

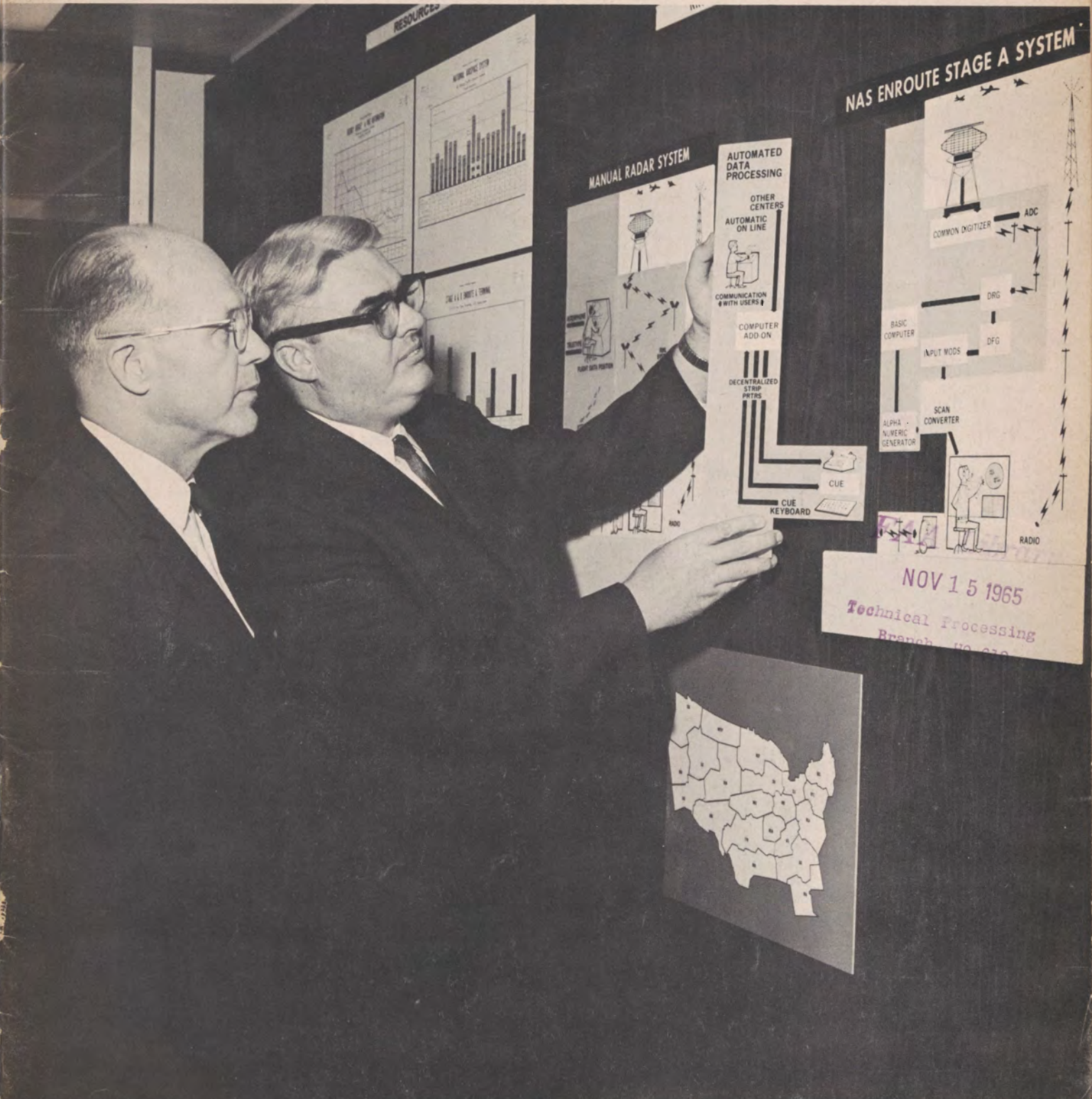
67-610

# FAA HORIZONS

OFFICIAL EMPLOYEE PUBLICATION OF THE FEDERAL AVIATION AGENCY

NOVEMBER 1965

C.2



NOV 15 1965  
 Technical Processing  
 Branch 40-230



FAA HORIZONS, the official employee publication of the Federal Aviation Agency, is published monthly by the Employee Information Division, Office of Information Services in Washington, D.C.

**WILLIAM F. McKEE**  
Administrator

**DAVID D. THOMAS**  
Deputy Administrator

**CHARLES G. WARNICK**  
Director  
Office of Information Services

**MARSHALL C. BENEDICT**  
Chief  
Employee Information Division

**ALEXANDER F. GARVIS**  
Editor

**ABNER B. COHEN**  
Art Director

Articles of general interest to FAA employees may be submitted to: Editor, FAA HORIZONS, IS-40, Federal Aviation Agency, Washington, D. C. 20553, Telephone: 962-5574 or contact Regional Public Affairs Officers: George T. Fay, Alaskan Region; Robert L. Fulton, Eastern Region; W. Bruce Chambers, Southern Region; Joseph H. Frets, Central Region; K. K. Jones, Southwest Region; Eugene S. Kropf, Western Region; Gilbert E. McCoy, Pacific Region; Edwin L. Shoop Jr., NAFEC; and Mark Weaver, Aeronautical Center.

## CONTENTS

- 3 ADMINISTRATOR ADDRESSES ATCA'S 10th ANNUAL MEETING
- 4 ATLANTA—NATIONAL AIRSPACE SYSTEM SHOWCASE
- 6 PARTNERS IN AIR WEATHER SAFETY
- 8 '... THIS IS HOUSTON CENTER—OVER'
- 10 MEN BEHIND THE MEN APPLAUDED
- 11 SAN FRANCISCO'S KEEPER OF AIRPORT LIGHTS
- 12 'ABOVE THE PACIFIC'
- 14 SOARING HIGH OVER THE BROAD MIDWEST PLAINS
- 16 WHATEVER GOES UP, COMES DOWN—SAFELY.
- 18 BETSY WAS NO BLOWHARD . . . SHE REALLY PACKED A WALLOP
- 19 FAA NEWSREVIEW
- 26 YOUR HEALTH . . . AND SAFETY
- 27 TECH TALK
- 28 NAMES AND FACES ALONG THE AIRWAYS
- 30 PERSONNEL PIPELINE
- 31 THE PASSWORD IS 'PROUD'
- 32 FAAETS ON THE JOB



**COVER**  
Deputy Administrator David D. Thomas (left) and James B. Dow review progress of the National Airspace System. Special status board illustrates the development of NAS through a series of orderly, integrated steps. See pages 4 and 5.

## Administrator Addresses ATCA's



"I have long known and have long had a high regard for FAA's air traffic control service. This acquaintanceship began many years before I was appointed your Administrator. I have now had three months of direct contact with your mission which has served to increase that original respect."

So spoke Administrator William F. McKee to controllers at a banquet during the 10th annual meeting of the Air Traffic Control Association held at Los Angeles last month.

ATCA's convention, "A Decade of Progress," was hosted by the Association's executive director Joseph A. Gascoigne, Joseph H. Tippets, Director of the Western Region, and Merle Nichols, chairman of the arrangement committee. In his remarks, the Administrator praised the Air Traffic Control Association for its recent decision to serve as a professional society. "That a group of Federal employees should band together to devote their energies in improving their craft serves as an inspiration for all of us," McKee added that both he and his staff will work with the Association and support its programs and encourage its efforts.

He noted that the Association's Controllers Procedures Committee had already met in Washington to evaluate 300 suggestions on improving control practices. "Such recommendations," he said, "represent, in the best sense of the word, progress in the science of air traffic control."

Administrator McKee then turned to the problems that controllers would face in the future. He noted that the expansion of the aviation industry would demand more air traffic control service. At the same time, he said, President John-

son has decreed a cost reduction program. "I must tell you," he added, "I mean to follow the President's orders to the best of my ability."

The Administrator said this need for holding the line on expenditures, coming at a time of new and additional demands for traffic control service, "means we shall be looking to increased controller productivity." McKee assured the controllers, however, that the FAA would "ask of no man more than he can be expected to handle within the limits of safety and ability." Furthermore, he said, we shall make "every effort to provide you with new equipment and procedures to aid you in meeting this challenge."

Earlier in his speech, the Administrator had reported on the successful testing of the new semi-automated equipment in the Indianapolis Center and Atlanta Tower. He also noted recent improvements in the controller's environment—the new standard design towers with their functionally designed cabs and new research into improving the TRACON room.

The Administrator told the convention that he would "fight to the limit for the funds, equipment, and the manpower" to enable the Agency to do its job. He added, however, he would be just as persuasive in arguing against that which is not necessary to the Agency's mission.

McKee expressed his interest in the problem of early retirement for controllers. FAA's recommendations on this matter, he reported, had been forwarded to a Cabinet Committee on Federal Staff Retirement Systems which is concerned with all Government retirement programs. The expectation would be that



Administrator William F. McKee praised the work of ATCA during his Los Angeles speech.

"this problem will be resolved not by a single approach but rather by a number and variety of solutions including early retirement, retraining and reassignment, promotions and normal attrition."

The Administrator cautioned against assuming there was no opportunity for advancement in air traffic control. There is, he noted, "Nothing final or fixed about the air traffic system. We are, indeed, but beginning. In such an employment environment there is more than sufficient opportunity—there is ample room for individual self-development, advancement and promotion."

The Administrator closed his remarks with some comments of his philosophy of management. "If I were to single out the quality I seek most in those who work around me," he said, "it would be the requirement that they find satisfaction in their jobs. If you can take your coat off the hook at night with the honest feeling you've turned in a good day's work, that's good enough for me."

Mr. McKee urged those "who have achieved positions of leadership and authority" to be "bold . . . speak out . . . sound off."

The Administrator said he could not stress too much his emphasis on the human factor. "In many respects," he said, "the head of an agency must be his own personnel officer. In my book, the organization is fine, but morale is everything." #

# Atlanta -- National Airspace System Showcase

James E. Dow put down the phone and completed the hurried notes he had made during the call. He stepped toward the door of his office in FAA Headquarters and his secretary reminded him of his appointment with Deputy Administrator David D. Thomas, his immediate boss. He nodded and continued across the hall to a room where the walls were completely covered with charts, graphs and diagrams. Dow took a plastic tile from a display and fitted it neatly on another magnetic board.

The chart room where Dow stood is a complex control room which reflects each detail of a quiet revolution in the modernization of the air traffic control system. This chart room is the nerve center of the Agency's National Airspace System (NAS) Special Projects Office. It portrays, on a systems basis, current and future actions necessary to bring about the total system needed to meet the demands of the 1970s.

Today, effects of the program extend to only one of FAA's control towers and two of its 21 centers. Within ten years, the effects will extend through 253,000 miles of airways which include some 300 flight service stations and more than 7,000 navigational facilities. The one tower, at Atlanta Airport, is a vignette of things to come.

## Atlanta and ARTS

Here the windowless TRACON room looks like a showroom for a manufacturer of radar equipment. In effect, it is. Several control consoles with differing radar display systems and varied communications equipment have been placed in the room for evaluation under operational conditions by controllers. Tower chief Lester R. Shipp describes the testing concept for the Advanced Radar Traffic Control System—ARTS—this way:

"Instead of buying equipment and saying 'here it is', the Agency obtained several test pieces which will do the job it wants done. We are to decide the best configurations from the standpoint of the controller."

ARTS is a radar display system which is far different from that used in other towers and centers. Normally, controllers use a manual method to identify blips on the radar scope. In a center, for example, controllers follow the blips with small plastic markers called "shrimp boats" which carry the identification of the aircraft the blip represents. Tower controllers carry the total traffic picture in their heads while they control from one to five or more airplanes simultaneously.

The new radar displays at Atlanta show all necessary information on the scope itself. In addition to blips, these scopes show sets of symbols and figures—or data blocks—which accompany flights as they progress. Altitude and other information is available to the controller each time he glances down at the scope.

"This feature," Shipp explains, "is just one of the things about



Arvin O. Basnight shows Atlanta TRACON to Sir Laurence Sinclair as Lester Shipp, George Allgood and James Moon stand by to answer questions.

ARTS which will help the controllers cope with the expected increase in air traffic."

## Automated Traffic Control

Computers are at the heart of the new system that performs most of the routine and clerical functions of control. They act as a readily available storehouse for much of the information controllers now must either memorize or write out flight progress strips for ready reference. The computers handle the gathering of the necessary data, as well as organizing, processing, correlating, filtering and distributing it according to the needs of the many individuals concerned. In addition, they serve as a communications medium through which a total traffic picture in great detail can be passed from one controller to another.

