



# HORIZONS

HELP KEEP AMERICA STRONG  
INVEST IN U.S. SAVINGS BONDS, FREEDOM SHARES

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## To Fly Again

Robert Phelps, GADO inspector from Ontario, Calif., receives an application for re-examination flight test from Mrs. Barbara Anspaugh shortly after she was involved in an accident at Santa Paula Airport. Phelps and Jim Dewey (right), recently retired Supervising Inspector of the Van Nuys Calif. GADO, arrived on the accident scene within seconds.

## GADO Inspector Arrives On Accident Scene Instantly

By Cliff Cernick

SANTA PAULA, Calif.—One of the shortest intervals between occurrence of an aircraft accident and arrival of an FAA inspector on the scene was chalked up here recently.

While piloting a helicopter, the FAA inspector observed the aircraft prior to the accident, saw the accident happen and then promptly took part in the rescue of the stunned pilot. Time elapsed between the accident and FAA's arrival at the scene: virtually zero.

Robert Phelps, inspector from the Ontario, Calif., GADO, and Jim Dewey, recently-retired chief

of the Van Nuys, Calif., GADO, were in a helicopter flying in the traffic pattern at Santa Paula Airport when they noticed a new 150-horsepower aerobatic aircraft—a Citabria—coming in for a landing about 2,000 feet directly ahead of them.

The plane's approach to the 2,200-foot runway was slow and the two men noticed that it bounced perceptibly at touchdown. They observed that the pilot apparently decided to go around for another landing and applied power. At that point the aerobatic plane suddenly swerved toward a 14-foot-high

(Continued on page 7)

## New 'Failure-Proof' Power System Being Developed

WASHINGTON — Because of the sensitivity of modern electronic equipment to power outages and the effect on air safety, the agency is taking steps to provide all air route traffic control centers with an uninterruptible power supply system.

Analysis of requirements for electrical system modernization has led to selection of a fully modular design concept to provide maximum benefits. Modules will be used in a parallel redundant configuration, depending on power requirements for each individual facility.

To determine optimum cost-effectiveness of the individual module, the Systems Research and Development Service has conducted a study based on these considerations: reliability, universal ARTCC application, module interchangeability between ARTCCs, space and future expansion requirements, maintainability, electrical design and cost.

The study resulted in selection of an optimum module output capacity of 180 kva with an overload rating of 270 kva for 10 seconds.

Details of the analysis leading to the selected module configuration and its design are given in report RD-67-62, "Uninterruptible Power System Module Analysis." The study was carried out by Air Research Manufacturing Division of the Garret Corporation, under direction of FAA Project Engineer Fred E. Gilmore.

## Everybody's Welcome!

## Savings Bond Drive Now In Full Swing

WASHINGTON—In a kick-off meeting at Washington Headquarters, Administrator McKee declared May as the month to buy U.S. Savings Bonds and Freedom Shares throughout FAA.

As Chairman of the FAA "Buy A Share of Freedom" campaign, General McKee has asked for full participation by FAA personnel to set a high standard.

Throughout the country Regional and Center Directors, who have been appointed as chairmen of their respective districts, will furnish information for those interested in making a solid investment in the future through United States Savings Bonds.

Every FAAer has the opportunity to contribute not only to the growth and security of his country, but also to make his money work for him—to earn extra money, effortlessly.

Everybody wants to save. It is the "doing" that sometimes becomes difficult. With the payroll savings plan, the money you want to work for you is put aside and saved for you. Not only is it saved for you, but it also accrues interest (4.15 per cent for bonds and 4.74 per cent for Freedom Shares) at the same time. With bonds, that means for every \$3 you save, you will have \$4 at maturity—even more with Freedom Shares.

The savings plan offers you two alternatives. You may either purchase Savings Bonds separately, or purchase them in combination with Freedom Shares.

And, it doesn't take a large investment to participate. For as little as \$3.90 per bi-weekly pay period throughout a year, you will have accrued nearly \$150 when your Bonds and Freedom Shares reach maturity.

You can help your country financially and help yourself earn dollars too.

Consider investing in Bonds and Freedom Shares the easy way—through painless payroll savings.

## Flying Tourists Are Being Lured To Big Southwest

SAN ANTONIO—Two big attractions for air-minded tourists are certain to bring an increase in flight plans being filed for travel to and through the Southwest.

One is the "Hemisfair" in this city, site of the Alamo. The other is the summer Olympics—a day's flight away in Mexico City. Since the fair opened in April, air traffic has increased notably. And the city is ready to handle them.

San Antonio is already a city of air activities. Military aviation was born here and is still growing, as evidenced by the high density areas around Randolph AFB. More than 600 aircraft are based at area airports, with extensive military and civil student activities.

Air traffic controllers recognize the extent of the growing traffic and plans have been made for a smooth flow in and out of San Antonio and across the border. Flight service stations throughout the country are being sent information on air traffic procedures at San Antonio to aid in their briefings of pilots who plan flights into the Southwest.

The Southwest Region also has distributed a large folder containing detailed and comprehensive information to flight service stations that normally give briefings for flights into Mexico.

The "Hemisfair" theme is "The confluence of civilization in the Americas."

## AF and Agency Teamwork Saves Lost Arctic Pilot

KOTZEBUE, Alaska—U. S. Air Force and FAA controllers here teamed up last month to help a pilot lost over the Arctic icepack land his ice-laden aircraft in "white-out" conditions at the Kotzebue Airport.

Mortimer Clement, who was hunting polar bears 150 miles north of the Arctic Circle on a "tagging" mission for the Alaskan Fish and Wild Life Commission, became the hunted when he called "MAYDAY"—the distress signal—on the emergency frequency 121.5 mHz. Unable to land at his destination of Point Hope because of poor weather and severe turbulence, he elected to fly south in his ski-equipped Cessna 180 and try to land at Kotzebue.

Thwarted by deteriorating weather and low fuel, he called for help.

First to hear Clement was Lieutenant William D. McClintock, Duty Controller of the 748 ACW Squadron at Kotzebue. The officer determined by radar that the aircraft was heading west toward Siberia across the Chukchi Sea. He



## On Scope

Lt. William McClintock, USAF (seated), adjusts a radar scope at Kotzebue, Alaska, aided by Richard Tomany (pointing), Kotzebue Facility Chief, and Jon Ellsworth, ATCS. All three received "Special Service Certificates" for guiding a pilot lost over the icepack to a safe landing.

gave the pilot corrected headings to fly to Kotzebue.

At first, the flight service station at Kotzebue was unable to locate the Cessna with its direction finding equipment because the aircraft was beyond range. However, as it came closer to Kotzebue, bearings were obtained.

Working together, Air Force and FAA controllers brought the

Cessna to Kotzebue where a "hand-off" was made by Lt. McClintock to Jon Ellsworth, ATCS.

Clement made a number of passes at the village airstrip in low visibility conditions. He was advised by FSS to land at the nearby lighted airfield. After shutting down his engines, he determined that he had fuel enough for

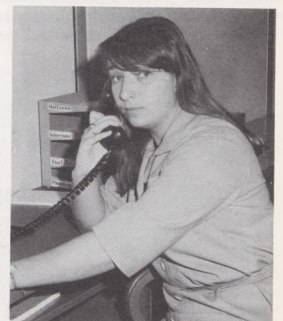
(Continued on page 7)

## FAAers Help In Civil Disorders

EDITOR'S NOTE: Diane Enos, writer for HORIZONS and INTERCOM, spent long hours from early Saturday morning until Sunday afternoon, during the civil disorders in Washington, D. C., doing volunteer work at the Washington Urban League. She estimates that over 60,000 calls were answered at the Urban League's Rumor Control Center during the tiring 30-hour stint. During the first part of the following week, after an eight-hour day at headquarters, she put in additional hours at the Urban League finding temporary shelter for those left homeless due to the disturbances.

