

FOR WORLD

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(?)th Anniversary
of ATC

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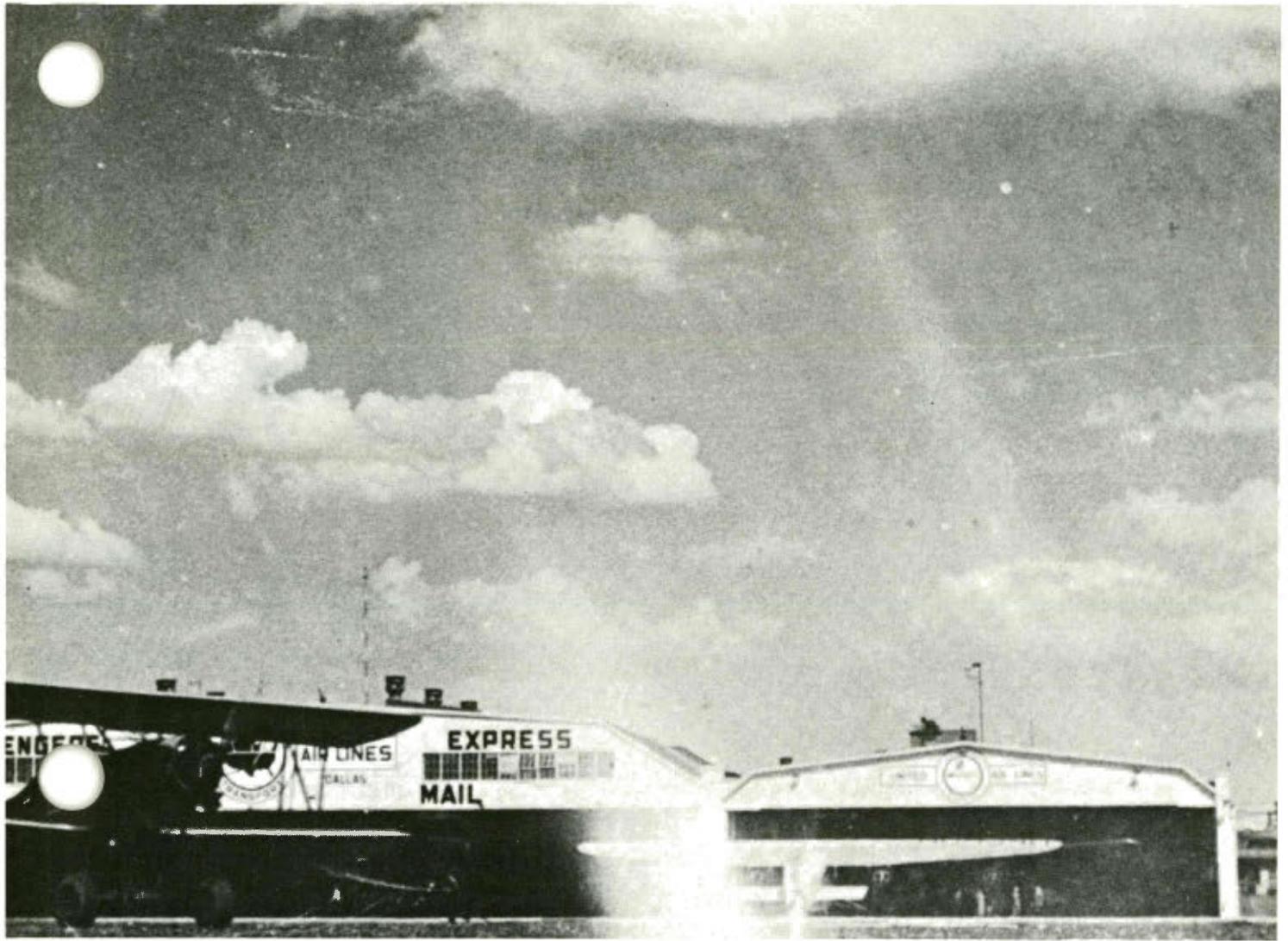
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The earliest government controller may have been this City of Chicago employee waving a "go" flag for a departing biplane at the Municipal Airport in 1931.

We may be celebrating the 50th Anniversary of air traffic control this year—we're not sure.

It's usually easy enough to date matters relating to technology; before a specific development or invention, certain happenings or actions are impossible. But events in history have a way of going undocumented and firsts



**The
Anniversary of ATC**



50th (?)

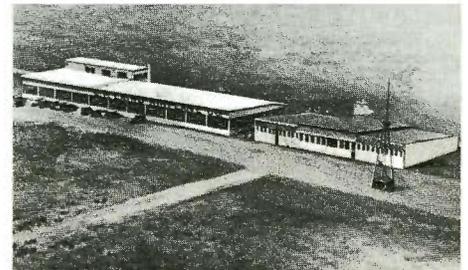
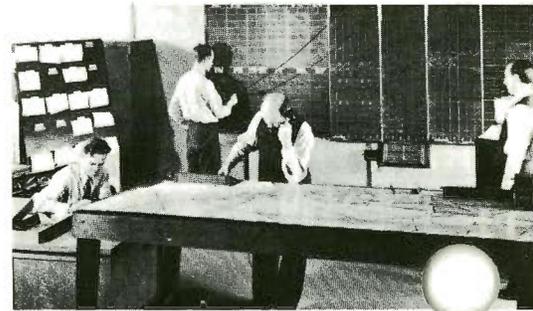


Lambert Municipal Airport in St. Louis hired Archie W. League to control takeoffs with flags at runwayside in 1929. In the summer, his equipment wheelbarrow was fitted with a beach umbrella to provide shade.

By 1933, Archie League was inside a St. Louis Tower using the more sophisticated sighted light gun and radio, when there was anyone listening.



The Newark Airway Traffic Center was the nation's first en route center in 1935. It was operated by representatives of four airlines.



The Aero Club of Illinois erected a 50-foot tower at its Ashburn Field, Chicago, in 1917. A wind sock was mounted at its top. Control consisted of the airport manager climbing a ladder to a "crow's nest" perch. Note that next to the "terminal" was the E. M. Laird Airplane Co., where Matty Laird built some of his famous planes. (See FAA World, September, page 17.)



Runway flagmen were replaced at Chicago Municipal Airport—now Midway Airport—by the tower over a terminal in 1931. The building is still in use for an Airway Facilities Sector office and city aviation department functions.

have to be qualified (Who discovered America first? Columbus? Leif Ericson? the Phoenicians?). It's true even of the relatively recent early days of aviation.

Probably the first official air traffic controller—that is, a person authorized to exercise control other than on private property—debuted in 1929 in the Midwest.

An unnamed City of Chicago employee was reported in the newspapers in 1929 to have been assigned to Chicago Municipal Airport as an "aerial cop." Armed with a flag, he stood at the end of a runway and signaled aircraft when it was safe to depart. A rule book spelled out the responsibilities of pilots and flagmen.

That same year, Archie League, later to become an FAA assistant administrator, pushed a wheelbarrow out to the runway at Lambert Field, St. Louis, each day, equipped with an umbrella, a chair, his lunch, a note pad and a pair of flags—a red one for *hold* and a checkered one for *go*.

FAA air traffic controllers still use a similar system at air shows where some older aircraft are not equipped with radios, but now they use paddles instead of flags.

Perhaps it's the word "official" that limits our perspective of the birth of air traffic control. Without it, we'd be hard put to fix a date for the origin of ATC, however. Then, again, one might speak of the birth of passive air traffic control when regulations on aircraft operations were first imposed.

When a mid-air collision occurred over Chicago's Cicero Field in 1912, possibly the nation's first, field manager Andrew Drew was reported to have set up some do's and don'ts for pilots using the field.