All this assistance leaves the controller free for his primary task—making the control decisions which provide air safety. These decisions will be tougher in the future. The projected growth of aviation during the next 10 years indicates that controlled air traffic will quadruple in volume. The controller's job would soon exceed human capability unless simplifying processes, like automation, keep pace with increased air traffic.

## Project Beacon

ARTS is one part of the advanced concept for the National Airspace System now under development which officially became airborne almost five years ago. In March 1961, President Kennedy wrote the FAA Administrator:

"The safe and efficient utilization of our airspace is of increasing concern to the public, to private and commercial aviation, to the Government and to me, personally. . . . Therefore, as Administrator of the Federal Aviation Agency, you are requested to conduct a scientific, engineering review of our aviation facilities and related research and development and to prepare a practicable long-range plan to insure efficient and safe control of all air traffic in the United States.

Six months later, the Administrator was able to give the President the report of a task force known as Project Beacon. The report constituted a complete analysis of the principal technical and operational problems of air traffic control with recommendations for solving them. Six months after the President approved the Project Beacon Report, FAA's Systems Research and Development Service produced another document, "Design for the National Airspace Utilization System." This has been converted into a system description of En Route Stage A, and, in turn, programs, first articles, schedules, end items, procurements, etc.

Two en route systems are under procurement, an engineering model for NAFEC, and the first field system for Jacksonville Air Route Traffic Control Center. NAFEC now has a Simplex model of the computer and other major components of the systems are on board or in production. A terminal system, ARTS,



is now being evaluated at Atlanta. A stored program alphanumeric (SPAN) system for the high altitude sectors is being evaluated at Indianapolis ARTCC. The overall system, and acquisition activities for the total program, including airborne equipment, rules, procedures and point actions with the Department of Defense, are integrated into a system program and managed on a system basis centrally planned and scheduled by the NAS Special Projects Office.

## Design for a Cooperative System

Dow is careful to point out that NAS is designed so that all users can fly through the national airspace with minimum restrictions. It is a cooperative system in which users' requirements in terms of capability, cost and scheduling is of primary concern. Both civil and military uses of airspace had to be considered in the design of a single common system. In addition, the system had to be capable of operating under both peacetime and wartime conditions. Another goal in the design was to provide the required services at a minimum cost to the Nation. This meant maximum use of facilities already established by other branches of the Government. A particular case in point is the joint use of civil and military radars for ground based data acquisition.

The ARTS system at Atlanta too, is a refinement of "off-the-shelf" military hardware. SPAN uses some of the same components. The Agency is appraising SPAN at the Indianapolis Center.

## Flying the System

By 1975, more than 300,000 pilots will be using NAS in varying degrees. In a typical flight the pilot will file his flight plan with an operator at a data entry device in the operations room at the departure airport. The plan will be error checked, a transponder code assigned and route changes recommended if a conflict exists—all by computer. Voice position and altitude vacating reports will be minimized and may no longer be required. All pertinent information goes from one scope to another electronically in an automated radar handoff system with a failsafe feature.

Long before he reaches the destination airport, the pilot is advised of any necessary delays so he can take appropriate action. His flight plan is closed after landing when a controller pushes a button.

Even in 1975 after Dow puts the last block in place on his NAS jigsaw puzzle, many flights will be made without benefit of this degree of automated traffic control. Just as present-day FAA services vary widely throughout the country, in direct relation to traffic density, the automated services of the future will match the need for them in each area.

But by 1975 controllers for the high density terminals will be men of decision, and computers will be the clerks. #



Controllers at Atlanta Tower read altitude, identification and control status directly from the scope. Airborne transponders give altitude automatically. Controllers add more information to the data block as needed. George H. Allgood, Atlanta's ARTS project officer, discusses one of the data blocks with Lester R. Shipp, chief of the Atlanta Tower. Below is a typical ARTS console.



Weather Bureau technician John P. Baker (left) is responsible for quality control of FAA weather briefing services. Here he discusses the weather picture with Leonard L. Schornak, senior air traffic control specialist at the King Salmon FSS.

## PARTNERS IN AIR WEATHER SAFETY

Back in 1890, a Hartford, Conn., editor said: "Everyone talks about the weather, but nobody does anything about it."

Today everyone still talks about the weather but man is trying to do something about it. In the past 75 years, man has learned a lot about what causes thunderstorms, blizzards, rain, snow and other weather phenomena, but the problems still remain. On the ground man can take shelter from the weather. For a pilot, however, weather takes on a much fuller meaning: he must share the airspace with weather everytime he flies. His safety—and that of his passengers—is of mutual concern to the Federal Aviation Agency and the U.S. Weather Bureau. The latter is now a part of the new Environmental Science Services Administration (ESSA) of the U. S. Department of Commerce.

Working together as partners in air safety, the two agencies must present the best available weather condition information—current and forecast—to the pilot who radios in for information from his airplane, or when he comes to a Weather Bureau (WB) airport station or to an FAA flight service station for a weather briefing.

This cooperation between FAA and WB has been

formalized by agreements in the past between CAA/FAA and the Weather Bureau. A new inter-agency agreement signed by Administrator William F. McKee and Commerce Secretary John T. Connor last August updated all previous agreements and working arrangements in the areas of aviation weather services and meteorological communications.

Evaluation of weather information from many sources and weather forecasting continues to be Weather Bureau's responsibility. FAA is responsible for distributing this information through its extensive communications facilities, and, where flight service stations are located, FAA air traffic control specialists now display and present weather information to pilots.

FAA-WB teamwork has been developed to a high degree throughout the 50 states. In Alaska, teamwork between employees of both agencies and their families on and off the job is a way of life. Colocated at 13 airports throughout the 49th state, the joint weather facilities serve pilots in the flyingest state in the Union where for many the airplane is the only means of transportation, and where some of the world's most difficult weather to predict tests a forecaster's mettle.

Torrential rains in the southeast panhandle, high winds and fog banks in the Aleutian Island chain, heavy snows and severe low temperatures in the interior and the "whiteout" conditions in the Arctic are examples of the extremes of weather FAAers and their WB counterparts have to contend with during the year.

King Salmon, a small community situated 300 miles southwest of Anchorage, is a typical example of excellent rapport and teamwork existing between FAA and WB in Alaska.

Carl E. Fundeen, FAA area manager, and John P. Baker, WB meteorological technician in charge, and their personnel, work in a modern flight service station—a one-story structure commissioned in June 1963. Life at the King Salmon FSS resembles that of most stations found in the 48 states. However, there are a few exceptions. FAA performs plant maintenance for the Weather Bureau personnel which includes everything from repairing teletype equipment, maintaining motor vehicles, fixing plumbing and electrical wiring in living quarters—their families live together in Government furnished homes a short distance from the FSS—and just about anything else that needs fixing at the station.

Weather chief John P. Baker assists Leonard L. Schornak and his air traffic control specialists maintain their proficiency in briefing pilots on weather conditions—a function formerly performed by Weather Bureau forecasters. The new FAA-WB Memorandum of Agreement assigned weather briefing responsibilities to FAA specialists in the flight service station, and, at the same time, charged WB with establishing a quality control program to assure that there is no derogation of service.

The cooperative spirit of the two agencies has been carried one step further by FAA-WB wives who have been contributing their share to build the spirit of teamwork which is evident to a visitor to King Salmon. Boredom and "cabin fever" are practically nonexistent as a result of social activities and programs they have organized for their families.

King Salmon is typical of a number of Alaskan stations where this inter-agency cooperation is found. This partnership in air weather safety exists in Alaska and throughout the United States.

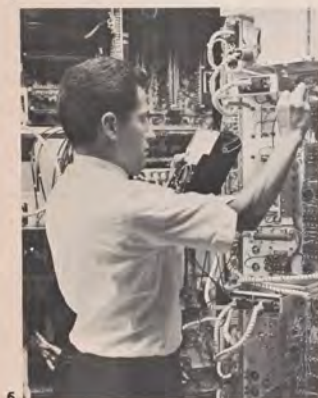
FAA and WB specialists are working together to help pilots and their passengers make their way safely through the airspace. #

### FAA, Weather Bureau Aid Alaskan Pilots



Center: Leslie W. Henderson, a weather technician, releases a weather balloon at King Salmon. 1 Charles E. Collier, an electronic maintenance technician, repairs a weather teletype machine. 2 FAAer Leonard L. Schornak (left) briefs Pilot Fillmore A. Hoak on the winds aloft. 3 FAA-WB wives plan social activities for their families. Discussing the plans are, from left: Mrs. Paul Gregory Jr., FAA; Karen Pruet; Mrs. Lyndol L. Pruet, FAA; Mrs. Reuben C. Effers, WB, club president, and Mrs. Robert C. Oftedahl, FAA. 4 Alaskan Regional Director George M. Gary (left) and Mac A. Emerson of ESSA meet regularly to discuss mutual problems.

1 Architectural departure from the standard ARTCC can be seen in this aerial view of Houston Center. 2 Center chief C. Otho Reasoner escorts VIPS through Center. From left: Regional Director Henry L. Newman; Mrs. Ann Lasater, representing her father, U.S. Representative Albert Thomas; U.S. Representative Bob Casey; Reasoner and Lawrence C. Matthews, systems maintenance chief. 3 Many distinguished visitors attended the dedication. Here Senator John G. Tower (right) discusses the Center's functions with U.S. Representative Bob Casey (center) and Alan L. Dean, Associate Administrator for Administration, from Washington Headquarters. 4 Electronic maintenance technicians Robert Crum (left) and Bobby Tillery check tape recording equipment. Recorders use 1,728,000 channel feet of tape daily.



5 Visitors jammed the aisles between the control positions as Houstonians flocked to the open house. 6 Electronic maintenance technician Gilbert Elizalde checks some of the equipment. 7 In the lower foreground are the flight data positions of the Center's operations room. At desk in center are the watch supervisor, flow controller and military mission controller. 8 Center chief and staff, seated from left: Gerald B. Fox, assistant chief; C. Otho Reasoner, chief; James Yowell, air defense officer; standing, from left: Elmer Prather, operations officer; Guy Allen, Planning officer, and Louis J. Meyer, evaluation and proficiency development officer.

## '...THIS IS HOUSTON CENTER — OVER...'



Houston, the space city with its eyes in the sky, officially welcomed another sky-watcher Sept. 19 when the Houston Air Route Traffic Control Center was dedicated.

"This center," said Southwest Region's Director Henry L. Newman, "is the last to be constructed in the FAA's program of consolidating and up-dating these facilities."

The 19-acre Houston Center is an architectural departure from its 20 sister centers constructed since 1962 in the contiguous United States.

C. Otho Reasoner, center chief, explained that "... it was designed for compatibility with the other buildings which will be constructed near the center site at the new 6,000-acre Houston Intercontinental Airport."

Houston Intercontinental, which is being built from scratch as one of the Nation's first specifically designed supersonic airports, will be operational by

early 1967. It will eventually cost \$100 million. It is located on Houston's north side, approximately 20 miles from the downtown area.

Although the terminal and other buildings in the airport complex have long been on the drawing board, the center is the first structure at the airport to be completed and occupied. It is about 1½ miles from the terminal site. The center's ultra-modern lines were planned to blend gracefully with other buildings that will be rising at Houston Intercontinental Airport.

The center has approximately 70,000 square feet of floor space and while the main control room is basically the same as the other centers, the architects designed a large one-story addition to the front of the building. This annex contains a cafeteria, several administrative offices, including that of the center chief and others for systems maintenance sector personnel. A large glass entrance

door leads into a corridor which extends on both sides and around an outdoor patio. Other patios break up the complex, with views from most offices and cafeteria into either the patios or landscaped areas.

Houston Center, in addition to the radical change in design, is one of the few to be built in an entirely new location. This was necessary due to the consolidation of the San Antonio and New Orleans centers into the single operation.

Operations at the new center began June 26 when it assumed control over the New Orleans Center area and the southern portion of the San Antonio area. On July 10 it took control over the remaining San Antonio area, boosting its total coverage to 310,000 square miles in the Gulf Coast region, including South Texas and the southern parts of Louisiana, Mississippi and Alabama. The center expects to handle at least 441,000 operations annually on its 8,767 miles of

low altitude, 4,904 miles of jet and 3,620 miles of oceanic airways.

The semi-detached control room has an area of about 12,000 square feet with a 25-foot high ceiling. In it are housed radar scopes, flight data positions, teletypes and other equipment. One end of the control room is glassed in and used as an observation room for visitors and training purposes.

The new complex will receive radar information from four sites: Houston, New Orleans, San Antonio and Alexandria, La.

"Video information," said Elmer Prather, center operations officer, "is transmitted from the airport surveillance radar systems at Alexandria, La., and New Orleans via microwave owned by the telephone company. Information from the San Antonio and Houston radars is transmitted by FAA-owned microwave equipment."