By Diane Enos

WASHINGTON — During the civil disorders which beset the country early last month, FAAers



Diane Enos

in troubled areas worked long, arduous hours to keep the agency functioning smoothly. But more than that, many devoted their off-duty hours to help those directly affected by the disturbances.

Services performed by FAAers (Continued on page 7)



## FAA's Newest Team . . .

# Controllers and Computers

By Robert G. Kelm, Data Systems Coordinator, FAA Academy

OKLAHOMA CITY—Anyone who reads or flies knows that the air traffic control system is fast approaching saturation.

As private and commercial planes pour from factories into our skies and as IFR pilots increasingly choose the safety of instrument flight, FAA's 14,000 air traffic controllers strive to provide separation both in increasingly congested terminal areas and in the airways which link our cities.

Sophisticated tools help. Discrete radio frequencies and remote transmitters have further reduced the communications lag. Radar allows a controller to fit more planes into a given amount of airspace with more safety. New centers have been built around enormous telephone-radio-radar complexes; electronic maintenance rooms are beginning to dwarf control rooms.

Despite these advances, the heaviest burdens on the controller—coordination and flight data processing—have remained basically unchanged. Most controllers still write with red and black pencils on paper strips similar to those used 25 years ago. Strips are hand-carried to the various positions; coordination instructions are relayed man-to-man with heavy reliance on human memory.

As traffic has increased beyond every prediction, coordination and clerical duties have multiplied even faster; and it is in this area that most errors and incidents occur.

### Computer Systems Are Developed

The agency has been working since 1957 to develop computer systems which would alleviate much of the clerical workload. Air traffic controllers and engineers have been trained in computer programming at Sperry Rand in Minnesota and at IBM in New York. Controllers there were teamed with computer programmers from the companies to develop a basic air traffic computer program.

Computers began to absorb some of the flight data processing duties in eastern centers, but the anticipated reduction in controller workload was more than offset by the increase in air traffic. It became obvious that automation, to be effective, would have to be on a vast scale.

Such a computer system could not even be built until the micro-miniaturization breakthrough occurred in the mid-sixties. Astonishing advances in transistor technology made it feasible to design a system around modular components, which could fit into a control room and "grow" by adding new elements. The pace of computer science made it possible to build a system utilizing some components which are

still in early development and to make it "fail-soft," sensing its own disruption or internal failure and shifting its load to other units or to the controller himself.

The result was the IBM 9020 data processing system and, in 1964, the FAA decided to cast its lot with full-scale automation.

### System Will Predict Flow

The agency contracted for a system which would automate all data processing and most coordination, with provision for future digitized radar displays. Specifications call for a computer system which will predict traffic flow, display information when the controller wants it, store data until he needs it, calculate, scrutinize his radar through several systems and "pass the word" along from computer to computer, from center to center, and from tower to center at the speed of light.

The new system must be completely reliable and accurate—in air traffic control there is little margin for error. Each of the more than 20 computers will be able to handle input and output from more than 200 devices, teletype and radar links. Calculations will be performed in micro-seconds and all computers will be inter-connected in a nationwide automatic data network.

The new \$100 million system—National Air Space (NAS) Stage A—will be maintained by the FAA's own technicians and operated by data systems coordinators, who also are controllers.

As there is no industrial equivalent for air traffic control, the agency both set and broke precedents at every step. Men at the top realized that the vast system of automation must have the full support and cooperation of every controller. Even more important, the people developing and programming the computers must have the same sense of urgency and attention to detail which distinguishes the controller from other occupations where life-or-death decisions are not daily fare.

It became evident that it was more feasible to teach programming to controllers who have an aptitude for data systems than to teach industrial programmers how to think as controllers.

### Develop Agency Programmer Course

Beginning in 1965, a small group of instructors at the FAA Academy, controllers all, were sent to schools run by industry and by the agency's own engineers at NAFEC, as a prelude toward developing an agency programmer training course.

To the surprise of many, the first controller/programmers developed a high enthusiasm for the new field and an even more surprising aptitude. It appears that the quick logical mind of the controller is uniquely suited to computer science.

Blackboards at the academy were covered with flow charts and program instructions. The instructors began to swap information with earlier programmers in New York, Cleveland and other partially computerized facilities. They set out to remove any doubts from agency management that:

- (1) Controllers would be able to handle the IBM 9020 and the most complex data systems if they were trained; and
- (2) They could be trained by other controller/programmers. The FAA, with initial help from industry, could develop and support its own data systems workforce, one which was compatible with and attuned to the needs of the controller.

Washington decided to break precedent again, and to waive degree and data processing experience requirements. The agency began a search for controllers who had an aptitude for computers, realizing that the several hundred new specialists—to be known as Data System Coordinators

Dick Kaser instructs a class of Data System Coordinators. Representing eight ARTC centers: Chicago, Cleveland, Ft. Worth, Indianapolis, Jacksonville, Los Angeles, New York, and Washington, D. C.



Dick Marks checks the console typewriter while his working partner, Dick Kaser, observes.

(DSC)—must be far more than programmers. They must remain conversant with both air traffic control and computer fields. They must analyze, adapt and improve computer systems in a "real-time", where action is taken now.

So new and so different is this occupational field that an adequate position description still hasn't been written. Who knows exactly what a DSC will be doing one year from now? This was another move based upon faith in the controller's ability to adapt and master new techniques.

The instructors at the academy were given the task of developing a training course on a system which wasn't even completely built yet. For texts, there were only technical manuals written for engineers. The language gap between the jargons of air traffic control and computers had to be bridged. The course could not wait for texts to be printed; it would have to rely on practical application and the ability of the instructor to communicate with a minimum of training aids.

Groups of controllers, selected by competitive examinations, began attending a rugged 16-week DSC course last year. Maintenance technicians train for nine months. Both teams share the same training computer, installed at the academy. Maintenance takes it apart in the daytime; controller/DSC's learn to master its operation at night.

Weeks of classes and hours of night time study are spent learning computer "language," systems configuration, programming and job processing, in what has been called the "longest, toughest course ever given to controllers." One trainee termed it "a little like trying to take a drink of water from a fire hose!"

The students write actual programs which are submitted to the unforgiving computer. The machine can be blunt when it catches a mistake and "bombs" a program.

### Fourth Training Class Now On

As this is written, the fourth DSC class is deep in that strange computer mathematics where  $1+1=10$ . As Fred M. Marks, Chief of the Academy's Air Traffic Training Branch, comments, "Its more than a new language, its a whole new world opening for controllers." Others in ATC regard Marks' think factory with awe and perhaps nostalgia for those simpler days when the skies were not so crowded, and a computer was a handy pocket calculator.

Initially, the computer system will concentrate on the clerical/coordination bottleneck which ties up 70% of a controller's time. As with any new trainee, the computers will be kidded when they make their first goofs. The agency has learned from experience with experimental systems at Atlanta Tower and Jacksonville Center that an engineer who is not a controller can not design a perfect system for controllers. The controller will take his new tools, suggest, improve and criticize, until the end result surpasses anything imagined by the designers.