Most airports of the day originally had been racetracks, parks or farmers' fields, and most ultimately returned to those uses. Cicero Field was one of the first to be designed as an airport, and its operator, the Aero Club of Illinois, was very safety conscious and developed a set of rules and regulations.

In 1917, Charles Dickinson, millionaire seed merchant and long-time president of the Aero Club of Illinois, had a 50-foot control tower built at the club's Ashburn Field. Having purchased the land and paid for most of the improvements there, Dickinson saw a need for control of arriving and departing aircraft and set down a system of air traffic control that pilots were required to follow if they wanted to use the airport.

For a long while, rules were local ones. In 1911, Connecticut became the first state to regulate air navigation. By the time Federal regulations arrived on the scene in 1926 with the Air Commerce Act, only eight other states had done similarly. The gaps and the weakness of the state legislation even led municipalities the size of Nutley, N.J., and Kissimmee, Fla., to enact their own regulatory ordinances.

Forms of control and guidance for pilots had come from another direction, too, which provided a model for regulation in the future.

The Post Office Department began air mail service in 1918 and expanded it to a more practical transcontinental system in 1919 and 1920 and to day-night

service in 1924 with the installation of light beacons on the Chicago-Cheyenne, Mo., leg.

While other civil pilots in the United States could take up a plane with a few minutes of instruction on how to use the controls, airmail pilot applicants had to have 500 flying hours and had to pass qualifying examinations. Once hired, they were given periodic medical examinations. Their planes were given regular inspections and overhauled on a periodic basis. The emphasis on pilot qualification and ground support gave the Air Mail Service the best safety record of its day for any type of aviation activity.

Despite this progress, however, the pilot was still on his own in taking off and landing, until the flag-wavers came on

the scene at the end of the third decade of aviation. But flag-signaling was more effective for takeoffs than for landings, and it was useless at night.

What followed was a system of mounted light guns with sights and hand guns whose red or green beams were visible for a mile or so in good weather.

In the 1920s, a number of airports had experimented with low-power radio transmitters and could communicate with similarly equipped airplanes out to about 15 miles. This culminated in the construction of the first radio-equipped control tower in the United States at Cleveland Municipal Airport in 1930.

As terminal control grew, so did the traffic, arriving at will and in uncontrolled volume. It became obvious that some form of control was needed out in the

airways to limit the congestion at the terminals as well as in the heavily traveled airway routes.

At the urging of the Department of Commerce, the airlines acted first, establishing the first airway traffic control center at Newark, N.J., in 1935. The following spring, centers were established at Chicago and Cleveland. Since there were obvious problems with airlines telling other airlines what to do or airlines telling private or military pilots what to do, the Bureau of Air Commerce hastened to take over operation of the centers in July 1936.

Perhaps air traffic control may be said to have evolved out of a need created when the second airplane took to the air, but as far as we can be sure, controllers came on the scene in 1929.

By Marjorie Kriz

Heads Up

EASTERN REGION

George T. Coen, chief of the Washington Flight Standards District Office, from the Air Carrier Operations Branch in Headquarters . . . **Robert H. Davis**, chief of the field office in the Newark, N.J., Airway Facilities Sector.

GREAT LAKES REGION

Richard H. Mack, assistant chief at the Wold-Chamberlain Airport Tower in Minneapolis, Minn., from the Plans and Program Branch in the regional Air Traffic Division . . . **Martin J. Oosta**, chief of the Grand Rapids, Mich., General Aviation District Office, from the General Aviation Branch in the regional Flight Standards Division.

NORTHWEST REGION

Charles R. Bird, assistant chief at the Everett, Wash., Tower, from the Tacoma, Wash., Industrial Tower . . . **John K. Williams**, assistant manager of the Pocatello, Ida., Airway Facilities Sector, from the Program and Planning Branch in the regional AF Division.

PACIFIC-ASIA REGION

Michael A. Hanapi, assistant chief at the Honolulu Tower.

ROCKY MOUNTAIN REGION

Charley L. Misner, chief of the field office in the Colorado Springs, Colo., Airway Facilities Sector, from the Bismarck, N.D., AF Sector Field Office . . . **Joseph J. Simonet**, chief of the field office in the Great Falls, Mont., Airway Facilities Sector, from the Grand Junction, Colo., AF Sector.

SOUTHERN REGION

Gilbert P. Bilodeau, assistant chief at the San Juan, P.R., CERAP . . . **Alfred M. Dail**, assistant chief at the Balboa, Canal Zone, ARTCC . . . **William D. Hendrick**, chief of the London, Ky., Flight Service Station, from the Jackson, Miss., FSS . . . **Richard A. Hubbard**, assistant chief at the Balboa ARTCC . . . **Wayne T. Kinchen**, chief of the Paducah, Ky., FSS, from the Air Traffic Branch of the FAA Academy . . . **Carmen N. Mena-Moreno**, assistant chief at the San Juan International Flight Service Station, from the Mobile, Ala., FSS . . . **Bobby R. L. Norris**, deputy chief of the Miami, Fla., IFSS . . . **Charles I. Wentworth**, assistant chief at the Melbourne, Fla., FSS, from the Anderson, S.C., FSS . . . **James L. Wright**, chief of the Evaluations Branch in the regional Air Traffic Division, from the Memphis, Tenn., Tower.

SOUTHWEST REGION

Gerald W. Graham, chief of the West Memphis, Ark., Tower, from the Isla Verde Tower in San Juan, P.R.

WESTERN REGION

Edward L. Couch, chief of the El Monte, Calif., Tower, from the Airspace and Procedures Branch of the regional Air Traffic Division . . . **Francis H. Horn**, chief of the Maintenance Operations Branch in the Airway Facilities Division, from the CAAG, Western Area Operations Branch . . . **David F. Houser**, chief of the Services Branch, Logistics Division . . . **William D. Marino**, assistant chief at the Oakland, Calif., TRACON, from the Chicago O'Hare Tower . . . **Joseph J. McMullen**, assistant chief at the Las Vegas, Nev., Flight Service Station, from the Fresno, Calif., FSS . . . **Bob M. Payne**, manager of the Long Beach, Calif., Airway Facilities Sector, from the Maintenance Operations Branch in the AF Division . . . **Donald Tom**, chief of the Establishment Engineering Branch in the AF Division, from the Long Beach, Calif., AF Sector . . . **Irene M. Wisner**, chief of the Voucher Examination Branch in the Accounting Division.

WORD SEARCH

By Douglas J. Post, ATCS
West Memphis, Ark., Tower

'Tis the season for football and we've got a busy puzzle of football terminology and team names.

The words read forward, backward, up, down and diagonally, are always in a straight line and never skip letters. The words may overlap, and letters may be used more than once.

Use the word list if you must, but try covering it first. All 70 words can be found. Circle those you do find and cross them off the list. The team "Colts" has been circled to get you started. When you give up, the answers may be found on page 19.