Personnel are new to Houston too,

with 340 air traffic control specialists reassigned from the two decommissioned centers. Fifty-one electronic maintenance technicians also have been assigned to the center.

Center chief Reasoner had been chief of the New Orleans Center. His assistant is Gerald B. Fox, formerly chief at San Antonio. Lawrence C. Matthews moved from the Fort Worth Center to head the systems maintenance sector.

Total cost of the facility is more than \$6 million, with \$2.4 million investment in the buildings and \$4 million in electronic equipment.

Reasoner, commenting on the cut-over last June, said, "After our crowded conditions in New Orleans, the controllers from there especially enjoy working in this environment. All of our personnel are pleased and enthusiastic about the equipment, the air route traffic control center building and, of course, Houston's typical Texas hospitality." #

# MEN BEHIND THE MEN APPLAUDED

When a giant jet is led through weather with help from a precision approach radar to make an ILS landing or a lost aircraft is radar-vectorred safely on its way, how much credit goes to the maintenance technician *behind* the man on the radar scopes?

When a control tower is pulsating with activity during a bad weather session, or the floor of a center echoes with the staccato clicking of scores of microphones and electronic gear, how many people are aware of the man behind the man behind the mike—the skilled electronic technician entrusted with keeping equipment functioning flawlessly 24 hours a day, 365 days a year?

Realizing that these seemingly glamorous, behind-the-scenes jobs do not receive the recognition they deserve, Eastern Region's Airway Facilities Division (AFD) has done something about it. Now the hitherto unsung field maintenance personnel will be honored for their achievements through the Region's "Award of Meritorious Achievement."

Plaques will be presented each fiscal year to outstanding units in three categories:

- The best small sector (one to 19 personnel)
- The best large sector
- The best area office

The Eastern Region kicked off its awards program in September when Eastern Region AFD chief Ernest L. Gayle presented plaques to the fiscal year 1965 winners—the first recipients of the new awards.

The **best small sector award** went to the Toledo, Ohio, Systems Maintenance Sector headed by chief Arthur P. Kohn.

The **best large sector plaque** was presented to the Leesburg, Va., SMS. It is directed by Ray E. Mikesell, chief.

The **winner of best area office** went to the Washington, D.C., Systems Maintenance Area Office headed by John L. McGiverin.

The Toledo SMS was singled out for its award because its adjusted availability averages for all six of its major facilities were above the regional average. In addition, Chief Kohn's sector was the only SMS in the region in FY 1965 to receive an excellent rating for management and technical proficiency, Ernest L. Gayle said.

Mikesell's Leesburg, Va., SMS was cited for carrying out the philosophy of reduced staffing and maximum manpower effectiveness to obtain the greatest monetary saving of all the ARTCCs in the Eastern Region. Other factors resulting in the award were the sector's high management evaluation rating and an outstanding record of technical proficiency—over one-third of all its technical equipment evaluations were rated as excellent.

The Washington Systems Maintenance Area Office was honored for its high quality, fully developed responses to regional office surveys and the consistent accuracy of these reports. Also rated high were the area office's handling of correspondence, control of overtime funds and consistent demonstration of its ability to make decisions with a minimum of guidance.

Competition for next year's awards is already underway. The Eastern Region maintenance men who stand behind the operational segments of the FAA and keep the equipment running will henceforth receive the recognition they have earned. #

Ray E. Mikesell (left) accepts the best large sector award from Ernest L. Gayle of the Eastern Region.



The small sector award was accepted by John Hanlon, Cleveland SMAO chief, and Arthur P. Kohn of Toledo SMS.



The best area office award was presented to John L. McGiverin (center), chief of the Washington SMAO, by Ernest L. Gayle (right) as Stanley W. Henceroth beams.

## San Francisco's KEEPER of airport LIGHTS

As Vojon walks on a pier to make a light replacement an inbound airliner skims closely overhead.



One of FAA's loneliest, noisiest and most unheralded jobs is held by V. Walter Vojon of San Francisco.

Vojon, 60, is employed by the Airway Facilities Division in the Western Region as a light lane caretaker. This title fails to do justice to Vojon's unique occupation: keeping the intricate system of lights at San Francisco International Airport functioning perfectly at all hours of the day and night.

As light lane caretaker, Vojon is the air-gage equivalent of the lighthouse keeper. His work is lonely because there is no other human being working close to him. He often can be found far out on the spindly catwalk of the pier that parallels the system of overwater approach lights—a solitary figure above a watery "no-man's land," a domain where any trespass by unauthorized persons would be a serious violation of the law.

Vojon's job is noisy because while he works a succession of planes stream overhead, actually just a few feet over his head. Vojon stands 5 feet 10½ inches and often ducks instinctively when incoming planes skim above him in thunderous, screeching bursts of sound.

Vojon's job is unheralded because his official job title scarcely reflects either the significance of the work or its noisiness and loneliness.

This keeper of the lights rides a bicycle to various stations along the light lanes. This is good exercise—and the most efficient way to get from place to place on the light lanes.

His hobbies are reading Plato and studying trigonometry.

Vojon was born in Port Arthur, China (Kwantung Island). He has been an American citizen since 1933. Before coming to work for FAA, he was employed by the Security Section of San Francisco International Airport.

Though noisy and lonely and unheralded—one thing Vojon can testify to about his job: It never gets dull. #



Vojon puts his bicycle aside to study FAA manuals and books on trigonometry during his spare moments.

He uses his bicycle to check various stations along the light lanes of San Francisco's International Airport. ▼





On June 1, 1928, the first foreign owned plane, the "Southern Cross" landed in Hawaii en route to Australia. The pilot was Charles Kingsford-Smith and the navigator, Charles Ulm.



**1** Olin V. Andrews (top left), shown with his first students in 1932, was chief pilot for Hawaiian Airlines and later went to Aloha Airlines in the same job.  
**2** A crowd at Wheeler Field during a 1920s military open house is typical of the many crowds which gathered there to meet such famous flights as the first flight from the mainland in 1927 and the Dole Flight which won a \$25,000 purse in 1927.  
**3** Formation of Navy patrol bombers over Barbbers Point on Aviation Day in 1934 shows how quickly military aviation grew in Hawaii after an abortive start in 1913.  
**4** Capt. Harold Geiger for whom Geiger AFB, Spokane, Wash., was named, brought the first military aircraft to Hawaii in 1913, but the turbulent air in Hawaii was considered too dangerous for the frail craft. Military aviation finally gained a foothold in Hawaii in 1919.



The Pan American Clipper flew from Alameda, Calif., to Honolulu in 18 hours and 37 minutes on April 16-17, 1935, in the first test flight for Pan American Airways trans-Pacific commercial air service.

# 'ABOVE THE PACIFIC'

*New Book Highlights the Rich Aviation History of Hawaii*

While Glenn Curtiss was earning \$5,000 for flying 64 miles across Lake Erie in 1910, another aviation pioneer was making flying history in the Pacific.

In Hawaii on Dec. 31, 1910, J. C. (Bud) Mars made the island's first heavier-than-air flight in a Curtiss P-18 biplane.

Mars was the first of many early aviators who helped make the fiftieth state more aviation oriented than many of its older sister states. Home of FAA's Pacific Region Headquarters, Hawaii is typical of much of the Pacific Region's responsibility in its dependence on aviation.

If the land area in all the many islands which make up the Pacific Region were combined, the total land would be less than many of the sub-regional areas in the 48 contiguous states. Yet the Pacific Region is by far the largest of FAA's seven regions when the total geography over which it stretches is considered.

Aviation flourished in this water part of the world before the FAA or the Pacific Region was conceived because water transportation was aviation's only competition. Fortunately, aviation development in Hawaii was undertaken early by a handful of farsighted aviation enthusiasts.

Their history is chronicled for the first time in a forthcoming book written by USAF Lt. Col. William J. Horvat.

In "Above the Pacific," to be published next year by Aero Publishers, Inc., Horvat traces the development of aviation in Hawaii from 1889, when Professor Joseph Lawrence Van Tassel made a balloon ascent, to 1964 when both Geraldine Mock and the late Joan Merriam touched down there during their separate round-the-world flights. Horvat's description of these events and those in between should help younger members of FAA understand how Pacific aviation got where it is today.

Bud Mars was followed quickly by Gus Schaefer of Honolulu who completed the first locally produced airplane in 1911. He had no worries about FAA certification, because the only aviation legislation in existence was a city ordinance passed by Kissimmee, Fla., in 1908 which regulated air traffic over the town.

In 1913, the name of Tom Gunn was added to the list of aviation pioneers in Hawaii. When the revolution broke out in China in 1911, Gunn's services were requested by Dr. Sun Yat Sen, with the idea that a few bombs dropped from airplanes would settle the Manchu Dynasty forever. After two years in China, during which he made 800 sorties and carried some 300 passengers over China, Gunn returned to Honolulu to give demonstration flights and carry passengers. He made the first take-off from Honolulu Harbor with pontoons on his plane.

Gunn's bombing missions may have preceded the first air bombing in America when Didier Masson raided Mexican fed-

eral gunboats in the Gulf of California in 1913. This was the same year that airplanes carrying two opposing Mexican generals exchanged pistol shots in the first air-to-air duel.

The first military aircraft to arrive in Hawaii on July 13, 1913, were under the command of Army Lt. Harold E. Geiger. Even though Geiger made an incredible mile-a-minute speed run from Pearl Harbor to Diamond Head (12 miles), the turbulent air in Hawaii was considered too dangerous for the frail aircraft and all military flight activities ceased after only four months. Military aircraft did not return to Hawaii until 1919 when the War Department established Luke Field on Ford Island in Pearl Harbor.

A wartime Army flight instructor, Charles J. Fern, was also one of Hawaii's pioneers. In 1919, Fern started barnstorming from Kapiolani Park in Honolulu, carrying passengers at \$10 a hop. He flew a Jenny powered by a 90-horsepower OX-5. This exposure to aviation started Honolulu businessmen thinking about inter-island flights, and some even ventured to dream of flights between Hawaii and the major land masses of the world.

The dream looked closer to reality when Navy Commander John Rodgers, with a crew of four, took off for Hawaii from San Francisco Bay on Aug. 31, 1925. They landed 25 hours and 23 minutes later, 1,970 miles southwest of San Francisco but 300 miles short of their destination. They drifted to the island of Kauai nine days later. Honolulu's Airport carried Rodgers' name until it was changed to Honolulu International Airport.

The first successful flight from the mainland to Hawaii was made two years later by Lt. Lester B. Maitland and Lt. Albert F. Hegenberger, U. S. Army. The first civil flier to make such a flight was Arthur C. Goebel who landed at Wheeler Field on Aug. 17, 1927, with Army Lt. William V. Davis navigating. One hour and 15 minutes behind them were Honolulu's own Martin Jensen and Paul Schullter who landed with only 30 minutes fuel remaining after skimming the ocean in an effort to conserve fuel. These flights paved the way for Stanley C. Kennedy to form what is now Hawaiian Airlines in 1929.

The date coincided with another milestone in aviation on the mainland in which the first FAA Administrator took part. On Jan. 1, 1929, Elwood Quesada completed 150 hours, 40 minutes in the air as a crew member on the "Question Mark" which was piloted by Major Carl Spaatz and Captain Ira C. Eaker.

It was almost 22 years later that the FAA Pacific Region was established in its present form. In fact the first step toward Federal Aviation Regulations had been taken only three years before. On May 26, 1926, President Coolidge signed the first Federal legislation regulating air commerce. #

# SOARING HIGH OVER THE BROAD MIDWEST PLAINS

*Graceful sailplanes slip silently through the skies doing what comes naturally.*

"Soaring," as one advocate of the sport says, "puts the fun back in flying."

To members of the St. Louis General Aviation District Office, however, soaring is a bustling, growing sport that requires the same attention to airworthiness and safety as any other type of flying. Although sailplanes have no powerplants, they must nevertheless be tested and certificated by maintenance inspectors. Sailplane pilots must also be certificated.

Records show that soaring, like all of the activities grouped under general aviation, is increasing both in numbers of sailplanes and pilots. On Jan. 1, 1962, there were 694 sailplanes in the United States. By the same date in 1964 there were 914, a sizeable increase probably brought about by increased production of "do-it-yourself" glider kits.

Although no accurate statistics are available, the eastern part of Missouri and the southern portion of Illinois can account for a respectable percentage of this increase. Thomas S. Murphy, supervising inspector of the St. Louis General Aviation District Office and one of the few FAA glider instructor pilots in the Central Region, said he recently had to designate an examiner outside the Agency to conduct flight check rides and certify new glider pilots because of the increasing interest in soaring.