The transition to automation will not happen overnight—some refinements and devices necessary before the computer can handle radar displays may even be beyond the present state of the art.

But as competence and confidence increase, more of the controller's time will be freed for the basic decision-making and sequencing responsibilities which only he can perform.

Current plans call for automation courses at the academy through 1970. As each new facility comes into the system, it will share the experience of the earlier facilities. Lateral communications will be developed and encouraged between all data groups. These next few years will see the data systems team, the maintenance team and the controller team working together to extract new services from their computers.



Three instructors who teach data processing to controllers in the agency's Programmer Course at Oklahoma City are (left to right): Dick Kaser, Bob Williams and Ted Goodlin. Here they check a high speed printer for student results.

# Flying Racing Fans Get AT Service While Enjoying Sebring Grand Prix

Story and Photos  
By Ronald Billib  
ATC Tower, Sarasota

SEBRING, Fla.—Once again this sleepy central Florida town's airport underwent a magical transformation into an international Grand Prix race course. To provide air traffic control services to the hundreds of pilots flying in for the big race, Orlando-based Controllers Dewey Bostdorf, Emil Smigelsky, Peter Carmack and Lee Trepanier again manned the temporarily reactivated World War II control tower.

For four consecutive days recently, the airplane took a back seat to high-powered prototype cars and sedans competing for rich purses in the Trans-AM, Formula V and 12-hour Sebring races. The international aspect of this race is emphasized by the numerous entrants from Europe, South America along with the United States.

Working with portable VHF transceivers, Orlando controllers handled 1,211 aircraft operations during the racing competition without incident or accident.

Providing excellent flight service

support were St. Petersburg FS Specialists Ed Catt and William Momfort. By means of specially installed telephone equipment, they provided pilot briefings, flight planning and flight plan closures from their temporary desks in the airport operations room.

On the day of the grueling 12-hour Sebring, dawn broke with low, overcast skies, a nip in the air and 20 to 30 knot northwesterly winds. Pre-noon brightening skies and rising temperatures, however, allowed a total of 850 planes to fly in that day. At one time there were 450 aircraft, ranging from Mooney A2-As to DC-3s to Lear Jets, standing on the designated parking areas on the airport's east taxiways.

Many pilots were overheard remarking about one of the most unusual aspects of flying in or out of Sebring Airport during race days—aircraft many times shared runways with the race cars. It was not unusual to see a racer on one side of the runway whiz past a plane on takeoff or landing on the other side.

Constantly buzzing overhead were as many as six helicopters at a time, ferrying people to and from town, conducting sightseeing

rides over the race course and providing aerial coverage to the news media's reporters and cameramen.

On the lighter side, the usual complement of fun-loving people were on hand, bent on turning the race event into a gigantic festival and sleep-in.



## Le Mans-Style Start

Drivers sprint for their race cars from the required Le Mans-type starting position to open the 1968 12-hour Sebring Endurance Race held at Sebring Airport. Helicopter hovering over the race course is one of several covering the action for newspapers, radio and television. From a nearby temporary tower, controllers from Orlando Tower provided ATC services for pilots.



## Temporary Tower

Controller Peter Carmack, Orlando Tower, works heavy inbound-outbound air traffic from his position in the temporary tower, reactivated at Sebring Airport to provide control services to the hundreds of airmen flying in for the international race. During the daylight hours of the 12-hour Sebring Endurance Race, 850 operations were logged.



## VHF Checked

James Carr (left), Orlando-based electronics technician, checks the temporary VHF communications set-up with Controller Lee Trepanier in the former World War II tower at Sebring Airport.

# Top Central Region Secretaries Hold Regular Monthly Meetings

KANSAS CITY—Each quarter of the year, division and staff office secretaries of the Central Region meet to discuss matters of mutual interest. Usually held in the form of luncheon meetings, the forums provide the ladies with an opportunity to exchange ideas and to discuss their duties and working relationships with those who have common problems.

According to Wilma Dembroski, secretary to Edward C. Marsh, Central Region Director and moderator and coordinator for the group, the meetings serve as an excellent medium to help the working girl keep abreast of the latest secretarial skills, correspondence techniques, clerical procedures and regional activities.

A guest speaker is usually in-

cluded to talk on a topic of interest to all. At a recent meeting, Dr. Jane Berry, Director of Continuing Education for Women, University of Missouri at Kansas City, addressed the group on the need for continued education for women. She stressed the importance of recognizing and applying one's abilities toward opportunities that will be available for women in the future.

The meetings were started in the fall of 1967. Thus far they have proved very popular among the region's key secretaries.

It's not just a one-way street. The agency benefits by nurturing better informed secretaries who can carry out their important responsibilities more efficiently and more effectively.



## Together

Central Region secretaries get together for a quarterly meeting. Addressing the group is Dr. Jane Berry, Executive Director of Continuing Education for Women at the University of Missouri at Kansas City. At far left is Wilma Dembroski, secretary to the Central Region Director and moderator and coordinator for the group.

# Wants Cabin, Not Cargo Space

# Sorrowful, Discouraged Dachshund 'Writes' Letter to the President

By John Leyden

CHICAGO—When man "bites" dog, that's news. Even the President of the United States gets involved.

The dog in this instance is Wee Willie, a six pound miniature dachshund. Wee Willie is from Chicago—very often from Chicago, as a matter of fact.

That's the problem. You see, Wee Willie travels a great deal with his owners, who happen to be in the travel business. In all, he has logged more than 50,000 miles with the various U.S. airlines. That's equivalent to 20 trips across the country or twice around the world at the equator, take your pick.

Until very recently, Wee Willie enjoyed flying. He found it very relaxing and usually slept the entire trip in a special carrying case at the feet of his owners.

But then things changed. On his last trip—from Chicago to Wausau, Wis.—he was told that because of new Government safety regulations restricting "carry-on" baggage, he no longer could ride in the passenger cabin with his owners. He was relegated to the luggage compartment and what happened to him there shouldn't have happened to a dog—especially to a dog.

Wee Willie later wrote President Johnson describing his ordeal:

"... I was put in the back luggage compartment of the aircraft which was unheated and non-pressurized. The ground temperature in Wisconsin was around zero, and by the time I was taken off the plane in Wausau, I was practically frozen. Had the trip been longer, I probably would have died. Also in taking me off the plane, I was thrown from one cargo man to another as though I were an ordinary piece of luggage. My master practically had

to cause a riot at the airport to get them to lift the luggage before my case collapsed."

Because FAA issued the regulation covering carry-on baggage, President Johnson asked the agency to respond to Wee Willie's letter. FAA's reply was written by Curtis A. McKay, Chief of Air Carrier Operations in FAA's Flight Standards Service. McKay is intimately familiar with the problems of dachshunds, having lived across the street from one for some time.

"I am very sorry that you were subjected to such a grim experience on your last flight," McKay wrote Wee Willie. "This is certainly no way to treat man's best friend."

"However," McKay continued, "the new regulation was adopted because of safety considerations for passengers—people, that is (alas, not dogs!). Before this regulation was passed, there were no provisions for securely stowing carry-on baggage. Thus, if the flight unexpectedly encountered turbulent air, the loose baggage could be thrown around the cabin and might hit a passenger. The passengers, of course, wouldn't be thrown around,

because they would have their seat belts fastened.

"Also, in case of an incident or accident during takeoff or landing where the passengers would have to evacuate the airplane, we want to get them out as quickly as possible."