C K K C A B R E T R A U Q L A R E T A L
D C P I S S S F E I H C D N E T H G I T
D A H A S A P D O L P H I N S C O A C H
N B P U C C S A S A F E T Y T L S N P
E G L B C K B R O W N S Y R U J N I Y S
T N A S I K E D E E P S Y O B W O C R T
I I Y N O L K R F N P C C B S F C E O E
L N S A I I L G S A I E E R R I L T T J
P N S O C N U S N R S N U B A E A E C G
S U T K P A D S O P G T Y T E L F L I U
S R E G R A H C I A O E U T B D A P V A
I R E D F S H K L S D R S G R G S M A R
S P E E K A E S T R F P P I R O M O T S
S T U C N L S L A N I D R A C A F C S L
C H O D B A O W G L F E I N E L K A G A
P L O I I C C E C A E D O T R A P U N G
B F D N R T A C K L E R T S C B L I E
F U T N U T S E U R B H O L D I N G K L
A S K W A H A E S B R E K C A B E N I L
S Y T L A N E P U N T E R U S H I T V I

- | | | |
|------------|--------------|------------|
| AUDIBLE | COACH | HIT |
| BEARS | COLTS | HOLDING |
| BENGALS | COMPLETE | ILLEGAL |
| BILLS | COWBOYS | INJURY |
| BLOCK | DOLPHINS | JETS |
| BRONCOS | DRAW | KICKER |
| BROWNS | EAGLES | LATERAL |
| BUCCANEERS | FALCONS | LINEBACKER |
| CARDINALS | FAKE | LIONS |
| CENTER | FIELDGOAL | OILERS |
| CHARGERS | FORTY NINERS | PACKERS |
| CHIEFS | GIANTS | PADS |
| CHUCK | GUARD | PASS |
| CLIP | HANDOFF | PATRIOTS |

- | | | | |
|-------------|-------------|-----------|-----------|
| PENALTY | REDSKINS | SEAHAWKS | TACKLE |
| PLAYS | RUNNINGBACK | SNAP | TEAM |
| PRO | RUSH | SPEED | TIGHT END |
| PUNTER | SACK | SPIKE | TRAP |
| QUARTERBACK | SAFETY | SPLIT END | TURF |
| RAIDERS | SAINTS | STEELERS | VICTORY |
| RAMS | SCORE | STUNT | VIKINGS |

THE TONIC MAY BE WORSE THAN THE MALADY . . .

We've worked for FAA long enough to know that drinking and flying can be a deadly combination. That's why we quit flying. But even in the old days, as we sat on the veranda, sipping our gin and tonic beneath the sweep of the magnolia trees, we never dreamed that the tonic water might cause us more problems than those gentle distilled spirits. Certainly, after a particularly long session on the veranda pondering the riddle of man's continuing inhumanity to man, we noticed an unsteadiness in our equilibrium, blurred vision and other problems with our eyesight. But we always assumed that was the gin at work. We may have been wrong. Because now we find that a Navy researcher from the Armed Forces Institute of Pathology has labeled the quinine in tonic water as a co-conspirator at the very least. He says even low doses of quinine can cause any or all of the above mentioned symptoms.



That's not a particular problem for veranda sitters but it is for military jet pilots who must make steep dives and sharp banks and turns in simulated (or real) combat maneuvers. So the Naval Safety Center in Norfolk has issued an alert suggesting that Navy pilots refrain from tonic drinks before flying until additional research nails down the question of just how much quinine water is dangerous. And the Army is pondering stronger measures such as grounding pilots for a specific length of time after consuming quinine beverages; and FAA says it will monitor the military

research to see what application the findings may have for civilian pilots. As for us, we plan to retire to our rattan chair on the veranda, beneath the sweep of the magnolia trees, order a suitable beverage and ponder the entire situation.

FLYING THE FRIENDLY SKIES . . .

Having already set a thoroughly dissolute tone for this column, we might as well include another drinking and flying item and then drop the subject for all time to come. This one concerns a six-year-old Kansas law that prohibited cocktail service on commercial aircraft traversing the Kansas skies. The state Attorney General recently held the law invalid noting that the Federal Government—and not the individual states—is responsible for regulating the navigable airspace. That means you can look down on the Kansas wheat fields through the bottom of a cocktail glass—but remember what we told you about gin and tonics.

FEDERAL NOTEBOOK

IT'S JANUARY, PREMIUMS ARE UP. It happens almost every year. Health insurance premiums will be rising for most plans January 1, between 10 and 20 percent. For the 60 percent of Federal workers covered by Blue Cross-Blue Shield, the biweekly premium will be up \$2.84 for the high-option family plan, up \$1.55 for high self, up 95 cents for low-option family and up 33 cents for low self. For those covered by Aetna, the figures will be down four cents, up 60 cents, up 77 cents and up 32 cents, respectively. As usual, many of the plans will have changes in the benefits provided. Open season for switching between plans will be from November 12 to December 7. ■ Two plans--Group Health of New Jersey and American Assn. of Foundations for Medical Care--are withdrawing from the Federal Employees Health Benefits program; six employee organization health plans and 16 new comprehensive medical plans are joining the program. Among the six are PATCO, National Assn. of Government Employees and National Federation of Federal Employees. ■ While hearings have been held on legislation to require second opinions for elective surgery to reduce the amount of unneeded surgery, four new health insurance plans have already opted for the requirement effective January 1. The Office of Personnel Management has indicated that it intends to seek such a provision in all Federal employee plans. Although the American College of Surgeons is against the bill, it conceded that it has the potential for better health care at lower cost.

THE RETIREMENT FRONT

In a preliminary report, Congress'

Universal Social Security Coverage Study Group has said that bringing Federal employees under Social Security may do "more harm than good." A takeover of Civil Service and other retirement funds could not reduce costs, it added. The paper considered a full range of options for coordinating the two systems. ■ An Office of Personnel Management report may be the basis for legislation by Sen. David Pryor (Ark) to tighten up disability retirements, which constituted 32 percent of all new retirements last year. Among the proposals are eliminating disability retirement for employees who are eligible for voluntary retirement, improving retraining and retaining employees who are disabled only for their present duties. ■ Rep. Gladys Spellman (Md) has introduced a bill to require employees to inform their spouses if they elect not to provide a survivor annuity upon retirement.

PAY REFORM HEATS UP

Both House and Senate are into hearings on pay reform legislation, which is expected to continue into next year. Among the features is a locality pay system. Rep. Spellman, who chairs the compensation subcommittee, has raised the possibility that locality pay might encourage relocating Federal offices from high-wage urban areas to low-wage rural areas. ■ Meanwhile, the National Treasury Employees Union is suing the director of the Office of Personnel Management in U.S. District Court for using tax money to lobby for the pay reform legislation, which they allege is illegal. Director Alan Campbell sent letters to newspaper editors across the country last summer promoting the bill.



Double-Threat Savers

When a pilot gets into trouble anywhere within a 90,000-square-mile area of western Alaska, he can be sure that most of the staff of the Bethel Flight Service Station will be working out a way to help.

Four specialists—Chief John Ruth, Pat Clark, Stan Porter and Bill Brown—belong to Bethel's Civil Air Patrol squadron and participate actively in search and rescue missions whenever duty schedules permit. So, if they can't help the pilot in the air, they can still lend a hand when he's down.

Last year, the station chalked up more than 218,000 operations, breaking all previous counts, without a systems error. After hours, the saves continue, as, for example, when a Helio Courier failed to return to a hunting camp while on a round-robin flight.

Emergency locator transmitter (ELT) signals were picked up by the pilot of a

passing Cessna 206, who reported it to the Bethel FSS. Specialist Pat Clark, another CAPer who is also a flight instructor, was on duty at the time and alerted the CAP squadron. ATCS Stan Porter took off in the CAP's Cessna 172 with observer Debbie Matheson, the wife of another FSS specialist, John Matheson.

After flying over bleak, desolate tundra for more than an hour, the pair spotted the downed aircraft straddling the crest of a small hill. There was no place to land a tricycle-gear aircraft; the only way to rescue the Courier's crew was by helicopter.

Porter radioed the Bethel FSS to advise Clark that his airplane would need more fuel and that a chopper was needed for rescue.

Clark contacted specialist Bill Brown, who, also flies Huey helicopters for the Alaska National Guard. As a CAP officer,

Brown is authorized to use a helicopter whenever required for rescue purposes.