Most of the glider activity in Murphy's domain takes place at Civic Memorial Airport in East Alton, Ill., just across the Mississippi River from St. Louis. There are other pockets of activity at Marion, Ill., and Cape Girardeau, Mo. Lawrence B. Sims Jr., the only other qualified glider pilot in the GADO, shares pilot certification chores with Murphy.

Two other GADO men, principal maintenance inspectors Royal O. Laakman and Bert Volker, can testify to increased activity in the area of "do-it-yourself" kits. Most of the glider manufacturers fabricate complete kits which can be put together by the purchaser. Other soaring enthusiasts build their own from scratch.

Glider pilots usually have regular jobs and do their kit building and glider construction in their basements and garages at night and on weekends. This means Laakman and Volker must do their inspecting at night and on weekends.

Laakman makes periodic evening and weekend inspection trips to the homes of a St. Charles, Mo., chiropractor; a McDonnell Aircraft Corp. engineer and a Lawrenceville, Ill., high school teacher. The engineer is building a Schweizer 1-26 from a kit and plans to build a high performance glider of his own design when he completes the kit. The chiropractor is also building a 1-26. The high school teacher is building an amateur *Cherokee II*, in which he is using



*Bert Volker (standing, with unlit pipe), principal maintenance inspector in the St. Louis GADO, examines a glider horizontal stabilizer.*

stock plans but buying his own material.

During these inspection trips made at various stages of the glider construction Laakman checks riveting or other fastenings and critical points of the glider. The glider builder has to notify the FAA when an inspection is needed and cannot cover completed work until it has been inspected and approved.

Generally, new planes are flight tested by test pilots from the Engineering and Manufacturing Branch of Flight Standards but a handful of GADO inspectors have been designated as glider test pilots. One of these is Eli Jerome, a principal operations inspector in the Indianapolis GADO, who handles these chores in a wide area of the Central Region.

Flight testing for final certification of a glider is a time-consuming chore. First, the craft must receive its final inspection, usually by Volker, and then it must be towed to altitude by a powered aircraft or some other means. The test, of course, can be washed out by bad weather or lack of conditions to give the glider needed lift.

Once the glider is certificated by the FAA, it's clear sailing—sailplaning, that is. #



*Eli Jerome (center), Indianapolis GADO, prepares to test German design Schleicher K8B sailplane built from a kit by Jefferson L. Miller (left) and B. G. Smith (right) both of St. Louis. Flight was successful.*



*Left, top: Eli Jerome buckles on parachute before climbing into "der Gummipuffer" (the rubber buffer) for a test flight at East Alton, Ill., Airport. Far left: Jerome scrunches down into his seat, adjusting the "chute, while Jeff Miller gets ready to fasten the canopy. Below: Bert Volker (right) congratulates builders Miller (left) and Smith on their slick handiwork. Sailplanes are growing in popularity. In 1962 there were 694 sailplanes in the United States; by Jan. 1, 1964, the number had climbed to 914 with steady increases reported in 1965. Many of the sailplanes are home-grown products of basement and garage, built in spare time which means plenty of Saturday and Sunday work for aircraft inspectors who must make periodic inspections of the work as it progresses.*

In NAFEC's Torture Chamber They Make Sure

# WHATEVER GOES UP, COMES DOWN ✱ SAFELY

There are some violent goings on in the Environmental Laboratory unit at the FAA's National Aviation Facilities Experimental Center (NAFEC), near Atlantic City. Environmental test engineer Roland J. Sanford, unit chief, and his staff, spend most of their time burning, crushing, twisting, dropping, hitting, spinning, freezing, dousing, baking and generally mistreating aircraft components to see how much abuse they will take.

But this is violence with a purpose and all of it is scientifically programmed and controlled with the object of obtaining precise engineering and design data to make flying and planes even safer.

The unit, which is part of the Standards and Calibration Laboratory Section, Test Facilities Division, creates in a laboratory environment those conditions that might be encountered in flight or in a crash where great impact and heat are major factors.

"Recreated environmental testing," Sanford says, "is frequently needed just to determine what actually happened, and why. The area of gray between theory and practice can be very broad—resolving these gray areas into black and white is a big part of our job."

Such an environment was created following the crash of a jet transport which damaged the flight recorder to such an extent that it was useless in post-accident investigation. To prevent this loss of information from happening again, a research and development project was set up to examine the survival properties of several production model recorders under "crash conditions" to see if they actually met specifications laid down by the Agency.

According to the test plan, each recorder assembly is mounted on a vibration test system and oscillated through a range of frequencies and G-forces until a component partially or completely fails. In one phase of the tests at least half of the outside area of the assembly is exposed to an open flame of 1,100° C. for an uninterrupted 30 minutes. Later it is squeezed with a force of 4,000 pounds on each of its three axes in the lab's tension-compression machine.

These are only a few of the tortures conjured up by the resourceful test engineers and technicians at NAFEC but they give an idea of the thoroughness with which tests are carried out.

Not all tests are as drastic but most are equally dramatic. Take the case of an electro-mechanical navigation pictorial display unit. It normally operates in a peaceful environment but is subject to varying conditions of pressure, temperature and humidity. While it may operate perfectly on the test bench, the question arises: How will it work in actual operational conditions? Unfortunately, it is too expensive in time and money to fly the unit around for long periods to make preliminary determination of its dependability under varying operational conditions.

Can nature be prodded into speeding up its cycles? Can it be turned off and on with the flip of a switch or the turn of a rheostat? Can it be kept at an extreme state—too hot or too cold, too dry or too wet?

Explains electronic engineer Ira S. McDaniel: "In NAFEC's Environmental

Laboratory there are three test chambers of varying size which conveniently provide altitude conditions from zero to 100,000 feet, temperatures between minus 65 to plus 200° F. and relative humidity from 15 to 95 per cent. The device to be tested is simply installed in the appropriate chamber, instrumented and put into operation."

Tests in the chambers can also be accelerated since different conditions of pressure, temperature and humidity can be programmed and controlled automatically.

"These test chambers are also used to subject runway and other lighting fixtures to accelerated changes between hot and cold, freezing and thawing, when making life-expectancy determinations on bulbs and when evaluating light housings for moisture leakage," says Duane Quinland, an electronics technician who deals primarily in photometrics, the science of measurement of the intensity of light.

Electronics technician Bernard J. Korsak pointed out that, "Not all environments provided by the Environmental Laboratory unit are composed of readily available test devices and various combinations. Lines of information often cross among the mechanical, electrical, electronic, pneumatic and hydraulic to obtain a desired condition."

A good example of the ingenuity that often goes into the creation of a required environment is found in the unit's support of an R&D project evaluating the safety and reliability of general aviation aircraft exhaust systems.

Engineers at NAFEC have been studying and testing the causes of exhaust system failures and the hazards they create in terms of carbon monoxide poisoning, fire, power loss and engine failure. Many tests have been conducted in instrumented engine run-up stands and a wealth of data collected. As a result of some of these tests, personnel of the Environmental Laboratory unit are now in the process of constructing a device on which a light aircraft exhaust system can be mounted and subjected to the same conditions of heat and vibration as during actual engine operation. If results from this test device are the same as those from the engine run-up tests, procedures will be established and the device quite likely used to determine the structural integrity of exhaust systems prior to their certification by the Agency.

Environmental testing by FAA's Systems Research and Development Service is an important part of making sure that whatever goes up must come down—safely. #

Mechanical engineer Roland J. Sanford calibrates thermometer in one of the three environmental test chambers at NAFEC.



Flames bathe cockpit voice recorder in test to determine crash survivability.



Aircraft engine fires are simulated in this environment in tests of extinguishing agents. The tests help the FAA establish new criteria for the design of aircraft systems.



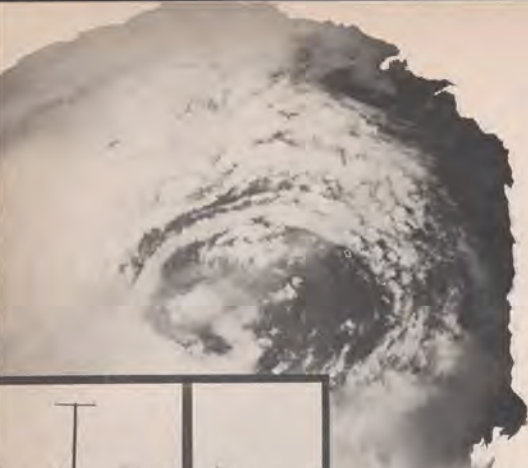
This tension/compression machine, operated by electronics technician Bernard J. Korsak, can apply a force of 5,000 pounds.

Electronics technicians Leon W. Shivers (left) and Joseph Conley ready equipment for helicopter experiments.



Mechanical engineering technician Donald T. Kelly makes mount adjustment in accelerometer.





# BETSY WAS NO BLOWHARD

... she really packed a wallop

When the wild eye of hurricane Betsy bore down on New Orleans last September, FAA personnel didn't just stare back—they were too busy bracing for the storm.

Black and red hurricane warning flags flew along the Florida, Louisiana and Mississippi coasts causing inhabitants to leave their homes and seek shelter on higher ground. Surging tides of 6 to 12 feet hammered the Gulf coast from the mouth of the Mississippi River to East Pensacola, Fla. Air carriers were at a standstill.

As the storm approached, and even during its peak, the General Aviation District Office at Lakefront Airport, New Orleans, had set up emergency procedures for general aviation aircraft. GADO supervising inspector Olin K. Haley and his team worked around the clock evacuating aircraft and issuing flight waivers for evacuation and search and rescue missions. Ferry permits were quickly arranged permitting pilots to move their aircraft—some not on the airworthy list—to safety.

The hurricane's full impact was felt in Grand Isle, La., 55 miles south of New Orleans. There, Betsy's violence ripped off 80 per cent of the VOR's roof and blew away an antenna—gasoline tanks were battered and blown loose and all commercial power lines were slashed.

The eye of the hurricane was from 60 to 80 miles in diameter

and its center passed about 35 miles west of New Orleans.

Frank Johnson, Systems Maintenance District Office chief reported: "The New Orleans VORTAC antenna in Lake Pontchartrain was badly bowed and the Moisant Airport (La.) facilities and nearby VORTACs were out because of power failures and the glass was blown out of Lakefront Tower, too."

The rest of the world was temporarily closed out for FAA communicators except for one radio thread—New Orleans' SMDO's single side-band transmitter link with Southwest Region Headquarters.

When President Johnson boarded his aircraft, AF-1, for the southbound flight to New Orleans to observe Betsy's damage, that one FAA source provided answers to the many airport and navigational aid questions needed for the Presidential flight.

Within a minute those answers came from the SMDO's transmitter. "We got through to our communications center at Headquarters (Southwest Region)," said Alvin A. LeBlanc, former SMDO chief, "and from there they sent the information to the Washington Communication Center where it was relayed to the Air Force Command Post." LeBlanc had recently been transferred to Houston as chief of the Airway Facilities Branch but was in New Orleans to help.

A portable control tower was sent to Lakefront and a mobile TVOR was moved to Moisant from Fort Worth by FAA volunteers who drove over hazardous roads to reach New Orleans.

Through determination and teamwork, FAA and airport personnel removed the debris from Moisant International and had the airport open for air carrier operations just nine minutes before AF-1 touched down.

In both the Southern and Southwestern Regions along Betsy's waste-strewn path, Airway Facilities technicians restored VORs, VORTACs and like equipment through tremendous physical effort.

Betsy's wrath was far less violent in the Southern Region but Agency personnel took no chances and were well prepared. James G. Rogers, Director, said, "Due to the experience gained over the years, especially with hurricane Cleo in 1964, and also due to the majority of our technicians in the area being hurricane-seasoned, the Southern Region suffered relatively minor damage from Betsy in the Florida area."

Throughout both regions FAAers did a remarkable job. The Southern Region sent a radar antenna from Birmingham, Ala., for the Moisant Airport surveillance radar. The FAA Installation and Maintenance Depot in Oklahoma City kept an extra crew on duty 24 hours-a-day to handle emergency requests. FAA generators provided emergency power for vital public and Federal offices in New Orleans and Baton Rouge.

Agency personnel in New Orleans and the surrounding area had experienced one of the most devastating hurricanes in modern history. On the scene, assessing and repairing damage to essential FAA equipment, were men from all New Orleans Agency offices.

In reviewing Betsy's damage and the efforts of his personnel, Southwest Region's Director Henry L. Newman said: "Employees in the area devastated by hurricane Betsy reacted admirably to the task of combating the elements of nature and restoring safety as quickly as possible. Within and without the disaster area, the total FAA effort was outstanding." #

**EMERGENCY AID amounting to about 25,000 pounds of food and 15,000 pounds of clothing was collected by Memphis ARTCC employees and other Government agencies in Memphis in a drive led by Controller Leroy T. Norwood, who drove a tractor-trailer with the donations to New Orleans on his own time.**

## Winning Pair



Mrs. Sandra Logan of Flight Standards Service holds an unbeatable pair, Christmas Seals to fight tuberculosis and other respiratory diseases and an issue of FAA HORIZONS which provides good reading at home or at work.