"You can see that if loose baggage blocked the aisles and passageways to the emergency exits, the evacuation time would be greater. This might mean the difference between life and death to some of the passengers in case a fire broke out."

All of this would seem to indicate that Wee Willie's days of traveling first class are at an end.

However, McKay took pains to point out that the new regulation "does not prohibit your master or mistress from carrying you on board in your case, provided there is room under the seat or there is a suitable baggage or cargo compartment in the cabin."

"Therefore," McKay continued, "may I suggest that, prior to your next flight, your master or mistress contact an airline to be sure that it can safely accommodate you."

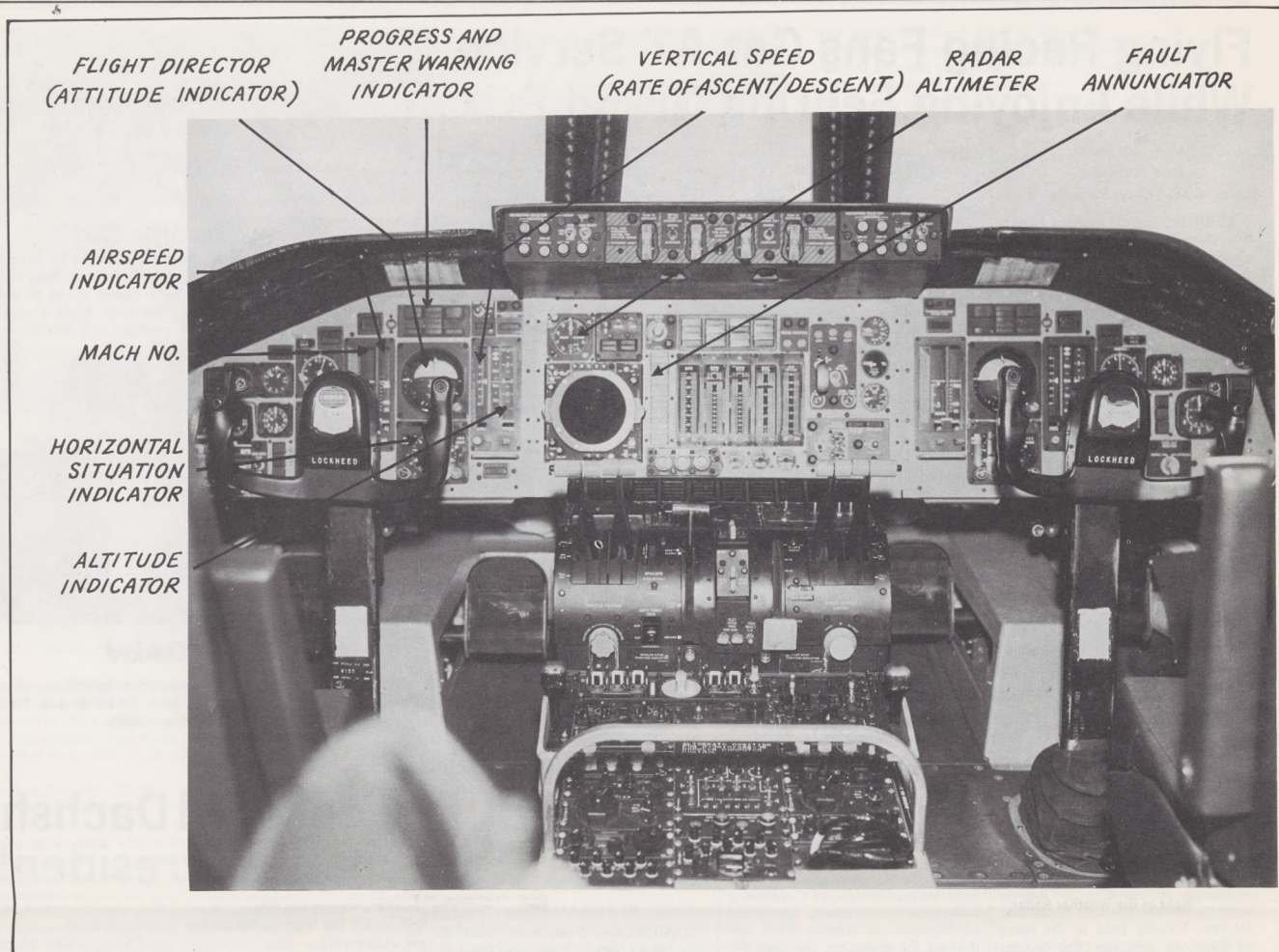


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## FAA Test Pilots Are . . .

# 'Sweating Out' Zero-Zero L

By Francis J. Brandl

ATLANTIC CITY—"In a real socked-in situation we wouldn't have had anything like that," said James R. "Mike" Nelson. He was describing his flying experiences recently as pilot of the Air Force C-141 StarLifter at NAFEC.

"We were shooting landings under wind conditions that bordered on our operating limits, with a cross wind of 25 knots—occasionally gusting up to 35 knots." Normally, the maximum allowable cross wind is 30 knots.

These were not normal landings, though. They were full zero-zero type all-weather landings being made "under the hood." In these so-called Category III approach and landing operations, the pilot sees nothing but his cockpit instruments until after the wheels have touched down and the airplane is slowed to taxi speed on the runway.

If these landings had been made under actual zero visibility, there is almost no likelihood that the wind would have been gusty. Winds in heavy fog are usually light and variable if any are present at all.

So the simulated all-weather landings were being made with rather formidable demands on both the aircraft system and the pilot. Even so, the system landed the airplane beautifully.

The all-weather landing system is designed to bring the airplane down automatically. The pilot acts only as observer to make sure all sub-systems are operating efficiently. But he remains in command at

all times and has the capability to override the automatic system at his discretion.

### Warns If System Is Off

If the automatic monitoring system indicates that any sub-system has become disengaged, or if any failure warning occurs, the pilot must decide, from the nature of the alarm, either to continue the landing with partial or full manual control, or to execute a missed approach and go-around.

Thus the pilot must be fully trained to manually operate the system under instruments just as the automatic system does.

Mike Nelson is Systems Research and Development Service project manager for the C-141 all weather landing program. He was one of three test pilots on the flight deck of the StarLifter that day, having taken over the duties of a NAFEC test pilot who had been called to active duty with his Air Force Reserve unit.

Nelson alternates flying the aircraft with one of two other NAFEC test pilots assigned to the program—Bill Stephens or Ted Billen. They were taking part in the training and familiarization phase of the flight test program, prior to the data collection phase when official records will be kept. The program will result in an FAA report on the problems associated with all-weather landing.

Lt. Col. Bruce Marshall, NAFEC test engineer directing the flight tests, will prepare the final evaluation.

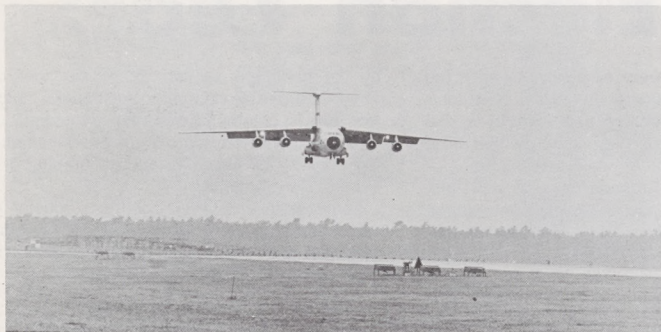
During this preliminary phase of two to three weeks the manufacturer is permitted to make changes, alterations and modifications to the landing system, which is still in the development stage. Later, the configuration will be "frozen" and the system will be evaluated as a prototype Category III All Weather Landing System.