Clark instructed Brown to load the Huey with extra fuel for the 172 and deliver it to Holy Cross, a bush village airstrip selected as a rendezvous.

Two hours later, the Huey set down at Holy Cross, the 172 was refueled, and Porter and Mrs. Matheson guided the Huey to the crash site, using the Cessna's direction finder to home in on the Courier's ELT. Within another two hours, the crew of the downed plane was safely back in Bethel.

The Bethel FSS crew could write "mission accomplished" to an operation they consider routine.

"We've done this so many times," commented Clark, "search and rescue seems like part of our job description."

By Warren Runnerstrom

New England's deputy chief of the Flight Standards Division, Otho Mendenhall, watches as Norwood GADO chief Bill Cook returns from flying the Plymouth traffic pattern in a glider.

Like the Pilgrims of old, the Plymouth, Mass., airport community solved a problem through cooperative effort.

Like many small airports, Plymouth Municipal has had to contend with problems brought about by an explosive growth in activity, compounded by an aviation mix that includes conventional powered fixed-wing aircraft, agricultural planes, helicopters and gliders.

The mix with gliders, plus 50 aircraft used in flight training by four flying schools, the other aircraft based there and the transients, had led to two midairs and one glider fatality. Through the efforts of an active airport safety committee, the airport manager, fixed-base operators, users and the FAA, a solution was found.

"The most significant and rewarding part of this exercise is the rapport that developed among these people," says Bill Cook, chief of the Norwood, Mass., General Aviation District Office. "They pulled together like a team. They asked for FAA's help, which we were glad to give, but they looked upon it as their problem, instead of just sitting back complaining about their special interest and looking to FAA for all the solutions."

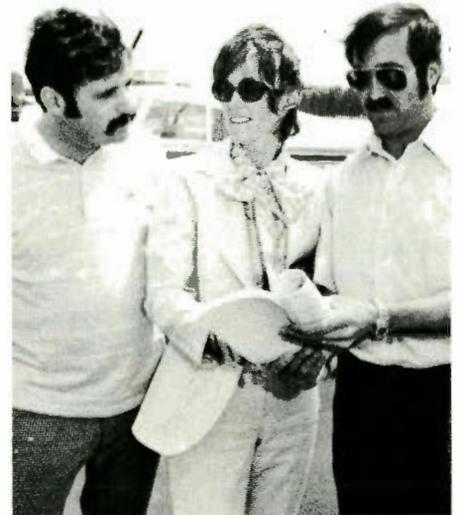
The biggest problem, the airport group believed, was with the tow planes for gliders, and they called upon a professional glider pilot for help. After much discussion, they decided to continue the standard pattern for an uncontrolled airport for powered aircraft, except for glider tow planes, which were to use a non-standard pattern.

Then airport manager William Prentice, Jr., called on FAA to discuss the problem and seek a waiver for the non-standard pattern. "We received the ultimate in assistance from FAA," Prentice said, "particularly from Otho Mendenhall and Ruth Zimmerman of the regional Flight Standards Division; Ted Askew, chief of the Otis, Mass., tower; and GADO Chief Cook."

Robert E. Whittington, New England Regional Director, frequently cites



Solving Their Own Problems

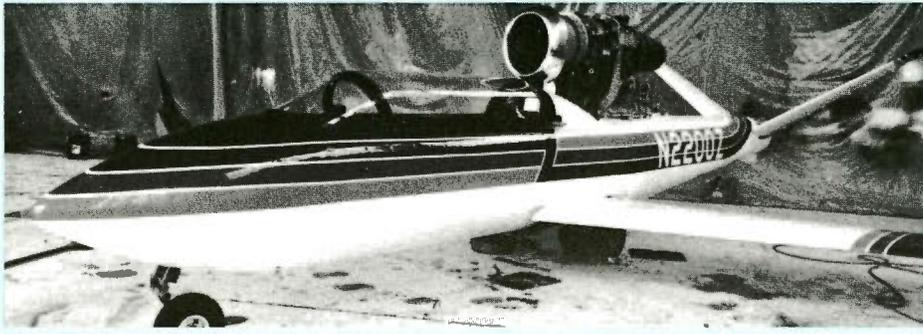


Ruth Zimmerman of the Flight Standards Division discusses flight operations with two FBOs—Steve Fried (left) of Yankee Aviation and Jeff Justice of Plymouth Aviation.

Plymouth airport as an example of what can be accomplished through the cooperation of the aviation community and FAA when he talks to pilots at "hanger flying" sessions throughout the region.

"What makes them special," he explains, "is that they have collected themselves and are taking action to solve their problems. This is the kind of direct action and peer pressure that is needed to straighten out airport safety problems. If every small airport took this approach, they could regulate themselves in a far more orderly manner. The bottom line on this is increased operational safety," he concluded.

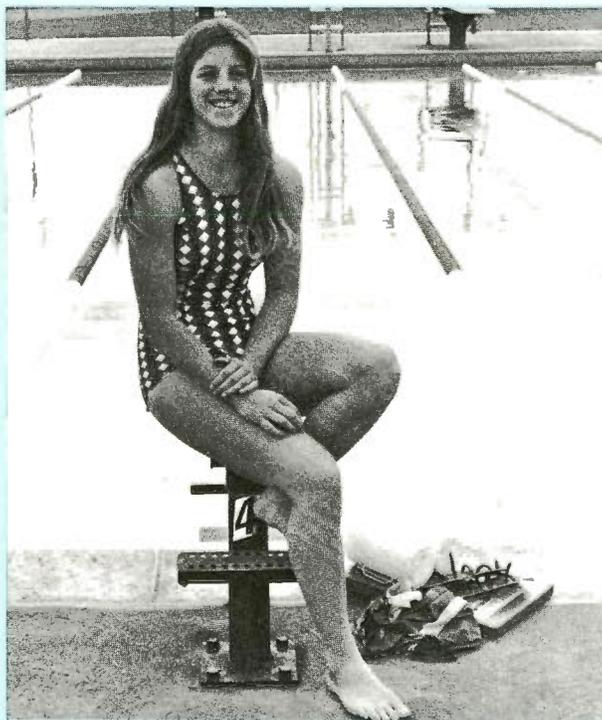
Story and photos by Stan McDonough



HOT HOMEBUILT—Mike Korhonen (left), general aviation maintenance inspector with the Seattle Flight Standards District Office, presents an FAA certificate to Boeing engineer Bob Hammer, who built the Zipper Jet, while partner and test pilot Dick Hunt and FSDO chief Don Burlingame (right) look on. The two-place turbojet is fully pressurized, gets 2,800 pounds of thrust from a GE J-85 engine and is planned for high-altitude photography at upwards of 55,000 feet.



GHOST PILOTS—Aeronautical Center pilot monitor procedures being plotted on computer. Computer problems will be used for instruction opened early next year.



ALMOST A MERMAID—Kim Fisher, daughter of Edwards AFB radar approach control ATCS Gary Fisher, has entered the University of Hawaii on a full athletic scholarship, having won every swim meet but one that she has entered in the last three years. She made the National Jr. Olympics in 1974 at age 13, then the Nationals and the Olympic Trials and has broken three records in breast stroke.

Faces and



MAKING DO—When toxic fumes from an engine in the cockpit routed the controllers, they filed into Delta's control room and worked traffic there for three hours. ... the Merageas and Dick Jones and Monte Belger, chief, AI



Training supervisors Marie Willis and Jean Johnson are training handicapped persons acting as "pilots." The new Radar Training Facility scheduled to be

Places



Below is a 3-story Logan International tower observation cab under an existing emergency structure. ATCS Bob Linehan, EDPSS Jim Transportation Security Division.