## TWO RECEIVED COMMENDATIONS

Two Denver ARTCC employees recently rated special honors for activities outside the line of duty.

Clarence (Bill) Schilling, coordinator at the Center, received a special commendation for his work in the volunteer fire fighting and prevention program at Hygiene, Colo., where he lives.

Mrs. Marcene R. Cropp, secretary at the Center's Operations Office, was nominated for the Colorado Highway Safety Award for her record as a safe driver.

## A Paperwork Expert



Linne Ahlbert, budget officer of the Southwest Region (left) receives the Administrative Management Society Award for excellence in Paperwork Management in Government from Associate Administrator Alan L. Dean.

## TWO NAMED TO NEW AERONAUTICAL CENTER POSTS

Two career employees from Washington Headquarters have been assigned to newly created posts in the Aeronautical Center in Oklahoma City.

Richard P. Skully, who has been executive officer in Flight Standards Service, was named Deputy Director of the Center, and Ollie J. James, who was an appraisal specialist in the Office of Appraisal, was appointed executive officer of the Center.

Both will report to the Center Director, W. Lloyd Lane, whose title was changed and responsibilities enlarged recently to include all the major operational activities at the Center. Such Center activities' as the Civil Aeronautical Research Institute, the FAA Academy, the Installation and Material Depot, the maintenance of FAA aircraft, flight inspection of navigation aids and the processing and issuance of air medical certificates had previously come under the jurisdiction of various FAA offices in Washington.

Skully, a veteran pilot with an air transport rating, joined the CAA/FAA in 1947 as a general aviation operations inspector in Richmond, Va. He remained in the Eastern Region area for 14 years. In the New York Regional Office he worked as an air carrier operations inspector, an airspace and procedures specialist and supervising inspector of the Kennedy International Airport ACDO.

In 1962 Skully was transferred to Washington to the FAA appraisal staff. He became assistant division chief of the Flight Inspection and Procedures Division, Flight Standards Service in March 1964 and was named Flight Standard Service's executive officer in August 1965.

A native of Rochester, N. Y., Skully attended State Teachers College at Ge-



Richard P. Skully

nesco, N. Y. Now a colonel in the Air Force Reserves, Skully served in the Far East during World War II.

James, who has been in CAA/FAA for 25 years, is a native of Durant, Okla. He joined the Agency in 1940 in Dallas as a ground school supervisor in the Civilian Pilot Training program. After four years military service, James left the Marine Corps as a captain. During the next 16 years, after rejoining the Agency in 1946, James worked in the field of property and supply management in the Fort Worth and New York regional offices and at Washington Headquarters. In 1962 he became an appraisal specialist in the Office of Appraisal.

After graduating from Southeastern State College in 1936 with a bachelor's degree, James stayed on four years as the school's registrar. In 1950 he received his masters degree in educational administration from Texas Christian University.

## Portland Controllers Are Initiated in USAF Jets

The men who normally talk to the planes at Portland, Ore., International Airport have been flying in them recently to become more familiar with the situation on the other side of the radio wave.

The 337th Fighter Group at Portland has conducted a series of T-33 orientation flights for 14 FAA air traffic control specialists who have never flown in military jets.

Participating in the familiarization trips were Portland Tower controllers Ray B. Lein, William R. Gibson, Clinton

B. Wilkinson, Kenneth E. Jackson, William M. Owen, Douglas M. Greene, Ronald C. Hanna, George Hong, Ralph C. Bateman, Ian C. Lawry, Bruce F. Harpham, Kenneth L. Spencer, Frank T. Hillman and George D. Dicey.

The orientation flights were conducted under simulated weather conditions requiring instrument flight rules.

FAA controllers participated in the flights during off-duty hours. As part of the exchange, Air Force pilots visited Portland Tower to familiarize themselves with controller operations.

## PILOTS AND EDUCATORS BRIEFED BY FAA AT GENERAL AVIATION SEMINAR

More than 100 general aviation pilots and educators from the New England States descended upon Boire Field, Nashua, N. H., in August for a general aviation seminar which included as top speakers Eastern Regional Director Oscar Bakke and FAA panelists members of the newly-established Boston Area Office.

Roger J. Crawley Jr., Director of the New Hampshire Aeronautics Commission, described FAA's participation in the two-day meeting as "the most vital ingredient in making our seminar turn out so successfully. I am deeply indebted to the Agency for cooperating in such excellent fashion."

Boston Area Manager Robert M. Brown explained FAA's new area manager concept. Three more Boston Area panelists, Airports Branch Chief Reginald Reed, Air Traffic Branch Chief Sidney Poe, and Flight Standards Assistant Chief Richard Freeland, each detailed accomplishments in his technical area and what New Hampshire's aviation public could expect in the way of future developments.

Aviation medicine and an analysis of the various weather factors affecting flight, particularly at high altitudes, were discussed by Eastern Region Flight Surgeon Dr. Lawrence Marinelli, Capt. George E. Pendergrass, USAF, chief of



Eastern Region Director Oscar Bakke led a group of FAA experts who explained the Agency's recent area manager reorganization concept and developments in the fields of aviation weather, medicine and technology. Seated at the right are Robert M. Brown and Richard Freeland.

the Office of Aviation Medicine's Medical Education Branch, Oklahoma City, and Jasper L. Black, chief of the Physiology Training Program at Oklahoma City's Aeronautical Center. Among the topics covered were decompression sickness, hypoxia, aircraft pressurization, spatial disorientation (vertigo) and the use of oxygen equipment.

Arthur Peterson of the U. S. Weather Bureau, Washington, D. C., was the weather panelist.

Among those attending the seminar

were William Piper, Chairman of the Board of Piper Aircraft; Nashua Mayor Mario Vagge and Boston ARTCC chief Clarence Kynock.

The seminar was sponsored jointly by the New Hampshire Aeronautics Commission, New England Aeronautical Institute, New Hampshire Department of Education, and Nathaniel Hawthorne College.

## Current NAFEC Projects Include Studies to Increase Air Safety

A run-down of projects currently underway at the National Aviation Facilities Experimental Center in the fields of air traffic control, navigation, airports, weather and aircraft safety, include:

- A joint project with the Weather Bureau to evaluate runway visual range (RVR) information as an aid to pilots.
- The minimum altitudes and airspeeds that a helicopter can safely autorotate (glide) to a landing if its engine loses power is being determined in tests held in California at several sites that vary in height above sea level.

- Airport surface detection equipment (ASDE), which gives controllers a radar map of an airport, is undergoing tests that will improve the usefulness of this equipment. Several new components that should reduce maintenance and extend its operating life are being evaluated.

- A low cost approach lighting system is being flight checked by NAFEC pilots at Nantucket Island, famous for its fog, when its weather approaches minimums.

- Jet fuel, gelled to the consistency of apple sauce, is undergoing a variety of tests, comparing its characteristics with that of liquid fuel. Purpose is to see if gelled fuel can reduce probability of combustion.

- The effect of ingesting foreign objects into a J-57 engine while it is operating is under investigation.

- A JT-12 engine pod from a Lockheed JetStar is undergoing fire tests in the Center's test tunnel to determine requirements for fire protection of small jet engines.

- A new compact instrument landing system (ILS) especially designed for helicopters is being evaluated in a series of flight checks.

- The effectiveness of weather returns on long-range radar is being evaluated by NAFEC engineers at the Washington ARTCC.

## DENVER EMT TOWNSEND ANNES HONORED BY AES

The Denver chapter of the Airways Engineering Society has honored Townsend Annes, an electronic maintenance technician at the Denver Airway Facilities Branch, with an engraved plaque in recognition of his contribution to technical excellence in the FAA. At the same time, the chapter nominated him for the annual Joseph B. Harriss Award, given nationally for unusual public service or technical achievement. As the regional award winner, Annes is now in competition with other regional winners for the national honor.

Honored for his contribution to technical excellence in the FAA by the Airways Engineering Society, Townsend Annes (right), an electronic maintenance technician at the Denver Airway Facilities Branch, receives a plaque from Michael E. Elnicky, AES coordinator for Colorado.



The work Annes has done in improving calibration and repair of test instruments was the basis for the AES honor.

After months of study and experiment, Annes devised a compact box with a switching scheme and instructions to simplify a complicated job of calibrating voltmeters, generators and other equipment. The calibration box permits a sector technician, after only one week of training, to calibrate any of the common voltmeters in use and also to make many precise checks on other types of instruments.

Annes designed and assembled calibration boxes for each section in his SMS district. He also helped prepare suitable course material and instructed two 40-hour courses on how to teach sector technicians calibration procedures.

Gordon A. Mickelson, Airway Facilities chief in Denver, reports that the calibration boxes have been used with good results in all sectors.

The AES citation points out "Annes' dedication and effort were obvious since he worked many evenings and weekends on his own time. He purchased, at his own expense, hardware and components which have no practical use except instrument calibration."

Annes also received an Agency Special Service Award in recognition of his skill.

## Automated Weather Forecasts Tested at 8 Airports

Eight selected major U. S. airports are receiving weather forecasts from a computer located at Suitland, Md., in a joint Federal Aviation Agency-U. S. Weather Bureau test of more reliable aviation weather information.

The computer, located at the Weather Bureau's National Meteorological Center, generates airport forecasts every six hours for the following airports: John F. Kennedy, New York; O'Hare, Chicago; Friendship, Baltimore; Washington National; Los Angeles; San Francisco; Seattle-Tacoma, Seattle, Wash., and Albany, N. Y.

The computer forecast, known as an "automated probability forecast," predicts cloud heights and visibility for two to seven hours in advance at the eight airports. Aviation forecasters use the automated forecasts as supplementary guidance in preparing their regular local airport forecasts.

To make its forecasts, the computer digests hourly weather observations from 73 selected airports across the country.

In addition, it uses pre-stored information on the climatic histories over the past 10 years for the eight airports which are receiving the forecasts.

The test, which will run through March 31, 1966, is designed to evaluate the potential advantages of using computerized forecasting techniques.

## SHUTTERBUG PAR EXCELLENCE

George H. Durand, Denver Center Planning and Procedures Officer, is a prize-winning photographer—and has ribbons to prove it.

Photos exhibited by Durand at the recent Boulder County Fair and Rodeo won four first-place ribbons, one second-place ribbon and a trophy presented by a local photo studio.

Also participating in Boulder County Fair events were four Denver Center assistant controllers, James E. Williams, Lewis S. Atencio, Lawrence Schneider and Adolfo H. Martinez.

## Award Certificate



An airworthiness certificate for the Japanese YS-11 turboprop airliner was awarded by Pacific Regional Director Phillip M. Swatek to Nagahide Mori (right), Nikon Aeroplane Co. president.

## Aussie From Down Under Studies FAA and Light Plane Operations

A visitor from "Down Under," Laurence P. Bond, superintendent of Flight Crew Standards for FAA's counterpart organization in Australia, the Department of Civil Aviation, spent four days in the Alaskan Region comparing notes with Flight Standards Division inspectors.

Bond is touring Agency facilities in the regions and the Aeronautical Center at Oklahoma City to study light aircraft operations and the light aircraft industry.

"Our organization in Australia is like yours in the States," he told Bud S. Selteneich, supervising inspector of the Anchorage Flight Standards District Office at Merrill Field, who briefed him on FSDO functions. "However, we also regulate air commerce and investigate accidents in Australia, activities which your Civil Aeronautics Board performs in America."

Australian Superintendent of Flight Crew Standards Laurence P. Bond checks the float of an aircraft at Merrill Field with Bud S. Selteneich of Anchorage FSDO.



## ALS Installed at Grannis Field



Southern Region's Airway Facilities technicians Robert W. Houseworth and Carson F. Brandon adjust lights on the new approach light system at Grannis Field, Fayetteville, N. C. The ALS helps pilots land at lower minimums.

## GARYS MAKE THEIR FIRST INSPECTION TOUR OF ALASKAN FAA STATIONS

"Hi! I'm Florence Gary," was the greeting extended to FAA families at McGrath, Galena, Kotzebue, Nome, Moses Point and Unalakleet last September.

The lady with a personality as big as the State of Texas, where she hails from, was on a get-acquainted tour of northern and interior FAA stations with her husband, George, who had taken over the controls as Director of the Alaskan Region in August. It was the first tour of a series planned by the Garys to visit every Agency facility in Alaska. "George and I wanted to meet as many FAAers and their families as we could on our swing through the Region," explained Mrs. Gary.