### A Safety Pilot Is Aboard

The third pilot in the cockpit was the safety pilot, Lockheed Aircraft Company's representative H. B. Armitage. He is a seasoned veteran with the system, having test flown it many times during the checkout phase, prior to assignment of the Lockheed airplane to NAFEC for the FAA test program. The safety pilot has full visibility and is responsible for command of the flight during the FAA test pilots' simulated "blind" landings.

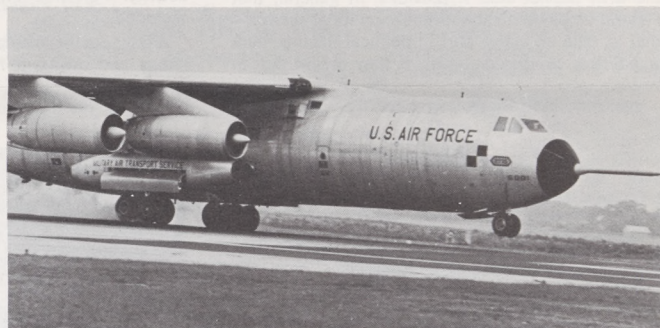
Mike Nelson has nothing but praise for the automatic mode of the all-weather landing system. "It stays glued on the beam," he related, "then at about 18 feet over the runway it kicks the crab out, touches down, and rolls out to a stop as pretty as you please. Then you lift the hood and she's right smack on the centerline."

All the decisions to operate the controls which keep the aircraft on course at the proper rate of descent and speed are performed by small but complex and sensitive computers, each about the size of an ordinary shoe box.



In this series of photographs of the automatic landing system being tested at NAFEC, the viewer can see its completeness. At top left, the C-141 aircraft is at 100 foot altitude, at which height, in most "automatic" systems, the pilot must take over. In the center, the automatic system still has control and, at bottom, the new C-141 All Weather Landing System retains full control until the plane slows to taxiing speed.

◀ The production C-141 StarLifter has automatic landing capability. Key instruments are directly in front of the pilots, behind each yoke. Main instrument is the circular display behind the right grip—the Attitude Indicator. Beneath it is a Horizontal Situation Indicator. Grouped around them, from top center, are: Progress and Master Warning Indicator and strip indicators giving vertical speed and altitude. Strips at left give Mach number and airspeed. On the center panel, is the Weather Radar, with the Radar Altimeter directly above. If anything malfunctions, lights go on in the Progress and Master Warning Indicator, directing the pilot to the verticle strips, located to the right of the Weather Radar, for specific nature of the fault.



# o Landings

The flight director computer takes signals from the ILS receivers and other sensors on the airplane and computes bank and pitch steering commands on the pilot's display throughout the approach and landing.

Another computer generates similar commands for the autopilot, which actuates the ailerons, rudder and elevator to maintain the airplane precisely on the proper flight path.

An automatic throttle system will also maintain the airspeed automatically if the pilot elects to use it.

### Pre-Landing Flare Signal

At about 50 feet above the runway, the autopilot computer disengages from the glide slope signal and a radar altimeter gives signals to the flare computer, which establishes the proper attitude for the airplane to touch down on the runway.

About 18 feet above the runway, a fourth computer neutralizes the crab angle during cross wind approaches and aligns the longitudinal axis of the airplane with the runway centerline, steering the airplane down the centerline during rollout.

Both computers direct the automatic mode and drive displays for the pilot to use in the manual mode.

Full manual instrument landings are work—real hard work, Nelson says, particularly in the beginning. The size of the C-141 and its rather spongy response to changes in the aileron controls, along with very high sensitivity of the cross-pointers on the flight director instrument, demand intense concentration,

resulting in mental and physical strain. Every landing is literally "sweated out."

Training is a critical part of the entire all-weather landing concept.

Success or failure of the pilot to achieve the skill needed for manual operation will be crucial to its operational use, according to Nelson.

"We are beginning to uncover the improvements we need to make," he says, "which is the reason for the test program. One of our preliminary conclusions is that we need a little more sophistication in the flight director computer to help the pilot keep the needles centered." Nelson is referring to the ultra-sensitivity of the pitch and bank steering pointers of the flight director.

### Make IFR Landings Manually

Because of the difficulty in making an instrument landing completely under manual control, such attempts occasionally result in a go-around. This maneuver is executed when the aircraft is less than 100 feet above the runway and the instruments indicate an excessive deviation from the desired flight path.

One flight per day is scheduled for the flight test program, with six to 12 landings for each of two pilots during each flight.

Much good solid data will be accumulated before testing is concluded in June—a date Mike Nelson is "sweating out" as much as each zero-zero landing.



Three FAA project pilots who make hands-off approaches in the left seat of the "StarLifter" at NAFEC are (left to right), James "Mike" Nelson, Theodore Billen and William Stephens. With a Lockheed safety pilot in the right seat, the plane is landed automatically until it comes to a full stop.

## What FAAers May Do In . . .

# This Exciting Election Year!

The year 1968 denotes many different things—it means February has 29 days, it means the girls can take the initiative and ask, instead of waiting for a ring, it means the 192nd birthday of the USA—but most exciting of all, 1968 is election year.

It's impossible to pick up a newspaper without reading about the Democrats and Republicans and Independents, and the Hawks and Doves. Convention plans are front page copy and some days nobody knows who's "In" and who's "Out," and who hopes to oust whomever is in.

In the bustle and flurry created by the frantic pre-election pace, it is hard not to become caught up in the excitement.

Federal employees covered by the provisions of the Hatch Act are, however, prohibited from engaging in certain forms of political activity.

So that no FAA employee will be unaware of the protection afforded him, nor the restrictions affecting him, under the Federal merit system, HORIZONS offers this simple summation of acceptable and unacceptable political activity:

Federal employees who are a part of the Government's career civil service are protected by law from efforts to force them to render political service or tribute. This protection has not always been the case. Federal employees derive this protection from the Civil Service Act, passed in 1883, which laid the foundation for the Federal merit system.

The Hatch Act, passed in 1939, goes further than the Civil Service Act. It provides, in general, that Federal employees cannot render political service—that is, take an active part in political management or political campaigns—even if they are willing to do so.

Basically, both these laws have the effect of in-

cluding the Federal career employee against the impact of political considerations that might damage his job tenure. They are a protection to the employee against political "reprisals"—which were the order of the day under the "spoils system"—because they eliminate grounds for such reprisals.

The problem of patronage in Government service goes all the way back to the time of George Washington. However, the spoils system did not come into being until about 1829. The need for reform, highlighted by the assassination of President Garfield by a disgruntled office seeker in 1881, resulted in the passage of the Pendleton Act of 1883, more commonly known as the Civil Service Act.

Even then, only 10 per cent of those on the Government employment rolls fell under the jurisdiction of the newly passed reform bill. By 1900, approximately 45 per cent of those working for the government were protected from political pressure under the spoils system.

Finally, in 1939, in retaliation to a "purge" by President Roosevelt, Congress passed the Hatch Act. The act was amended in 1940 so that coverage was extended to cover state and municipal employees funded by Government monies.

### Those Subject to Restrictions

In general, employees of the Federal Government and the District of Columbia Government, whether career or excepted, are restricted in their political activity. Part-time and temporary employees are included.

