot training has been deemed of little value.

### The Limits of Jointness

At present, the Air Force and Navy do not plan to merge their more advanced training tracks—bomber/fighter in the Air Force and fighter/strike in the Navy—because these sectors do not have operational aircraft in common, and the carrier-based mission is far different from the landbased mission.

The Navy has already made a considerable investment in its advanced trainer—the T-45 Goshawk, a variant of the British Hawk trainer—but the Air Force plans to stick with the T-38 Talon as its advanced trainer well into the 2020s, General Peterson said.

"Structurally, it's in pretty good shape," he noted.

The Pacer Classic program of structural upgrades has kept the T-38 in good repair, but soon it will be necessary to give it a substantive avionics upgrade to make it more like the "glass-cockpit" fighters and bombers for which it is supposed to prepare pilots.

The avionics upgrade will "get started in 1999," and the Air Force expects to convert 425 aircraft by "the 2004 time frame," General Peterson said.

"The transferability of skills" from the T-38 to operational aircraft "is

very important, and we feel this upgrade is critical to that," he asserted.

Among other improvements, the T-38 will get a head-up display like that found in most combat airplanes today. It will also get some structural replacements, such as long-erons and bulkheads. AETC is studying the possibility of replacing the ejection seats and canopies and re-engining the fleet.

Though the Air Force and Navy won't be merging advanced training anytime soon, current resistance to that step might change in the next decade, say some officers. Once the Air Force, Navy, and Marines field the Joint Strike Fighter—intended to be a common combat aircraft derived from technologies explored under the Joint Advanced Strike Technology program—a common graduate-level flying program may indeed emerge, General Peterson said.

Until then, the two services will have no combat aircraft in common, as they did not too long ago when both services flew the A-7 and F-4, so joint advanced training is not a near-term probability.

Already, however, the transformation of the way the Air Force and Navy do business has been substantial. The move toward joint aircrew training is "a big change from the way I grew up," General Peterson said, adding, "It's definitely a change for the better."