Coming to Alaska from the Nation's second largest state, a Texan might be permitted a certain amount of cynicism when comparing the size and merits of the two states. But Florence Gary isn't a cynic. She is a warm, friendly, self-assured lady who wants to see all of Alaska and learn as much as she can about her adopted state.

"It's a grand place and everyone is so friendly," says Mrs. Gary, "and I come from a section of the country where hospitality and friendliness are traditions. It's colder here than where I grew up in southeast Texas, near the Gulf, but I have discovered among Alaskans a per-



Mrs. George Gary, wife of the Alaskan Regional Director, makes a new friend in youthful Richard Davis, son of acting area manager, Leonard B. Davis of Galena, Alaska.

sonal warmth which makes one forget about temperatures outdoors."

Florence Gary's route to Alaska has been a circuitous one with as many twists and bends as the Alcan highway. Florence Gary, nee Kubecka, grew up in the southeast Texas towns of Hallettsville and Edna. Her father was a farmer-rancher. She met her husband in Austin in 1948 where he was assigned as airport planning engineer with the CAA, FAA's predecessor Agency.

The subsequent years read like a Bae-decker of the United States with assignments of ever-increasing responsibility for husband George in CAA/FAA. Following his first aviation job in 1946 as an airport planning engineer with CAA in Austin, Texas, he steadily advanced, and by 1957 was district airport engineer assigned to the Los Angeles area. In February 1961, he was advanced to assistant chief, Airports Division of the Western Region. Upon establishment of the Southern Region, he was selected to head up the newly formed Airports Division with headquarters in Atlanta, Ga. He held this position until his assignment here this summer.

Florence Gary is especially happy for her two sons and daughter. Alaska is a wonderful place to raise children, Mrs. Gary believes. Sons George Jr., 15, and Bret, 10, are Boy Scouts and take to the outdoors like brown bears to berry patches. Daughter Sandra, 13, couldn't wait for the snow to fall. "We all wanted to get on skis," explained Mrs. Gary.

The Garys are building a home in Anchorage. For the time being, they are living in an apartment hotel. The first thing Mrs. Gary plans to do when she moves into her new home is to put out a large welcome mat near her front door, and to greet her new Alaskan friends.

## NAFEC Tests Terminal Radar Control Room Consoles

Improved console layouts for terminal radar control rooms (TRACON) which will be located in the large new standard FAA concrete control towers were tested recently at the National Aviation Facilities Experimental Center. The consoles featured new equipment rearranged for more efficient operation.

Six controllers from various parts of the country participated in the tests.

They were: Paul Rowland, O'Hare International Airport; Stu Hayter, Los Angeles; Earl Wolf, Albuquerque Tower; George Perry, Washington National Airport; Henry Lawson, Memphis Tower, and M/Sgt. Warren De Fazio, McGuire AFB. The project, which continues at NAFEC into next year, is under the direction of J. Roy Bradley, who is assisted by Jack F. Horvath.

## Automation in Air Traffic Control to be Discussed

Representatives from 30 countries convened at the FAA's Third International Aviation Research and Development Symposium at Atlantic City this month to discuss "Automation in Air Traffic Control."

Seventeen technical papers were presented by representatives from France, Germany, Israel, Japan, The Netherlands, United Kingdom, United States and European Air Traffic Control Organization (Eurocontrol). Panel discus-

sions devoted to recent research and development accomplishments in air traffic control automation were also held at the symposium.

Neal A. Blake, of the FAA's Systems Research and Development Service, was chairman of the symposium's technical sessions.

Two previous international aviation research and development symposiums, held in 1961 and 1963, also met in Atlantic City.

## 33 EMPLOYEES OF OAKLAND CENTER ARE HONORED



Area Manager Hervey E. Aldridge (center) congratulates Arthur T. Wilborn and Robert A. Patterson, co-winners of coordinator award; Eugene L. Chainey and Fritz E. Sperling, controller and assistant controller winners.

Thirty-three employees of the Oakland Center at Fremont, Calif., recently were honored for outstanding service under the Center's award program.

The honors were presented by Hervey E. Aldridge, San Francisco Area Manager.

Four men were named recipients of the Glenn L. Simonson Awards presented in honor of a former chief of the Oakland Center who died in January 1963.

Recipients were Fritz E. Sperling, assistant controller; Eugene L. Chainey, controller; Robert A. Patterson, coordinator; and Arthur T. Wilborn, coordinator. The latter two employees tied for the title of top coordinator.

Twenty-nine employees received the Baldwin-Varney Awards made semi-annually to honor the most effective air traffic control center crews. The awards are made on the basis of participation in



Assistant Oakland Center chief Jack Thomas watches crew chief Robert Faulkner (center) receive the outstanding crew award from San Francisco Area Manager Hervey E. Aldridge. He was presented the Baldwin-Varney Award.

flight assists, complimentary in-flight evaluation reports, letters of appreciation or commendation, suggestions adopted and participation in Federally sponsored campaigns such as charity drives.

Those receiving the awards were: Crew chief—Robert L. Faulkner; Coordinators—Norbert F. Rossillon, Thomas J. Donnelly and George E. Wright; Controllers—James D. Dixon, Lee C. Stracnet, Frank L. Cunningham, Henry J. Puncchar, Stanley Bieber, Robert F. Blair, Michael A. Boehm, Donald L. Weiler, Merle Clure, Ralph L. St. John, Cortis L. Jones, R. LaRue Johnson, William V. Reavely, Donald A. Dunn, Kenneth W. Barton, Kenneth E. Anderson, Owen R. Kane, Joseph E. Coltrain and Joseph R. Basham; Assistant controllers—Werner L. Gumpert, Raymond J. Todd, John B. Mayo, Douglas G. Smith, Alvin R. Seidel and Calvin W. Steele.

## Kansas Twister Turns A Foreign Car into a High Flying Machine

Everett J. Smith, a watch supervisor at the Wichita, Kan., RAPCON, recently took a harrowing, three-block ride through the air in his small foreign car—courtesy of a Kansas tornado.

The twister blew the car through the air at power pole level and although the car was badly battered, Smith suffered only bruises and a bad case of the shakes. "I could see the crossarms on those power poles," he said. "When I hit ground, I realized both legs were quivering. I had been trying to put on the brakes while the car was still in the air. Man, I was hanging on. It was a rough ride."

Smith flew *Corsairs* and *Skyraiders* for the Marines in World War II and Korea but he said, "I never had a ride like this."

Ironically, the same twister destroyed a house Smith's wife was visiting, but she also escaped injury.

After suffering only minor injuries, Everett J. Smith poses alongside his damaged, miraculous flying machine.



## STRIKES TWICE



Lightning struck at Columbia, S. C., Metropolitan Airport, hitting the tower and the field where it left a trench 45 feet long. William A. Davenport and Marvin T. Love check the damage.

## Teamwork by the FAA, TWA and Coast Guardsmen Save Pair from Sea Tragedy

A tragedy at sea involving a father and son out for a day's fishing was averted recently thanks to the swift actions of two New York Center air traffic controllers.

Radar controller John Badzo Jr., and Ocean Area supervisor George Payla, were the FAA duet whose alertness paid off in the rescue of two fishermen after their boat caught fire in Atlantic waters off eastern Long Island.

Two TWA captains and the U. S. Coast Guard also figured prominently in the rescue operation that was a masterpiece of teamwork.

It all began at about 3 a.m. on Aug. 24 when the captain of TWA's Kennedy to Frankfurt, Germany, flight radioed Badzo to report the sighting of a fire on the ocean's surface. Using TWA's radar position and the pilot's estimate of the fire's distance and direction, Badzo noti-

fied Ocean Area supervisor Payla of the report. Payla then relayed the information to the Coast Guard Rescue Coordination Center in New York, which im-

George Payla (left) and John Badzo Jr. made up the FAA part of the rescue team. They relayed information to the Coast Guard who rescued the fisherman from a dory.



mediately dispatched a cutter to the area from its station at Shinnecock, L. I.

Hoping to pinpoint the position of the fire, Badzo contacted another TWA flight, inbound from Switzerland, with instructions to attempt a sighting. Within a brief span, the captain reported spotting the fire. He added that it appeared to be aboard a small vessel and that nearby was what looked like a smaller boat with two or more occupants. Payla again passed his information on to the Coast Guard, which dispatched a helicopter and an amphibian aircraft from Brooklyn's Naval Air Station, Floyd Bennett Field.

The Coast Guard cutter sent earlier was the first to reach the scene. It found the boat engulfed in flames and nearby, in a dory drifting on the ocean swells, were the father and son. Crewmen helped them aboard the cutter and to safety.

## 'YOUR PEOPLE ARE DOING A FINE JOB' SAYS PRIVATE PILOT LE MAY

An Air Force general whose log book lists flight time in military aircraft from trainers to the latest jet bombers, has joined the thousands of general aviation pilots who fly the U. S. civil airways.

Retired USAF Chief of Staff General Curtis E. LeMay tells of his transition to "pleasure" flying in a letter he sent to Administrator William F. McKee recently.

The letter read:

Dear Bozo:

As you well know I recently graduated from KC-135, C-140, C-131 and other miscellaneous hardware belonging to the taxpayer to an S-35 Beechcraft Bonanza. I suppose I suffered to some extent from the same notion that infects a lot of people, to wit, that FAA is a necessary nuisance and composed of characters that sit around thinking up diabolical plots on how to route you the wrong way, hold you somewhere when you are in a hurry, etc. Perhaps this is a little exaggerated but you get my point. In any case, I was sure that a new private pilot and another puddle jumper cluttering up the airways would not be wel-



Retired AF General Curtis E. LeMay uses his S-35 Beechcraft Bonanza for pleasure flying after spending 36 years in military aircraft. Shown with LeMay alongside a Bonanza is Beech vice president William M. Morgan.

comed by FAA with any degree of enthusiasm. How wrong I was.

"I have flown over most of the country in the last three months and everywhere I went, whether it was personal contact with your people, or just a radio call, I always got not only what I asked for but nearly always additional information I could use. Not only did they do the job exceptionally well, but I al-

ways left with the feeling that they were glad I came and that my visit had been a welcome break in an otherwise monotonous day.

"In all the 36 years I have been flying there has been very little time for what I call fun flying. Sure I have enjoyed it but always there was a mission to fly or somewhere to go, something I had to do—not necessarily what I wanted to do. The Bonanza was to be primarily a fun airplane and it has been. I have enjoyed tremendously putting around the country and your people have in no small measure added to that pleasure.

"Having had a little experience in front offices I'm sure you haven't listened to anything but trouble since you walked in the front door. I just want you to know you have at least one happy private pilot using your airspace. I think your people are doing a fine job and if you have an opportunity to tell them so for me I would appreciate it."

Sincerely,  
"Curt"

Curtis E. LeMay  
General, USAF, Retired

## STRIKES THROUGH FOR \$3,900

One of the Agency's star bowlers is Victor Eichelberg of the Lincoln FSS who recently amassed winnings totaling \$3,900 in the Petersen's Bowling Classic in Chicago.

Eichelberg bowled seventh highest in a field of over 17,000 bowlers to earn \$1,800, placed second in his division for \$2,000 and was high man on his squad for another \$100.

## Back to School



William J. McGill (left) of the Central Region entered Syracuse University recently under the FAA Administrative-Management Development Program while James Moreland of the Eastern Region went to the MIT Center for Advanced Engineering Education. Both are from the Airports Division.

## Flight of Pilotless Plane Tracked on Radar Scope

The drama surrounding the aimless flight of a pilotless plane over the Nevada desert recently was reflected on FAA radar scopes in the Western Region.

The dramatic episode started after Douglas Newman, 25-year-old Las Vegas student pilot, landed his Aeronca Champ on a dry lake bed near Boulder City. When he decided to take off again, Newman hand swung the propeller. The plane began to move—he had forgotten to set the brakes.

Newman stood in the cloud of dust kicked up by the prop wash watching his plane gain speed, take off and disappear into the distance—with no one aboard.

## Washington Flight Inspection Field Office Moved

The Flight Inspection Field Office (FIFO) previously located at Washington Headquarters was moved to the National Aviation Facilities Experimental Center in Atlantic City on Nov. 1.

Forty-one persons were affected by the move. Two turbo-prop Convairs based at Washington National Airport

Newman hitch-hiked to Boulder City where he reported the incident to FAA.

Earl Leseberg, a Boulder City pilot, took off from Boulder City Airport to find the pilotless craft. He spotted it, still flying, in the Paint Pots area of Boulder basin. Within minutes of the sighting, the plane crashed and burned.

The plane's flight was observed continually on FAA radar scopes and traffic in the vicinity was alerted. Also an Air Force fighter squadron was alerted to shoot it down if the plane began to stray toward any populated areas.