A few specific exemptions are made, including the heads and assistant heads of departments, members of the White House staff and officials who determine national policy and who are appointed

by the President subject to Senate confirmation. There is a partial exemption for Federal employees who live in communities in the immediate vicinity of the National Capital and in other communities, the majority of whose voters are employed by the Federal Government.

Some state employees' political activity also is restricted. They are employees whose principal employment is in connection with an activity which is partly or wholly financed by Federal funds.

### Penalties for Violation

The Civil Service Commission enforces political activity restrictions for employees in competitive positions. The Commission makes investigations and holds hearings in cases involving violations. The most severe penalty for violation is removal, and the minimum penalty is suspension without pay for 30 days.

In cases where removal is ordered by the Commission, the employee may not be reemployed in any position whose salary is paid from the same appropriation as the job from which he was removed.

Employees in excepted positions come under the jurisdiction of their agency head in political-activity matters.

If you are uncertain whether a certain action would violate political activity rules, you should contact either your Regional Counsel or the General Counsel, or present the matter in writing to the Civil Service Commission.

You should be sure to get a ruling before you engage in any political activity, since ignorance of provisions of the law will not excuse you from penalties for violation.

## You May

- You have the right to vote as you choose. Political activity restrictions do not relieve a Federal employee of his obligation as a citizen to inform himself of the issues and to register and vote. In states where absentee balloting is prohibited, employees may be given up to one day off without charge to leave in order to register and vote.
- You have the right to express your opinions on all political subjects and candidates as long as you do not do so in such a manner as to take an active part in political management or political campaigns of a partisan nature.
- You may make voluntary campaign contributions to any regularly constituted political organization.
- You may display a political sticker on your private automobile.
- You may wear a political badge or button.
- You may accept appointment to such positions as member of boards of education, school committees and boards of public libraries if your agency decides the holding of these local offices will not interfere with the efficient discharge of your Federal duties. If these offices are elective, you may not participate in a partisan political election.
- You may participate in a non-partisan local election in which party designation, nomination and sponsorship are completely absent. You may be a candidate for office in such an election and you may hold the office after election if the head of the agency decides that holding it will not interfere with your Federal employment.
- You may petition Congress or any Member of Congress. For example, you may write to your Congressman and tell him how you think he should vote on any issue.
- You may sign petitions, including nominating petitions, but may not initiate them or canvass for the signature of others if they are identified with partisan political management or campaigns.
- You may attend political rallies and join political clubs, but cannot take an active part in the conduct of the rally or the operation of the club or act as chairman, committee member or delegate. You may vote on issues, but you may not speak for or against them.



## You May Not

- The general prohibition on Federal employees is that they may not take an active part in political management or in political campaigns of a partisan character.
- You may not be a candidate for nomination or for election to a national or state office. You may run for a community office only as delineated in the "You May" column on the left of this page.
- You may not solicit others to become candidates for nomination or election to partisan offices.
- You may not campaign for or against a political party or candidate.
- You may not use your automobile to transport voters, except members of your immediate family, to the polls. However, riders in regularly scheduled carpools can stop at the polls on the way to or from work.
- You may not distribute campaign material.
- You may not march in a political parade.
- You may not sell tickets for or otherwise actively promote such activities as political dinners.
- You may not write for publication or publish any article or letter soliciting votes for or against any political party or candidate.
- You may not solicit or receive any assessment or contribution for any political purpose.
- You may not make a political contribution in a Federal building or to some other employee.



# Direct Line!

This is your direct line to the top. Your questions will get answers! Employees are encouraged to discuss questions with their supervisor or local P&T office. However, if this is not convenient, questions addressed to Joseph H. Tippets, PT-1, FAA, 800 Independence Ave., S.W., Washington, D.C. will be answered. All questions should be signed, and concern only personnel and training programs, policies and procedures. What's your question?

Question: I have two questions: (1) How can a fair comparison be made between my job as an air traffic controller and any job in private industry—or with that of a postman?

Answer: A comparison of "kinds" of work—air traffic controller, postman, etc.—is only one of the factors in determining pay. A more important factor is the "level" of work (GS-5/7/9/11, etc.) which is determined by the degree of difficulty, authority and responsibility involved in the job. Thus, a GS-12 air traffic controller should be working at the same level of work as a GS-12 engineer, management analyst, or general aviation inspector. When Federal pay scales are compared with those in private enterprise, they are compared level by level.

Question: (2) Why aren't air traffic controllers included under a special pay scale similar to the one specified in the latest pay bill for engineers, scientists, accountants, etc.?

Answer: A few air traffic control positions are already included under a special pay scale—commonly known as "504" rates. At O'Hare Tower, for example, controllers are paid more than the minimum rate of basic pay that their grade calls for. Requests for these special rates may be approved by the Civil Service Commission when it is difficult to recruit or retain well-qualified personnel. This situation occasionally exists in large metropolitan areas where there is strong competition for critical skills. As a result, a special pay rate may be established for a specific geographic area, office or even one facility.

Question: I have a two part question: (1) PT P 3750.1A, paragraph 63, says that letters of reprimand and other related documents must be withdrawn from the official personnel folder only if an employee's reply or grievance procedures justify this action. Does this apply to the more serious actions—discharge, suspension, etc.—if the adverse action was successfully appealed?

Answer: No. The provisions of this paragraph cannot be applied to the more serious adverse actions. In accordance with CSC regulations, a Notification of Personnel Action (SF-50) must be filled out each time an adverse action occurs. All SF-50's are a permanent part of the Official Personnel Folder and—along with those documents supporting the adverse action—cannot be removed from it. Of course, evidence of a successful appeal will also be included.

Question: (2) Must all reference to written reprimands, including that contained in local facility files, be removed in accordance with this paragraph?

Answer: The basic intent of this paragraph is to insure that written reprimands and related documents are withdrawn from the Official Personnel Folder when it is determined the reprimand should not remain a matter of record. The OPF is the official repository of the records and reports of personnel actions affecting employees. Its contents are important to the employee because they are used as a basis in determining promotions, transfers, etc. Local facility records have no official significance in this regard.

Question: My question is in two parts: (1) What is the agency policy with respect to working hours in each day in the basic workweek when on multiple shift operations?

Answer: The policy, in essence, is that hours of duty will be assigned as necessary in order to accomplish the mission of the agency. Those who are responsible for establishing tours of duty are expected to keep the interests of the employee in mind. However, in the interest of aviation safety, the needs of the FAA must be paramount.

Question: (2) Should the working hours be the same all week or can they be jumped from one shift to another and another in the same week? This is in reference to PT P 3600.3, Chapter 4, paragraph 12a (4) and T&A Handbook 2730.2, Chapter 1, paragraph 5c(2).

Answer: These references state that hours of duty and non-work days will be regularly recurring each calendar week. However, you will also find that PT P 3600.3, Chapter 3, paragraph 10, permits exceptions to this policy when the agency would otherwise be seriously handicapped in carrying out its functions. The T&A Handbook will be changed to provide for the exceptions authorized in PT P 3600.3. Thanks for pointing this out.

Question: Is there a possibility GS-856-9/11 Electronic Technicians associated with the new NAS Program (e.g., Input/Output, CCC, Common Digitizer) will eventually be classified into a different series of specialty, for example, Data Processing Technician?