EEO DOERS—Western Regional Director Leon Daugherty (left) presented special awards for achievement in equal employment opportunity programs to (from left) Frank Jones, Airspace and Procedures Branch chief; Louise Watkins, management analyst; Jacque Wilson, Air Traffic procedures specialist; James Lehman, Long Beach, Calif., Tower chief; Henry Harris, SET at Long Beach AF Sector; and (not shown) Miguel Higuera, Los Angeles ARTCC electronics technician; and Martin Elliott, Maintenance Engineering Branch chief.



IT'LL NEVER FLY—Adorning the terminal at Ketchikan International Airport in Alaska is a large replica of a Southeastern Alaska fishing boat, here being admired by Fred Porter of the regional Flight Standards Division. We doubt he'll certificate it.



TOP TOWER—For its pride, professionalism and productivity, the Port Columbus International Airport Tower, Ohio, was recognized by the Great Lakes Region as its Facility of the Year for 1978. Pleased with the award are (left to right) team supervisor Robert Spencer, tower chief Ken Friar and controller Carl Kertis.

It's hard to feel neutral about equal employment opportunity. Most people have strong feelings about it one way or another. In fact, it's one of those subjects that can spark an argument as fast as politics or religion.

For some, it means a program that pits Blacks versus Whites and men versus women. For certain minorities and women, on the other hand, EEO is a ticket to those jobs currently held by white males. For many, EEO simply means discrimination in reverse.

In fact, EEO is none of the above, says Leon Watkins, Director of FAA's Office of Civil Rights.

Says Watkins: "EEO really is nothing more than minorities and women saying to society: We don't want to steal anybody's job. We just want a chance to compete."

And, essentially, that's what his office is all about, says Watkins—to make sure everybody gets a fair shake.

A very important part of our job is to try to sensitize FAA managers and supervisors to the special employment needs of minorities and women," he added.

Watkins said that steady progress has been made by FAA in hiring minorities and women and promoting career opportunities for them, but he said, "Much more needs to be done."

He noted, for example, that minorities constitute only about 11 percent of the FAA work force. And women, who make up 13 percent of the agency's employees, have an average GS grade of 7.0 compared to an 11.8 average for men.

He said some managers don't realize that promoting EEO is an essential part of their job. As a result of the Civil Service Reform Act, however, that obligation will be made much clearer, he said. Under the new merit pay system, for example, all managers and supervisors will be eligible for merit raises based upon their overall performance. And that will include their performance in promoting EEO programs, not just technical performance.

A Special Kind of Courage

Some people may not do anything without that kind of incentive, says Watkins, but he still believes the majority would do a lot more for the EEO program right now, if only they knew what to do.

Ann Peavy Hoffer agrees. Hoffer, who is the Executive Officer in the Washington headquarters Office of Management Systems, was one of nine FAAers to receive this year's award for superior achievement in EEO.

She says: "The big job in EEO is to figure out how to do things. The world is full of well-intentioned people who are willing to do what's right, but they don't know how."

She, for example, helps supervisors to design promotion requests that will attract well-qualified women and minority applicants.

Hoffer says most supervisors don't take advantage of the special-emphasis programs, which "provide an excellent means of bringing qualified minorities and women into FAA." These include, she explains, part-time employment, internships, excepted appointments for handicapped persons and the cooperative education and Stay-in-School programs. Although most persons hired via these programs are considered temporary appointments, Hoffer said, often they can be converted non-competitively to full-time status later on, if they work out.

Hoffer also says that some supervisors are confused about training. They think it must be related to one's current job before it can be authorized. Not true,



John F. Kilbane, Jr. (left) and Edward S. Condor (middle), air traffic simulator operators at the Greater Cincinnati tower, show the facility chief, San Juan C. Romero, how they punch data into the simulator to give controllers practice in handling traffic.

says Hoffer. In fact, she adds, official duties are defined as "those authorized agency duties which an employee is currently performing or those which he/she could reasonably be expected to perform in the future. This includes potential duties in a different job at the same or higher level than the one currently held by the employee."

The program for hiring the handicapped is an excellent source of quality, dedicated employees, says Juan C. Romero, chief of the Greater Cincinnati Tower, who also was one of the recipients of this year's EEO awards. Among his achievements in EEO,



Ann Peavy Hoffer, Executive Officer in the Washington headquarters' Office of Management Systems, was one of nine FAAers this year to receive from Deputy FAA Administrator Quentin Taylor the agency's highest award for superior achievement in EEO.

Romero was the first ATC facility chief to hire a handicapped person as an air traffic simulator operator. Essentially, that's the job of feeding information into a computer using programs already prepared by data systems specialists.

"This is a clerical function," explains Romero, "and yet we were using GS-12 to 14 controllers to do the job."

So, Romero contacted the Ohio and Kentucky State Rehabilitation Services, which sent him the names of five or six employees capable of doing the job. Of those, he eventually hired two at the GS-3 and 4 level.

"Both are outstanding employees," says Romero. One is 21-year old John F. Kilbane, Jr. who has been without the use of his legs, since birth. He had never held a job before because no one was willing to give him a chance. The other, Edward S. Condor a 50-year old veteran of the Korean War, who has had severe internal problems requiring seven major operations. Condor also had tried unsuccessfully to get work. He had even worked for a while without salary for the Ohio State Rehabilitation Service rather than sit around doing nothing.

Romero says handicapped persons could be hired as simulator operators at every ATC facility in the country. They could be hired for other jobs as well, he says, and "we'd be doing the FAA and them a big favor."

Romero, who says the key to an effective EEO program is "commitment at the top," adds that there are all kinds of things that supervisors "with imagination and commitment" can do to promote EEO objectives. For example,

to get more minorities and women to take the ATC entrance exams, he contacted the NAACP and the Urban League, and the next time around, he got the biggest turnout he's ever had. He also contacted the Office of Personnel Management (OPM) to make sure that information on ATC exams was included in the official publication of OPM's Hispanic Employment Program.

Recruiting and hiring minorities and women, however, is only part of a manager's EEO responsibility. It also includes promoting career opportunities for minorities and women already on board.

The Office of Management Systems (AMS) in Washington, for example, has provided 10 slots for the Upward Mobility Program. Hoffer insists this was not done for altruistic reasons: "Our Upward Mobility employees have been bright, energetic, well-motivated people who have helped the Service."

Hoffer also restructured the AMS training program to provide better career-development opportunities for all employees, especially lower-grade employees in dead-end positions. That training program served as the model for the program which later was adopted for the entire headquarters.

Another EEO award recipient, Catherine C. Sullivan, an employee-programs specialist in Airway Facilities, planned an Upward Mobility Program that eventually was adopted by AAF regional divisions for training personnel in low-level positions to become electronics technicians.

Not everyone is in a position to make changes affecting so many people, but the other winners of the EEO awards were able to do a lot for minorities and women working directly for them.

Martin C. Elliott, for example, gave his entire clerical staff in the Western Region's Air Traffic Maintenance Engineering Branch an opportunity to acquire computer training at the time one of his branch functions was being automated. He also hired a minority veteran, disabled and untrained, under the Stay-in-School program. He worked

out a training program and eventually was able to have the employee converted to career status. Today, that employee is a GS-9 electronics technician developmental with potential for further advancement.

Another example is Larry Snell, chief of the Real Estate Branch in the Alaskan Region's Logistics Division. Snell created bridge positions—combining clerical and professional duties—that allowed four qualified women stuck in dead-end clerical slots to move into higher-grade positions as realty specialists.

Romero, who has helped four secretaries become air traffic controllers during his 24-year career, doesn't understand those who throw up their hands and say there's nothing they can do about EEO. "Where there's a will, there's a way," he maintains.