However, it circled over the desert for one hour and 50 minutes, and crashed 10 miles south of its takeoff position.

were also a part of the transfer.

The FIFO conducts flight checks of navigational aids in intermediate altitudes up to 20,000 feet. It determines the accuracy of nav aids in the eastern third of the United States, in the Caribbean area, Panama and in certain South American countries.

## YOUTH OPPORTUNITY PROGRAM IS BIG IN DENVER



Western Regional Director Joseph H. Tippetts gave participants in the Youth Opportunity Program a final briefing.

FAA supervisors in the Denver Area were so pleased with the success of the 1965 Youth Opportunity Program that they sent letters to the principals of the schools which the young participants attended.

A typical letter, sent by Henry T. Kimbell Jr., district engineer, stated: "We were very pleased with the way this program benefited the Federal Aviation Agency as well as the youths who participated. In a short period of time, we feel we developed a meaningful work relationship with our summer trainees, and we wish them well in their studies and future endeavors."

Photographs showing the school's participant in the Youth Opportunity Program were enclosed with the letter

and it was suggested that the principal post the picture on the bulletin board "to let other students know about the useful work experience and training opportunities available through this program should it be offered next summer."

The letters went to the principals of high schools in Denver and Fort Lupton, Colo., and to Colorado State College, Greeley; Western State College, Gunnison; and Northeastern Junior College, Sterling.

The letters were also sent to the Urban League of Colorado, the Denver Branch of the National Association for the Advancement of Colored People and the Neighborhood Youth Corps in Denver.

Seven summer trainees were assigned to FAA offices in Denver.

## Orange County Airport Tower Is Thanked by Grateful Pilot

Ned A. Cantillon, president of Westport Development Co. in Anaheim, Calif., was so pleased with the service given him by the Orange County Airport Tower crew at Santa Ana that he sent a letter thanking each member of the crew by name.

"Gentlemen, you are among the best," he wrote. "It is a good feeling to know you are looking after pilots who sometimes have two left feet and a mouth full of marbles."

The eleven men who earned this unique kudos were: Isaac R. Jones, Howard W. Hinton, Fred D. Johnson, James T. Goussy, Robert H. Castillo, James J. Dovali, Leonard J. Bartoszek, Robert O. Mikes, Robert T. Richards, Edward B. Rickel and Paul E. Johnson.

## Lynchburg Control Tower Chief Honored by Chamber of Commerce

William C. Flanik, chief of the Eastern Region's Lynchburg, Va., Control Tower, was honored recently by the Lynchburg Chamber of Commerce Aviation Committee upon completion of 30 years Government service.

An honorary member of the Aviation Committee and a leading citizen of Lynchburg since 1943, Flanik joined the CAA/FAA in 1938 in Cambridge, Ohio. Later he served in Charleston, W. Va.; Washington Hoover Airport and Danville, Va.

He is a graduate of RCA's Maritime Communications School in Chicago. He served as a Merchant Marine shipboard communications officer in 1937. From 1933 to 1936 he served a hitch in the Marine Corps where he had worked as an aviation communications specialist.

## NEW TEXAS TOWER



El Paso and FAA officials gather at ground-breaking for the new 120-foot control tower at El Paso International Airport. From left: Robert L. Bekrens, chief, El Paso RAPCON/Tower; Dick Mettler, airport manager; Mayor Judson Williams; Paul E. Cannon, Albuquerque Area Office and H. L. McCune Jr., who is the airport board head.

## AAIA HONORS FAA VOLUNTEER

Richard F. Bache of the Western Region's Aircraft Engineering Division has been honored by the American Institute of Aeronautics and Astronautics in recognition of the distinctive volunteer service he rendered to the Los Angeles section of that organization. The AAIA fosters activities and programs aimed at betterment of the industry and also aids in career development.

## your health

**FROSTBITE** occurs most often on the nose, cheeks, ears, toes and fingers. Sometimes the patient will not know that he has been frostbitten since he may not see the part, although it will feel numb and will appear white upon inspection.

The ancient practice of rubbing a frostbitten area with snow should be forgotten. Friction of any sort causes damage. Good first aid treatment is to take the patient to a warm room, keep him warm and give him warm drinks. The frozen part may be immersed in warm water or have warm packs applied.

Frostbite can usually be prevented by wearing proper clothing out-of-doors in cold weather. It is more likely to occur in the aged person or one with poor circulation.

In the colder parts of the United States frostbite also occurs among teenagers who go without hats or covering for their ears.

In all cases of frostbite be sure to consult your physician.

## -and safety

**SNOW TIRES.** Tests conducted last winter show that reinforced tire chains provide the greatest stopping ability and traction, according to the National Safety Council. Studded snow tires are second best and regular snow tires are third. Studded snow tires are safer on icy pavements than regular snow tires, says the Council. Studded tires are either snow or conventional tires in which some 100 chrome steel studs (not much thicker than a pencil lead) have been embedded. They protrude about one-sixteenth of an inch from the tire's surface and are installed in your present tires by a tire dealer. However, tires with reinforced chains are the safest. The Council says more tests will be carried out this winter. Studded tires are legal in 25 states; some other states limit or outlaw their use. Check with your state Department of Motor Vehicles before investing money in this tire studding service.

## ONCE ARID LAND, NOW HAVEN FOR WATER SPORTS

Employees at FAA's Aeronautical Center are enjoying water sports such as fishing, water skiing and boating at their own private resort in what was once an arid wasteland.

They pay only \$10 per year for the privilege of enjoying the resort, a 32½ acre lakeshore site just 37 miles from the Center.

The Aeronautical Center's employee association decided to purchase the land for this purpose last summer after a committee appointed by Richard A. Wentzel, then president of the association, decided that the employees would support a lakeshore recreation site. Land was located on Little River Reservoir, the newest of many man-made lakes which have helped convert the Oklahoma cattle country into a mecca for water sports enthusiasts.

In May 1965 the deal on the resort was closed. Since that time a road, fencing, water well, boat ramp, picnic tables and general land clearing has been in progress by members who are combining work with water fun. Future plans call for rest rooms, shower facilities, boat storage sheds, cabins, a general store and a pavilion.

Members of the committee which decided on the project were Kenneth B. Young, Warren A. Thompson, Lawrence

H. Kruse, Kermit W. Krueger, Ted Wernick, Thomas W. Collin and John Southern. Final negotiations were handled by a committee composed of Jerry J. Lipscomb, Raymond Kelly and Merrill Van Sickle. Association president Jack Ferguson and secretary Betty Daugherty acted as legal agents for employees in the purchase.

A non-profit organization, headed by Ken Young, has been incorporated to handle the affairs of the resort independently of the employee association.



The membership drive in the Aeronautical Center's recreational area was termed a success by the Recreation Association president Ken Young (from left) and Wayne Harris, membership chairman, who presents memberships to Center Director W. Lloyd Lane and Dr. Stanley W. Mohler, Director, Civil Aeronautical Research Institute.

## JUST WHAT THE 'DOC' ORDERED

FAA air traffic service is "just what the doctor ordered," if you're talking about Dr. Michael F. DeSalvo of Redlands, Calif. When Dr. DeSalvo received his instrument rating from FAA, he took the occasion to thank Theodore G. Culver, chief of March Air Force Base Radar Approach Control, for excellent service.

"I appreciate the cooperation and patience shown me by FAA personnel while I was receiving my instrument instruction," the doctor wrote. "It must take the patience of Job to put up with 'mike fright' and stupid blunders made by a 50-year-old man attempting to learn the complexities of instrument flight, but you all displayed such patience. It is with utmost respect that I regard . . . ATC controllers throughout the country—in whose capable hands we place our safety."

In a letter to all personnel at the RAPCON, Culver added his own appreciation: "With the trying construction work being conducted within the RAPCON, we are still able to receive a pat on the back, indicating the splendid caliber of controllers operating March RAPCON."

## Learns and Tells 'How Two Do Europe on One Retirement Check'

A former News Division FAAer of Washington Headquarters Office of Information, Charlie Planck, is an author.

As a result of a year abroad with his wife, Carolyn, Charlie penned "How Two Do Europe on One Retirement Check," an illuminating, humorous, down-to-earth and extremely useful work.

The book chronicles the year which he and his wife spent in Europe after he retired from FAA in 1963. A detailed report on living conditions, food, amusements, travel, recreation, and many other items, all told in Charlie's sparkling manner, make it a delight to read, study, and even use as a planning guide.

## BUY CIRCUS TICKETS FOR KIDS

Salt Lake City ARTCC personnel purchased circus tickets for 250 local handicapped and underprivileged children recently. The ticket drive was part of a program sponsored by the Junior Chamber of Commerce of Murray, Utah.

## TO HIS FRIENDS HE'S KNOWN AS THE 'RAREBIRD'

In Alaska his friends call him "Rarebird," although his Form 57 identifies him as Clifford M. Springberg. He's a jack of all trades who repairs all types of equipment from diesels to water pipes in the Alaskan Region's Airway Facilities Division. His duties take him all around the state.

Home to him is his airplane, a Piper Colt, and his living room is the great outdoors of Alaska. A pup-tent pitched under a wing of his airplane and a sleeping bag are all the accommodations he needs for bedding down at night.

In a land where survival courses are included as a part of flight training, Rarebird leaves his pilot contemporaries far behind in his prop wash when it comes to survival preparations.

The cabin of his airplane looks like the inside of an Army-Navy surplus store. He has crammed enough survival equipment in his plane to sustain him for months. "An outdoor man really doesn't need too much," says Springberg. "A box of shells, some salt, a rifle, matches and a fishing pole should be in any survival kit. After that he can start adding items." One item Springberg thinks should be standard equipment is a five gallon can of dry foods—rice, beans, noodles, peas, corn, etc.—all mixed together, which he carries in his airplane.

"There'll be time to sort 'em all out if I'm forced down," figures Springberg. "Survival comes naturally to Springberg possibly because of his circus background. The 59-year old mechanic, who has three great grandchildren and seven grandchildren, was a man on the flying trapeze in a traveling circus when he



Rarebird's plane is equipped with special double pairs of wheels which permit landings "where people can't walk." His plane also comes fully survival equipped.

was in his twenties. He also dove into a tank of water from a platform 110 feet high as part of his circus act. "I figured that if I had to fly, it would be better to get wings so I took flying lessons and came to Alaska in 1927."

Prospecting for gold, logging, operating a sawmill and home building were some of his many occupations before he joined the Government in 1955.

Rarebird flies his own airplane to and from Alaskan field stations but is reimbursed for travel expenses. He's proud of his airplane: "I can land it in places where people can't walk," he boasts, pointing to its double pairs of wheels.

When he pulls his long, lanky frame from the cockpit at any airport in Alaska, chances are there will always be someone on hand to greet him warmly—"Hello Rarebird."

## Another Opening, Another Tower



The first Central Region type "O" tower was commissioned recently at the Rapid City, S. D., Airport during the dedication by Central Region Director Edward C. Marsh. Also present were: James W. Dunfee, chief, Rapid City FSS; Donald G. Phillips, new tower chief; Area Manager Lyle L. Brown and Mrs. Marsh.

## tech talk

**SATELLITES.** There may be a constellation of man-made satellites in the air traffic control of the future—and thereby hangs a tale.

"The only economically and operationally feasible technique which will fully satisfy the near future requirements for communication to over-ocean enroute aircraft, and which will be at all adequate for post-1970 requirements, is one which uses active satellite relays," says a study completed last year by the University of Michigan under contract to the FAA.

In spite of such sophisticated modern techniques where computers talk directly to computers in microseconds, the relatively old-fashioned two-way radio is still the best form of aviation communication. Its use, however, is limited by the long distances involved in over-ocean flights.

This is where the satellites enter the picture. In late 1964 and early 1965, a concept proposed by Systems Research and Development Service's Research Division, using SYNCOM III, was tested by a Government/industry satellite communications working group. The team successfully sent and received teletype messages via the satellite telemetry and command link between an aircraft over the Pacific and a ground terminal at Camp Roberts, Calif.

Although no requirement for a satellite-supported ATC communications system is expected before 1970, SRDS is supporting an active program investigating the technological problems. A recent report (RD-65-67), gives a review of "Future Satellite Communication Sub-system Investigation." Results are summarized and discussed to provide guidelines for future activity.

Among the more important problems to be solved is compatibility with the existing communication environment to protect user investment in airborne equipment. Engineers expect new aircraft antenna and possibly some modification or additions to aircraft equipment will be required to use a satellite-supported communications system.

The FAA, along with NASA, is planning a comprehensive data gathering program using the ATS-B (Application Technology Satellite), scheduled for launch in late 1966. This program will include gathering performance data on airborne communication links.