Answer: The present allocation guide, which was developed specifically for the NAS program, is being reviewed based on experience gained at Jacksonville Center. Although the results of this review have not been announced, the maintenance positions series will likely remain unchanged since the GS-856 classification series does adequately cover these positions.

## GADO Inspector Arrives Instantly

(Continued from page 1)

clump of castor bean trees adjoining the runway.

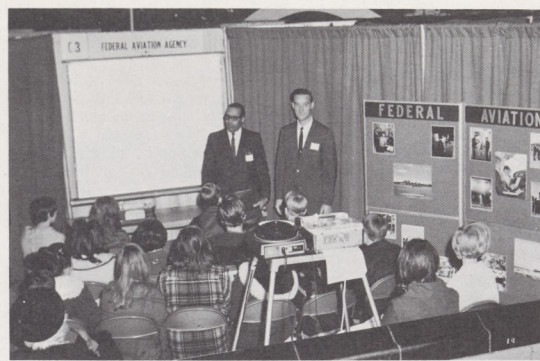
"It's going in!" Dewey exclaimed.

Both men's eyes were riveted to an accident in the process of taking place. They watched as one of the plane's wingtips snagged in the trees and crumpled, causing the aircraft to swing violently around and perform what Dewey referred to as a "low, snap roll."

### Into the River

Then, with a splash, the plane plunged nose-downward into the ankle-deep waters of the Santa Clara River which flows parallel to the runway.

Within seconds of the crash—Phelps said water from the splash



### Stay In School

Leonard Carper (left), personnel specialist, and Earl Skolaut, employee development officer, both of the Central Region, tell high school students at a Career Fair held recently in Kansas City why it is important for them to continue their education. Nine governmental agencies and 45 of Kansas City's largest private employers participated in the program.

## Agency Proposes To Replace Its TSO System

WASHINGTON—FAA is considering rule making action to establish a new system for approval of aircraft materials, parts and appliances.

In an Advance Notice of Proposed Rule Making the agency has asked for industry comments on a tentative plan for replacing the present Technical Standard Order (TSO) system with a new Unit Approval System (UAS). The new plan would incorporate technical standards for approval of aircraft materials, parts and appliances directly into the appropriate airworthiness parts of the Federal Aviation Regulations — Part 23 (Normal, Utility and Acrobatic Category Airplanes), Part 25 (Transport Category Airplanes), Part 27 (Normal Category Rotorcraft), Part 29 (Transport Category Rotorcraft), Part 31 (Manned Free Balloons), Part 33 (Aircraft Engines), and Part 35 (Propellers).

Present regulations provide that a material, part or appliance may be approved by either of two principal methods: In accordance with a TSO or in conjunction with type certification procedures for an aircraft, aircraft engine or propeller.

A deficiency of this dual system is that it permits inconsistencies between the standards applicable to

an article that are imposed on an article manufacturer seeking TSO approval, and the standards imposed on an aircraft, engine or propeller manufacturer using the same or similar article and seeking type certification approval.

All comments should be addressed to the Federal Aviation Administration, Office of General Counsel, Attention: Rules Docket, GC-24, 800 Independence Avenue S.W., Washington, D. C. 20590. Deadline for comments is July 10.

## Teamwork Saves Lost Arctic Pilot

(Continued from page 1)

only 10 more minutes of flight. Ice had built up two inches thick on his wing struts.

For their combined efforts, Special Service Certificates were presented to Ellsworth, who handled the direction finding contacts, and to Richard Tomany, Facility Chief, who lent a hand.

Nome Area Manager Carl Melton also presented a certificate to Lt. McClintock on behalf of Alaskan Region Director Lyle Brown. Said Brown in a letter to Major General Thomas E. Moore, Commander of the Alaskan Air Command: "I know this evidence of good work and close coordination between the Air Force and FAA facilities will be as pleasing to you as it is to me."



### King at Dulles

King Olav V of Norway (right) is greeted by U.S. Chief of Protocol, Ambassador Angier Biddle Duke, as he enters a mobile lounge at Dulles International Airport upon his arrival from Norway April 24. FAAers from Washington headquarters were among those present at the official welcoming ceremonies for the King, held on the south lawn of the White House shortly after his arrival.

## FAAers Help In Civil Disorders

(Continued from page 1)

included the collection of food and clothing, manning of emergency telephones for long hours, assistance in obtaining legal aid and donation of funds.

One FAA employee in Washington, Wilbert Brantley, who works with the Bureau of National Capital Airports (BNCA), worked late the first evening of the disorder in Washington. He returned home, tired after a long day, to find his "entire block ablaze."

All he had left were the clothes on his back, and a few things which he had left at the cleaners in another part of the city. Upon hearing of his plight, the employees at BNCA found a place for Brantley to live and took up a collection of money to help him through the difficult process of rebuilding.

Brantley wasn't the only person helped by FAAers during the difficult period a few weeks ago. In response to a broadcast request for legal services, Michael Raoul-Duval, a lawyer in General Counsel, spent most of Saturday, Sunday and Monday doing what he could to offer "the right to counsel" to some of the more than 5,000 persons arrested during the weekend.

He relates that after having presented a successful motion to dismiss charges against a 75-year-old woman, who had been arrested for burglary and had been held more than 30 hours because of lack of bond, he was touched by the tearful thanks of her family. They seemed surprised that anyone would take so much time to help.

### More Lawyers Help

Duval wasn't the only FAA lawyer who volunteered his talents to assure that every citizen arrested had adequate legal aid. Larry Smith, of General Counsel, was given a misdemeanor case. Cynthia Straker donated her services at the Court of General Sessions, where she helped arrange bond for those who needed it.

Other FAA lawyers who offered their services, but who were not needed, were John Arata, William Broderick, Joseph Jeffrey, David Mahan and William Sullivan.

A large number of the personnel at headquarters took time to collect food and clothing and deliver them to central distribution points.

Jim Harris, Chief, Aeromedical Education Division, and his wife spent most of that Saturday and Sunday working with their church group to collect the necessities of life for those who had been burned out during the fires which swept parts of Washington.

Personnel from the Office of Aviation Medicine who helped with the collection activities were Francis Banks, Helen Lawrence, Helen Dudley and Marilyn Fobbs.

In addition to the individual offers of aid from FAA personnel, many hundreds of dollars were contributed to the DOT Emergency Fund. This money, combined with that collected from other department organizations, will be used to help those affected by the rioting.

The individuals mentioned here are but a few of the many FAAers who donated their time, talents and energy to helping the innocent victims of this civil disorder.

FAA employees, not only in Washington, but all over the country, offered to help and did help when they found their fellow man in need.

## Handsome Logan TRACON Starts

By Frank J. Puglisi

BOSTON—A minute after midnight one morning last month, radar controllers working in the darkened, cramped quarters of the radar room on the seventh floor of the control tower at Logan Airport turned on the lights and walked away from their radar scopes and out of the room.

In less than an hour, they were back at work when radar control was reestablished one floor below in a spanking new terminal radar control room.

And what a difference a floor makes!

The new TRACON has 1,240 square feet of floor area, or more than three times the space of the old quarters.

Sixteen-inch FAA-7300 radar scopes have replaced the obsolete 10-inch ASR-3, indicators. "It's like going from a 14-inch television set to a 23-inch set," said one controller. Besides this, two additional and much needed radar positions have been provided.

Communications are appreciably improved with the inclusion of the advanced Telco 301 automatic push-button system.