Deputy Administrator Quentin Taylor praised all nine award winners for precisely that spirit during presentation ceremonies in late August. He said they displayed a "special kind of courage" and deserve to be ranked in that elite category of persons who "make things happen" in life, in contrast to those who merely "watch what's happening" or "wonder what's happened in the first place."

By Gerald E. Lavey



When Hawaii Took to the Air

Scheduled airline service in Hawaii was launched 50 years ago this month when, on November 11, a pair of Sikorsky S-38 amphibians began flying for Inter-Island Airways between Honolulu and the islands of Maui and Hawaii.

The photo shows an S-38 outbound five miles east of Diamond Head over Hanauma Bay in 1929.

The 110-mph, eight passenger airplanes arrived via steamer in mid-

October and were flying by October 26. Actual operations of the company, later to become Hawaiian Airlines, had begun on October 6 when its Bellanca monoplane carried 86 passengers on a number of 10-minute around-the-patch flights over Honolulu.

Last year, Hawaiian Air's 139-passenger DC-9-50 jets carried more than 3.7 million passengers basically over that same 1929 route.

How a Prop Gets Certificated

Almost all civil aircraft were propeller-driven 25 years ago. Although today we're in the jet age—mainly because of the airlines and military, there are still about 200,000 propeller-driven planes. That's about 100 times the number of U.S. airline jets.

Most of the propeller-driven aircraft are in general and business aviation and commuter airline service. A large majority of these use props manufactured by Hartzell in Piqua, Ohio, and by McCauley in Vandalia, Ohio. While metal blades have held sway since the late 1940s, the trend to higher-powered turboprop planes has led to the use of lighter and stronger materials, and thereby hangs our tale.

The Great Lakes Region's Flight Standards Division this year awarded Hartzell a type certificate for the first propeller made with DuPont Kevlar fiber in an epoxy matrix. This material is already in use for canoes, bulletproof vests and other applications requiring high-energy impact resistance. Unlike propellers certificated previously with plastic components, this one does not depend on a metal blade spar for strength.

FAA aerospace engineers Henry Weiss, Marvin Walker and Bob Alpiser handled the certification. First, they reviewed Hartzell's engineering analysis for design loads. This involved bending—both steady and vibratory—

aerodynamic twisting and centrifugal force.

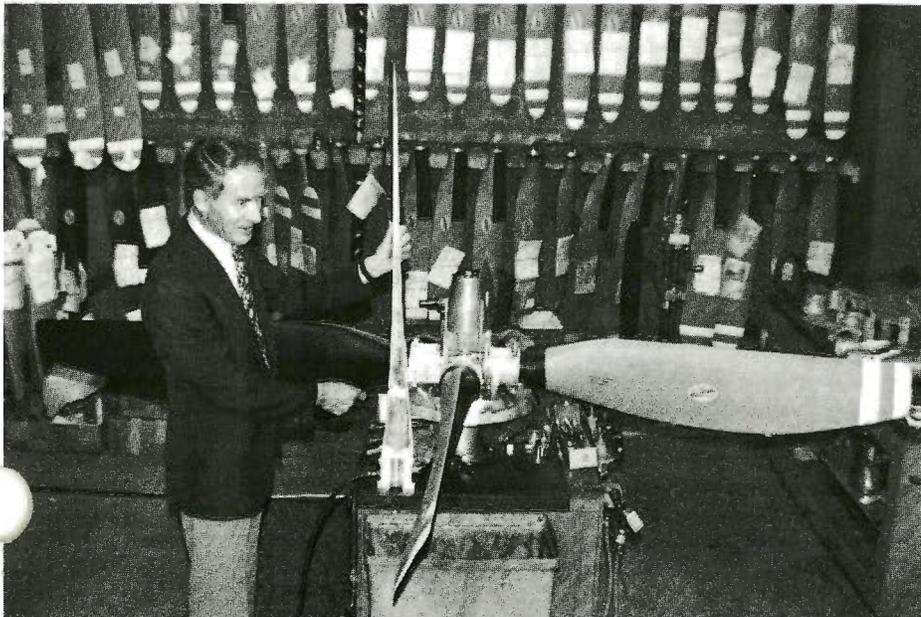
Then, they evaluated tests required to validate the engineering analysis. One placed an axial load two and a half times greater than the highest anticipated load in flight, which proved the blade-retention system. A fatigue test using three times the actual stresses measured in flight was unable to produce a failure—the test machine broke first. Endurance was established by running the propeller on a fixed engine for 150 hours.

In addition, the propeller was cycled through its operations and subjected to dust and sand, lightning strikes, temperature cycling, rain erosion, and exposure to other fluids for absorption and compatibility.

Because the effects of aging and weathering for this material in an airplane application were still not fully known, the propeller was certificated with an initial blade-life limit of 700 hours or three years. The limit will be progressively increased with favorable service experience.

New technology is not always so esoteric for FAA's engineers and inspectors. It seems the propeller is here to stay, in one form or another.

John Trey, principal inspector at the Vandalia Engineering and Manufacturing District Office examines a new composite propeller of Kevlar plastic molded over a foam core.



DIRECT LINE



Q At our flight service station, the chief insists that we make our requests for annual leave by "Note-O-Gram" form. On this form, he can deny leave without stating a reason. We know that the SF 71 exists, and a "if disapproved, give reason" space is provided. Can our chief be forced to use the SF 71 and to state a reason for disapproval?

A According to FAA Order 2730.2A, Time and Attendance Handbook, paragraph 307, an SF-71 is required when (a) home leave and annual or sick leave is taken when the employee is not available to initial the time and attendance report prior to its submission to the accounting division, (b) sick leave in excess of three consecutive workdays is taken, (c) leave without pay in excess of 24 hours is taken and (d) military leave is taken. The Comptroller General has ruled in recent decisions (FPM Bulletin 630-35, June 18, 1979) that an agency must approve a formal and timely request for annual leave either at the time requested or, because of the agency's workload, at some other time. Guidance is provided in the cited bulletin indicating that when a request for leave is disapproved, the supervisor should give the reason for disapproval and, in the case of annual leave, should initiate action to reschedule.

Q Throughout the government, one of the most misunderstood or least-known subjects is life insurance. At my age, 32, or any age, for that matter, please tell me why government employee life insurance is recommended over private company life insurance. Please compare like coverage by age and premium and please offer your recommendations.

A The Federal Employees Group Life Insurance Plan has never been recommended over a private plan. In fact, the Federal Personnel Manual Supplement 870-1, Life Insurance, states: "Federal Employees Group Life Insurance builds no cash, loan or paid-up or extended insurance equities, nor can it be assigned to anyone before a loss occurs. It is not intended as a substitute for regular individual policies purchased by an employee through an insurance agent." (Emphasis added.) It is a group life insurance program that attempts to meet some of the insurance needs of the career employee over the entire period of his service, including retirement. The program provides term insurance with accidental death and dismemberment protection. Since participation is strictly voluntary, the decision to elect or waive life insurance coverage should be based on an evaluation of one's current situation (age, health status, dependents, etc.), one's existing insurance program and one's short- and long-range plans. The type and amount of insurance coverage needed and/or desired is a very personal matter. Therefore, it is not ap-