# names & faces along the airways



1 Atop a flying saucer (an air car owned by a local TV station) is lovely Sheila A. Woolman of the Central Region. 2 Up for kudos in Alaska's Management Analysis Division is Ray Mayfield (right), a former intern, who studies report with E. A. Cook, ADP chief. 3 Three electronic maintenance technicians, Robert L. Burrows and Harold J. Holzmagel, of Bismarck SMS, and Harry S.

Iverson, Minot subsector, are \$200 richer for sustained superior performances. 4 A suggestion that simplifies computations in checking the ILS glide path measurements earned Warren P. Conrad (left), Fort Worth FIDO, an \$880 award. 5 J. W. (Buck) Winston (left) of the Air Academy earned a bachelors degree in physics from Oklahoma City U. after 12 years and many nights. He is congratulated by Warren W. Smith. 6 Western Region Director Joseph A. Tippetts (left) helps

Governor Mark O. Hatfield and Mayor Donald Simpson cut the ribbon dedicating the new Cottage Grove, Ore., Airport.



1



6



7



12



8



2



5



9



3



10

7 O'Hare controllers are also softball champs. They are: from left, front—C. Anderson, K. Lindquist, R. Clinton, W. Rusch; back—S. Serio, D. Kemmerling, J. Bowers, C. Joritz, W. Haeflinger, W. Yocius and R. Hake. Not in photo: J. Adkison, F. Banks, R. Baran, W. Boyle, P. Cazzanigi, L. Eastburn, P. Jackson, R. Mischke, J. Naimo, A. Rounds and R. Stevens. 8 Central Region's Richard E. Larson gets a "sweet" send off for his trip to Europe. 9 Denver champs won the Longmont, Colo., Recreation American League City softball championship. The winners are: from left, standing—F. R. Shelton, C. R. Hunter, W. D. Aynes, E. T. Jasmund, F. J. Carey; kneeling—A. Romero, R.

R. Allman, W. Aynes, D. P. Steinbrecker and B. T. Jones. Not in photo: M. L. Mochle, J. A. Carr and V. Palinck. 10 Radar section chief at NAFEC Joseph J. Scavullo is now an author. He wrote the book "Aerospaced Ranges: Instrumentation." 11 The queens of the ten pins are FAA wives at Meridian, Miss. They are: from left—H. Roesel, B. Hess, F. Agee and E. Kuhar, with their sponsor, Alex Loeb. 12 Van Nuys Field, Calif., Tower controller Vern B. Cole, also a pilot, made the 3 1/2 millionth landing or take-off at the busy field. The feat earns him a handshake from Robert P. Graner, chief of the Van Nuys Tower and his boss. Cole uses his plane to commute to work from Long Beach.

# Personnel Pipeline

## EQUALITY OF OPPORTUNITY FOR ALL

To assure that Federal Aviation Agency employees uphold the Constitution, laws, policies and regulations of the United States, the following Agency policy has been made a part of the revised Agency Order, "Implementation of the Equal Opportunity Program."

*"All official actions shall be performed in such a manner as to assure equality of opportunity and avoid even the appearance of discrimination because of race, color, religion, sex or national origin."*

The revised Order 1000.8, dated Aug. 19, 1965, stresses the need for a continued positive program to promote and encourage equal opportunity for all qualified persons employed or seeking employment with the Agency. It also requires contractors and sponsors contractors to sign and comply with non-discrimination agreements in all Government contracts. This and related laws, as well as rules and regulations, direct that affirmative and positive measures be taken to promote and encourage equality of opportunity within the FAA and in our services to the public.

The president also has directed that recreational organizations which practice discrimination be barred from sponsorship by Government agencies and from the use of an agency's name or facilities. Agency employees are barred from official participation in events sponsored by organizations practicing discrimination when their participation could in any way be interpreted as Agency cooperation. The order makes it clear that compliance with these policies is the responsibility of every Agency employee. Execution of the program Agency-wide is the responsibility of the Office of Compliance and Security.

## LOOK A GIFT HORSE IN THE EYE

Guidance on ethical conduct as delineated by President Johnson is described in the recently revised Agency Handbook on Conduct and Discipline. The revisions implement Executive Order 11222, "Prescribing Standards of Ethical Conduct for Government Officers and Employees." They caution employees not to accept any compensation, gift, favor, gratuity or entertainment directly or indirectly from anyone doing business of any kind with the Agency if it might affect, or even give the appearance of affecting, the employee's official conduct. It leaves no question that special occasion gifts, such as for Christmas, birthdays, weddings, etc., are out. FAA employees are reminded not to accept any gifts having monetary value. This includes intangibles such as credits, loans, discounts, transportation or any form of service. Even when a representative of a concern doing business with FAA is primarily a personal friend or social acquaintance outside the sphere of official contacts, the prohibition still applies. Any offer or acceptance of gratuities must be reported. The Administrator has directed that all violations of this policy be promptly reported to the Director, Office of Compliance and Security. Failure to report a violation is a serious infraction of Agency policy and could result in disciplinary action, including removal. Full details will be contained in the revision to the Conduct and Discipline Handbook, PT P 3750.1A, to be issued shortly.

## HELP THOSE WHO ARE LESS FORTUNATE

Give generously to the Combined Federal Campaign. The CFC consolidates in one drive the fund-raising campaigns of all voluntary health and welfare agencies which solicit contributions. Do it now, once for all!

## KEEPING PACE WITH TECHNOLOGY

A unique training program designed to keep key Eastern Region Headquarters staff members current on new developments in aviation and related fields has been in progress for four years.

Late in 1961, Regional Director Oscar Bakke asked his training staff to develop a program to help his technical experts keep pace with rapid changes in aviation and to provide internal cross-training so that personnel in one technical area could become familiar with problems and developments in other technical areas.

To plan and conduct the program, a Technical Alertness Committee was set up. It consisted of John Wilson, Air Traffic Division; John Vogel, Flight Standards; Arthur Chargois, Airports; Hugh McEvoy, Installation and Materiel; Dom Tocci, Systems Maintenance, and Leo Berek, Personnel and Training.

The committee members consulted with supervisors responsible for various subject matter areas and then tried to build a program to meet the needs they expressed. Speakers were obtained from inside the Agency and from the aviation industry and related industries. More than 40 one-hour sessions have been conducted.

Subjects covered were: Supersonic Transport Program, Decca Navigational System, Inertial Navigation Systems, Doppler Navigation, All Weather Landing Systems, Concepts of Airborne Equipment for Category II Aircraft Systems, Aviation Weather Research, In-Flight Cargo Extraction, Airport Lighting, Arresting Installations for Today's Aircraft, A Review of Research and Development at NAFEC, Canadair CL 44 Aircraft, C-141 Transport, Airport and Community Planning, Aircraft Accident Investigation, Lasers and Masers, Vertical Take-off and Landing Aircraft, Automation in Air Traffic Control and the Future of Air Freight.

Participants and their supervisors indicate that the Technical Alertness Program has been delivering the goods by exposing the participants to the "growing edge" of developments in aviation and related areas. The cross training has enabled air traffic controllers to learn the problems of aeronautical engineering, the electronic maintenance technicians have learned about traffic control and other technical and administrative specialists have broadened their knowledge in a variety of areas.

Plans for continued cooperation within the FAA and industry during FY 1966 indicate that next year's program will continue at the same level.

FAA Horizons



## THE PASSWORD IS 'PROUD'

1 Aeronautical Center employees gather to learn about PROUD, a work improvement program designed to encourage workers to do their jobs correctly the first time and to strive for excellence in performance. 2 PROUD worker Marcellous C. Capps earned title for devising a modification of a DF antenna system expected to double its service life. 3 Associate Administrator for Administration Alan L. Dean delivers the keynote address before assembled employees. 4 Civil Aeromedical Research Institute technical editor Aline (Corky) Koch is PROUD too; she earned the distinction for error-free editing of many CARI publications. 5 The Flight Inspection Division is PROUD of Delbert H. McGehee (left), and A. Wayne Hopkins for faultless research of navigational aids performance data for VOR/TACON master data summary. 6 A PROUD trio are Carl R. Whitaker (left), M. Clay Taylor and Kenneth L. Pierce, of the Data Services Division. They developed a "Workload Versus Resources System" which is facilitating scheduling and assignment of work. 7 The FAA Academy is PROUD of Paul J. Lane (left) and J. B. McCollough who are responsible for the construction and design, respectively, of the Agency's finest smoke tunnel. Used for research and instruction, the tunnel is completely remote controlled by the operator. Employees who enter the PROUD ranks are asked to sign a workmanship employment pledge card and will be given a "Mr. Proud" lapel pin. The PROUD program was developed from the successful "Zero Defects" program which has been used so effectively by industry and by the military in the wide area of precision work.

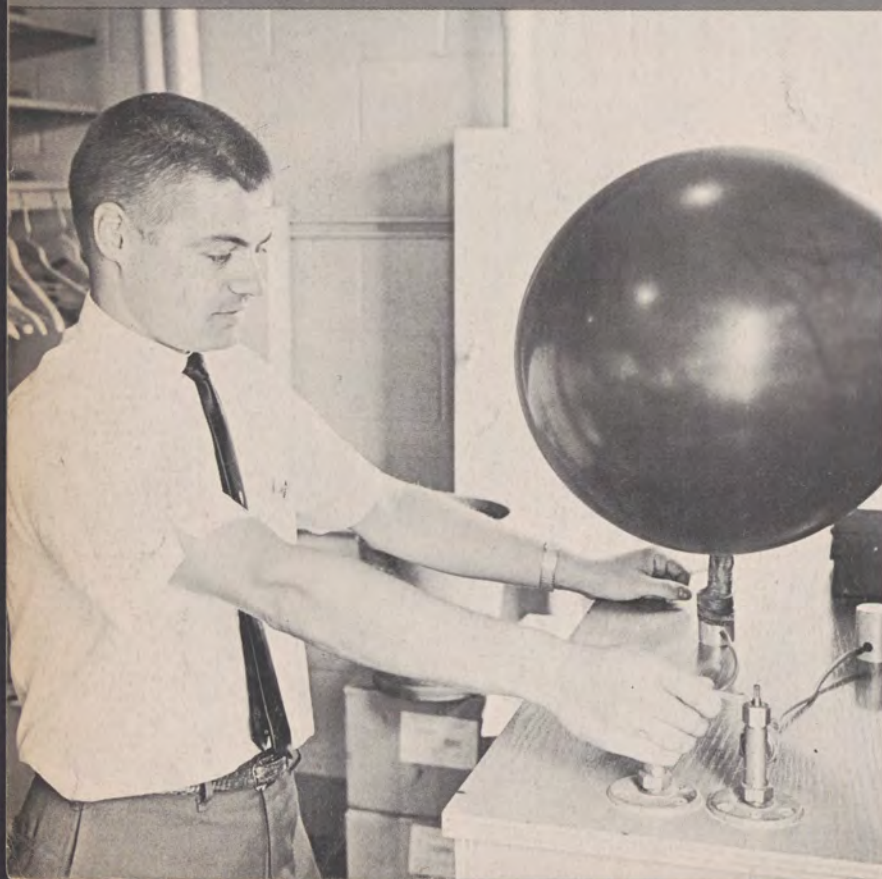


## Joan I. Olowach

After duty as a WAF (Women in the Air Force) started her on an aviation career in 1952, Joan I. Olowach returned to civilian life to become an air traffic controller and a pilot with an urge to travel. Today, Joan is one of the feminine voices in the tower that assists pilots flying in or out of the Detroit City Airport. A three year USAF tour at Kelly AFB, San Antonio, Tex., and Hickam Field, Honolulu, got her off to a good start as a controller. She's been with the FAA since 1956. She began her Agency career at Traverse City and Lansing, Mich., before moving to Detroit. As a pilot she has logged 200 hours. For five straight years she has entered the Michigan Small Race for Women but feels she needs more experience to end up among the winners. Her latest interests include traveling to Mexico.



## FAAers on the job



## John Cernohorsky Jr.

Seventeen and just out of high school, John Cernohorsky Jr., heeded the salty suggestion to "Join the Navy and See the World." See the world, he did, but more important, the Navy introduced him to his present job and hooked him on aviation for life. Now 27, he joined the FAA in 1960, after his four-year "cruise", which included duty at Guantanamo Bay, Cuba. He's now a flight service specialist at Chemung County Airport, Elmira, N. Y. Last year Eastern Region honored him for his part in vectoring rescuers to a crashed light plane which went down at Grand Canyon, Pa. He deduced its location by determining which remote receiver transmitted the pilot's final "Mayday" call. The injured pilot survived. Cernohorsky is an instrument-rated, commercial pilot, and is now working toward an instructor's certificate.