Esthetically the room is a decorator's dream. From a handbook as

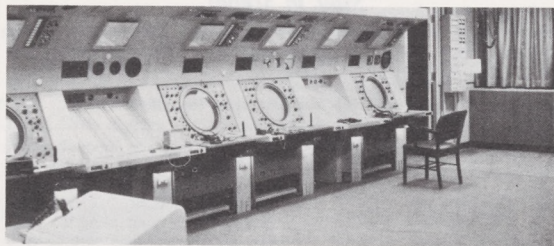
drab sounding as the one entitled "Improvement of Operating Conditions at TRACON Facilities" have come such visual delights as a two-color paint scheme, wall-to-wall red carpeting, dimmer-controlled wall and console lighting and electro-luminescent map displays. Double-layered aqua drapes cover the windows to keep out the sunlight.

Floor to ceiling wall partitions bisect both rows of equipment, thereby creating spacious, well-lighted maintenance areas behind the radar and communications consoles. A wall partition was also

built in front of the air conditioning equipment, creating a separate room for ease in maintenance and to decrease noise levels.

Modification of flight data desks permits utilization of three strip holder units per desk, and also provides for disposal of used flight strips into built-in wastebaskets behind the desks.

A suspended acoustical ceiling not only improves sound characteristics, but enriches the room's appearance and hides the intricate network of cable and air ducts and service conduits.



**Empty Palace**

The elegance of the new radar room at Boston Logan Tower is plainly evident in this photo taken just before the facility went into operation.

## Jeffco Tower Ends First Year With Zero Errors

BROOMFIELD, Colo. — Jefferson County Tower here, newest facility in the Denver Area, has completed its first full year of operation as a VFR tower, operating daily from 6 a.m. to 10 p.m. with the following remarkable record:

Total aircraft movements: 279,486; total systems errors: 0; total sick leave used: 0; total annual leave forfeited: 0; total overtime worked: 16 hours; total controllers: 7; daily traffic average: 765.74; and approximate cost-per-service: 38 cents.

Headed by Tower Chief Lawrence (Larry) Ebert, the controllers responsible for this enviable record are: Charles Abell, Jr., Layne Brown, Charles Digby, Paul Connell, Franklin Fuhrer, Francis Guethle and Robert Moore. Thomas MacDonald, one of the original crew, has since transferred to another facility.

Jefferson County Tower, located on Broomfield Airport at the eastern foot of the Rocky Mountains, 15 miles northwest of Denver, provides service to three local fixed base operators. Also based on the field are the Colorado Game, Fish and Parks Department Aeronautical Branch; U.S. Forest Service Air Operations Branch; Atmospheric Research Center Aeronautical Branch; Coast & Geodetic Survey; Colorado Aero Tech, a specialized ground training school, and the Denver Tri-Pacers Flying Club, the largest in

the flying state of Colorado.

Itinerant jet and other business aircraft visiting Boulder, Longmont and Denver utilize the ultra-modern facilities available at the airport.



**Anniversary**

Jefferson County Tower at Broomfield, Colo., surrounded by a mantle of spring snow, has set remarkable records of operation for its recently-completed first year.

## For Agency Publications

### Book Buying Is Easy In Alaska

ANCHORAGE — Many FAA publications can now be purchased in this Alaskan city like periodicals from a magazine rack in your favorite drugstore. A "bookstore" now offers over-the-counter sales of publications as a special service to the Alaska aviation public.

Located in the Department of Commerce offices in the Loussac Sogn Building downtown, the "bookstore" represents a joint venture by the Department of Commerce and the FAA to make it easier for Alaskans to inspect and purchase these publications.

The idea started late last year when Orville A. Perley, general aviation accident prevention specialist, Flight Standards Division, pondered the problem of getting some of these excellent publications into the hands of the people who could use them.

Uncle Sam spends a lot of money producing thousands of publications. What good are they, he said to himself, if they lie around some Government Printing Office warehouse in storage?

"And people just won't take the time and effort to buy a money order and write away to Washington for these publications," Perley discovered, "mostly because it's inconvenient—or they forget to."

Not in Anchorage anymore! Perley found a sympathetic listener in Maurice H. Oaksmith, Director of the Anchorage Field Office of the Department of Commerce. Oaksmith seized on the idea after their first meeting in February, and requested Perley to make up a "shopping list" of publications that he would like to have ordered.

In the meantime, Oaksmith started work on obtaining space for

the bookstore. In no time at all, quantities of the publications—Private Pilot, Flight Training Handbook, Instrument Flying Handbook, written examination guides and many others—were airshipped to Anchorage.

The "bookstore" officially opened for business in April. Alaskan Region Director Lyle K. Brown, Maurice Oaksmith and Orville Perley happily surveyed the excellent service-to-the-public project that started as Perley's idea, and came to fruition with the help of Anchorage Commerce Director Oaksmith.

"We've already shipped hundreds of these publications throughout Alaska in the short time we've been open for business," declares Oaksmith.

"As more requests come in, we'll increase our stock accordingly. We want the public well served."



**Proud Crew at Broomfield**

Half of the eight-man staff at Broomfield, Colo. Jefferson County Tower that chalked up an unusually fine record of operation for the new facility's first year, pose for a picture. From left are Lawrence Ebert, Tower Chief; and Controllers Robert Moore, Franklin Fuhrer and Charles Digby.



**Handbook Sales**

Orville Perley (right), of Flight Standards, displays a "winning hand" of safety publications to Maurice Oaksmith (left), U.S. Commerce Department Director in Anchorage. Alaskan Region Director Lyle K. Brown (center), is an interested on-looker. The Anchorage bookstore, offering FAA publications for sale, was a joint venture by FAA and the Anchorage Field Office of the Department of Commerce.

## Father and Son Reunited at Wake

WAKE ISLAND — A casual highball at the agency's Community Club here led recently to a Hawaiian father and son's reunion after 21 years.

It started when brothers Dempsey and Maki Kani of Hawaii, who are FAA paint shop employees, dropped into the club and met some sailors from the tanker "Idaho."

One of the sailors introduced himself as "Kalima."

"We have a Kalima working here as an FAA mechanic," Maki Kani told the sailor. "Hank Kalima—he's from Molokai."

"That's my father!" the startled sailor said.

The Kani brothers then drove the sailor around Wake until they found the elder Kalima—and then father and son spent the rest of the day catching up with old times.

## Fire Rescue Is Cliff-Hanger

By Frank King

AUBURN, Wash. — Gary F. Gruman, a controller at the Seattle ARTC Center, recently saved a man in a spectacular cliff-hanging rescue.

Gruman, in addition to his radar control duties at the center, is a nine-year veteran of the Sumner, Wash. Volunteer Fire Department, which has 30 members.

The fire department received an emergency call telling them that a man was clinging to the face of an 80-foot cliff at a nearby gravel pit. Gruman responded to the alarm and quickly arrived on the scene. He lowered a rope, called upon the experience and training he had received since 1959, and hauled the cliff-climber 20 feet up to safety.

"About 20 of the men employed at the center in Auburn serve on the various volunteer fire departments in suburban areas around Seattle," Gruman said.

Members of the Sumner Volunteer Fire Department are selected and screened by the volunteer group and undergo continuous training.

The group, for the most part, consists of younger men. Each must pass a rigid physical before being accepted for duty. Training includes a once-a-week drill covering fire fighting and equipment operations and emergency procedures.

"It's a satisfying avocation," Gruman said. "Working as a volunteer fireman gives you the feeling you are contributing something meaningful to your community."