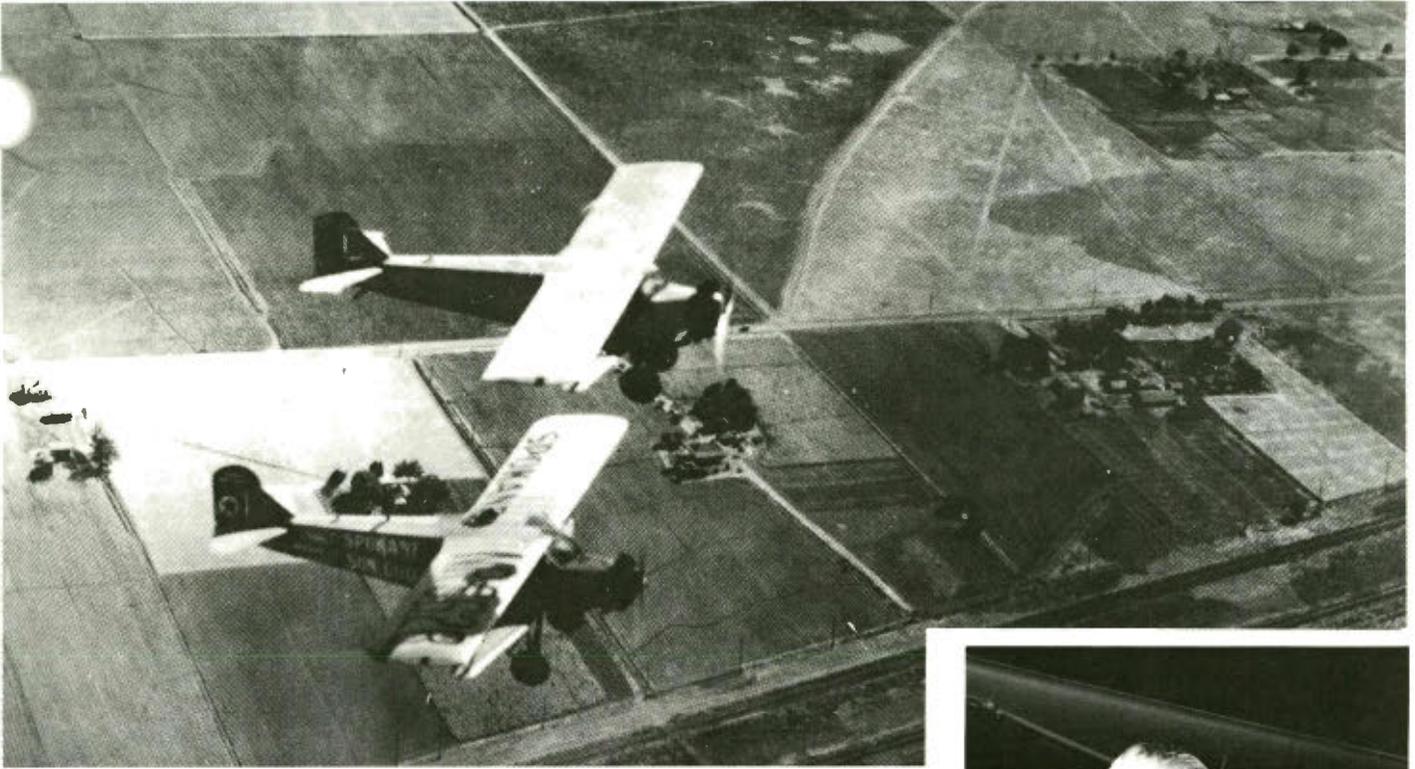
propriate for us to make any type of recommendation. We suggest that a more realistic approach would be to discuss and compare the features of the FEGLI program with a reputable insurance agent.

Q FAA Order 3410.14 states its purpose as being to provide the guidance and procedures for implementing and operating the FAA Personnel Management Career System. The selection system for higher-level personnel management positions was begun with the issuance of a single annual announcement in 1977. Were such announcements issued in 1978 or 1979? If not, please tell me the status of the career system.

A A national announcement for higher-level personnel management positions was not issued in 1978. The Office of Personnel and Training temporarily suspended the Personnel Management Career System in a memorandum to the regional directors on Feb. 12, 1979. In the interim, employing jurisdictions may announce vacancies in covered positions following normal merit promotion requirements. Personnel offices were forwarded a national rating guide which is to be used in evaluating and ranking all candidates for higher-level personnel management positions. Any further questions may be referred to your servicing personnel office or to the Executive Personnel Staff, APT-40.

Q Please provide me with an interpretation of the merit promotion plan grade increase for agency employees. I was notified of my selection for promotion to GS-13 on June 7, effective July 2 and with a reporting date of August 1. My promotion actually became effective on my reporting date. I have been informed that the promotion actually occurs on the notification date in other regions, regardless of the reporting date. These people are supposedly reassigned immediately and then detailed back to their old facility, thus accruing time in the new grade at their old job and facility. It appears to me that with the FAA operating from one set of directives across the nation, the MPP transfer policy should be the same for everyone.

A When employees are selected for promotion under MPP, the effective dates of the promotion are contingent upon when the employees can be released from their current positions. Regions and centers may not make promotions effective on the notification date unless the employees have been released from their current positions nor should they promote employees and immediately detail them back to the lower-grade positions. In the past, some regions and centers have unknowingly made promotions effective prematurely. As these situations are discovered, action is taken to rectify the situation.



Pioneer Refueling Flight Remembered



Ten years before the British inaugurated in-flight refueling for transatlantic airmail flights in 1939, Art Walker and Nick Mamer piloted a single-engine Buhl Air Sedan—the Spokane Sun God—from Spokane, Wash., to San Francisco to New York and back to Spokane without landing—the first in-flight refueling during a point-to-point flight.

On the Golden Anniversary of that flight—August 15—Walker was honored by the Pacific Northwest Aviation Historical Foundation. (Mamer died in a 1936 crash.) With his daughter, Barbara, watching, Walker received FAA's Distinguished Service Award from Northwest Regional Director C. B. Walk, Jr., and a plaque from the Strategic Air Command.

Endurance itself was part of the achievement of that historic flight, for the pair remained aloft for nearly five days—115 hours, 45 minutes, 10 seconds—and

covered a record-breaking 10,000 miles without benefit of radio or electronic navigation aids.

A group of Spokane businessmen organized the flight, christened the airplane and selected the pilots. Texaco offered free fuel; the Buhl Airplane Co. donated the six-seat aircraft; and the Wright Aeronautical Corp. offered its new J-6-9 Whirlwind 300-hp engine.

Refueling was accomplished eight times en route, with the supply plane flying in formation above and lowering a long hose.

“Nick or I would pull on helmet and goggles,” Walker recalled, “and stick our heads out of a hole in the top of the wing to grab the hose and stick the nozzle into our cabin fuel tanks.” The most hazardous, he said, was an emergency nighttime refueling over Rock Springs, Wyo. A small flashlight was tied to the end of the hose to help in the hookup, but the hose was chopped apart by the

Sun God's propeller, spraying gasoline over the plane. Later, over Miles City, Mont., refueling was done by lowering five-gallon milk cans on a rope.

Walker's 21,000 hours of flight time ranged from barnstorming to flying as a captain for Northwest Airlines and heading up aircraft operations for Standard Oil until 1971.

Instructor supervisor Fred Williams explains phase relationship between voltage and current waveforms in electrical theory to Donna Moore and Kayla Todd (right), who were pre-developmental technician students in the first class held at the Springfield, Mo., Sector Office.



It's often said: Give the typical Airway Facilities technician a job to do, and before it's done, he or she will have come up with a less expensive, more efficient or simpler way to get the job done. Now, in the Central Region, that attitude has been applied to training pre-developmental electronics technicians.

Traditionally, such employees have been assigned to individual sectors for on-the-job training, the quality of which has varied, depending on the time available for it and journeymen's attitudes.

As part of the region's Upward Mobility Program, the new approach is designed to improve the chances of lower-graded candidates to compete for GS-9 developmental positions. This training in the Springfield, Mo., AF Sector Office is coordinated with the later formal training at the FAA Academy. According to sector manager Paul Ratliff, "This training unit helps close the gap between the extreme-novice technician candidates and those who have some electronics background."

In essence, the program gives students the basic knowledge necessary

A Better Way to Train

to do well in Academy courses and, at the end of their training as developmentals, to understand journeymen instructions. With a fully equipped classroom and electronics laboratory, the trainees gain "hands-on" experience much earlier than they would from the standard on-the-job training.

Most of the laboratory equipment was built by sector employees, who are enthusiastic about the program, both because it eliminates much of the individual sector's workload in training new hires and because it helps provide a known, common level of electronics knowledge.

Just being accepted into the program involves comprehensive testing of the candidates on matters ranging from the ability to interpret symbols and having mathematical skills to the lifting of heavy equipment. Each applicant has to be able to climb a 25-foot ladder, as well. The tests were developed by the Airway Facilities Maintenance Operations

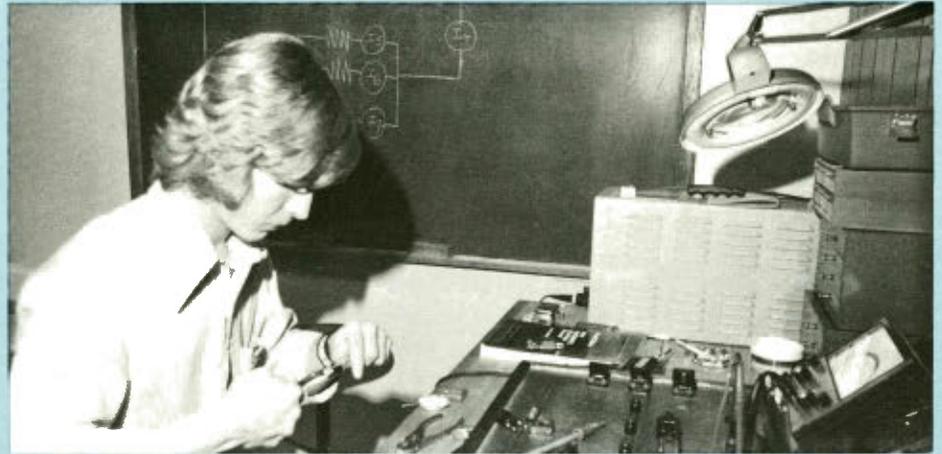
Branch and several sector offices. The entire program—including selection, training and later placement—was evaluated and approved by the Civil Service Commission, now the Office of Personnel Management.

Instructional programs are kept flexible to best serve individual student needs and to be responsive to the needs of the sectors who will be receiving course graduates. Weekly evaluations and individual counseling are provided.

At the completion of the predevelopmental training phase, each student will have been certified on at least two types of FAA facilities, among them tower, flight service station, remote communications air-ground facility (RCAG) and remote transmitter/receiver facility.

Central Region management believes it has found a better way that will produce top-notch electronics technicians who will continue the tradition of seeking better ways.

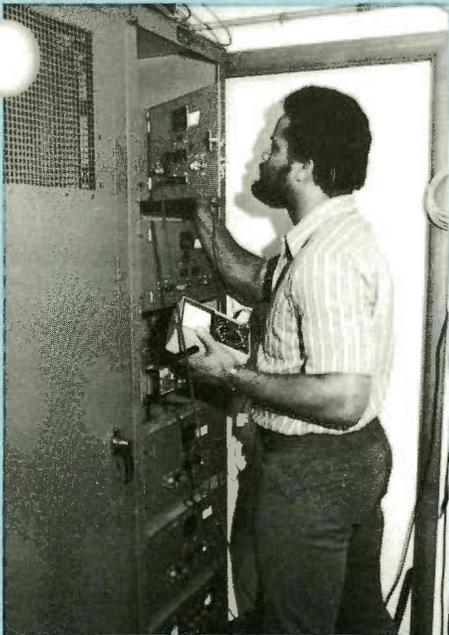
Sector proficiency development and evaluation officer Roger Lahmberg uses a camera and tripod stand to produce a film strip for a training video. Sector personnel also fabricated the equipment in the training unit's lab.



Pre-developmental Joel Myhre got a chance to dirty his fingernails early in his training, setting up a circuit on a "breadboard" in the sector's fully-equipped laboratory.



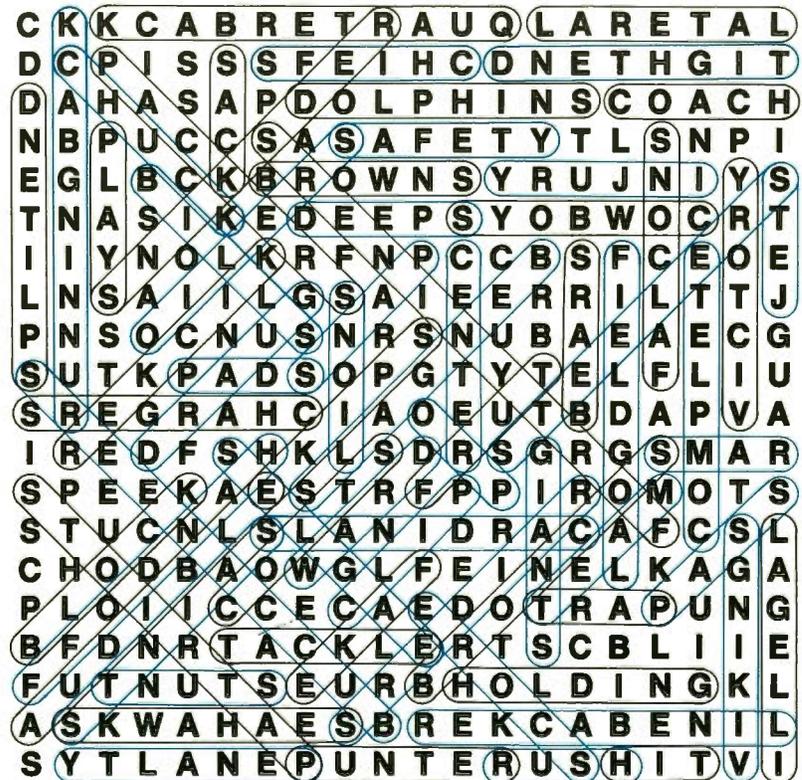
Instructor Wilbert Brewton, formerly a radar/communications technician, discusses an oscilloscope display with student Phyllis Moore.



Former maintenance mechanic Andy Hill, studying for an electronics technician position, takes a voltage reading on a VHF receiver in the Springfield, Mo., Sector laboratory.

Word Search Answer

Puzzle on page 6





OFFICIAL BUSINESS
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An Early Birdman Gets A Fix



Earlier this year, before his death at age 99, Al J. Engel received a pair of honors befitting a true aviation pioneer.

He was Cleveland's first pilot and owner of an aircraft in 1910, the first to fly across Lake Erie, the first to land on Lake Erie and the first to carry unofficial airmail in the area. During the two world wars, he was an aircraft builder.

On the initiative of Great Lakes Public Affairs Officer Neal Callahan, an outer marker fix at Cleveland Hopkins International Airport was named

for Engel—the second such in the region. Joan B. Barriage, Flight Standards Division chief, presented Engel with an engraved plaque of a new Cleveland approach plate showing the fix and a congratulatory letter from Administrator Bond. The occasion was also that of a 100th-year tribute at the Western Reserve Historical Society's Crawford Auto-Aviation Museum, where his plane, the "Bumble Bee," had been restored and is on display.

The photo above shows Engel at the controls of his 1910 Curtiss pusher.

By Marjorie Kriz