FAA HORIZONS

Read: 'New ATCS Training' Pages 4-5

Vol. 3, No. 2 | Published biweekly for employees of the Department of Transportation/Federal Aviation Administration | January 20, 1969

Honolulu Center Latest To Receive Automation

HONOLULU—With the installation of an IBM 1130 Computer System at the ARTC Center in Diamond Head Crater, automation has come to air traffic control in Hawaii.

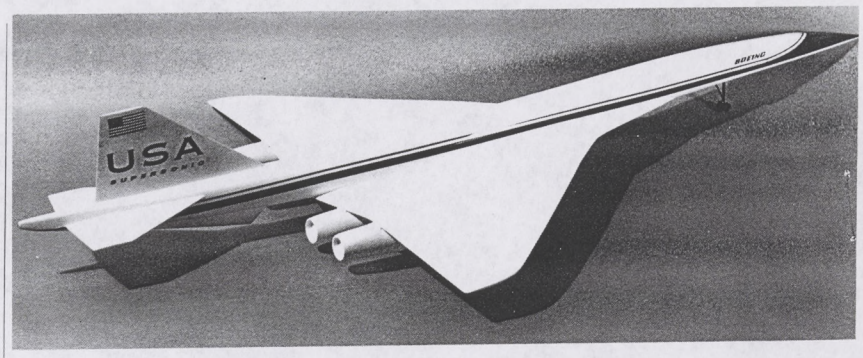
The new equipment follows an aircraft's progress along any proposed flight path. The plane's position, identification, destination, planned route of travel, estimated departure and arrival times, altitudes and speed are automatically printed out. This information, called the flight progress strip, is used by controllers to safely move each plane in the area.

Capable of making 200,000 computations per second, the system will save many man hours as controllers keep track of the 30,000 aircraft handled by the Honolulu Center each month.

In line with the FAA's long-range plan to upgrade its equipment, the control tower at Honolulu International Airport is expected to get an Automated Radar Terminal System (ARTS-III) sometime in 1971. The ARTS III system, also known as the beacon tracking level system, will display aircraft identity, computed ground speed and altitude information in alphanumeric form adjacent to the secondary radar (beacon) returns. These alphanumeric formats are in addition to the normally displayed primary and secondary radar data. Automatic tracking will correlate the alphanumeric formats with the secondary radar (beacon) returns.

Time Saver

Honolulu Center Controller Roland Holt explains workings of the facility's newly-installed IBM 1130 flight strip printer system to Jodie Lee, flight data aide. The 1130 processes and prints out flight data and computes flight progress. It is the first such system installed in the Pacific Region.



Supersonic Transport

The new SST design that Boeing submitted to the FAA on Jan. 15 is distinguished by the delta-type wing used in conjunction with the large horizontal stabilizer. The plane will be almost as long as a football field.

New Design Is Submitted for SST

SEATTLE—Boeing's new fixed-wing design for the SST has been presented to the FAA as scheduled. The technical evaluation of the new aircraft design is expected to take 30 to 90 days.

"It's one of the best designs I've seen," said Maj. Gen. J. C. Maxwell, Director of the SST Development Program. "I think we have a real good airplane."

Supplanting the earlier variable sweep wing design, the new fixed wing airplane will cruise at Mach 2.7, or about 1,800 miles an hour, at altitudes above 60,000 feet. It will carry up to 280 passengers. The new SST will be powered by four GE-4 jet engines, each having more than 60,000 pounds of thrust.

If the design is accepted, Boeing plans to build two prototypes of the SST, the first of which is expected to fly in 1972. The SST is expected to go into regular commercial service some time in the mid-70s.

The technical committee named to assist in evaluating the new design consists of Dr. Raymond L. Bisplinghoff, head of the Department of Aeronautics and Astronautics at Massachusetts Institute of Technology, chairman; Dr. Arthur E. Raymond, a consultant and member of the Rand Corp. Research Council and formerly Senior Vice President, Engineering, for the former Douglas Aircraft Co.; and Dr. Ernest E. Sechler, Professor of Aeronautics and Executive Officer of the Graduate Aeronautical Laboratories at California Institute of Technology.

Man's Positive Outlook Defeats His Handicap

OKLAHOMA CITY—For an outstanding example of courage and determination in the face of misfortune, consider the inspiring story of 22-year-old Eddie Beasley, an employee of the Aircraft Records Section at the Aeronautical Center.

While on duty with the Marines in Vietnam back in 1965, Beasley stepped on a land mine. The shattering blast that followed cost him both legs, an especially bitter blow to one who had been an outstanding cross-country runner on a Marine Corps team.

Others might have been crushed by such a serious and crippling accident, but not Beasley. During the long months of convalescence in military hospitals, his spirit and morale rarely sagged.

"I'm alive and able to work," he said cheerfully. "I have a lot to be thankful for—some of my buddies didn't come back at all."

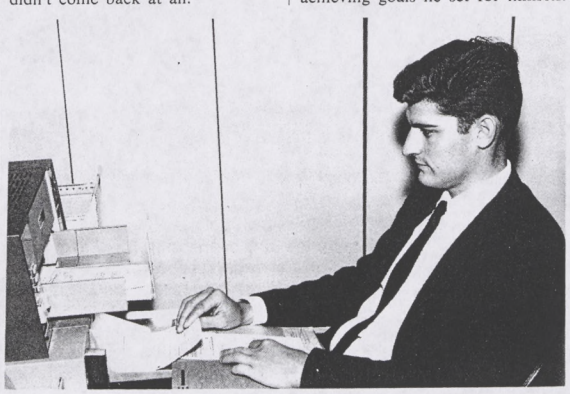
Beasley married an attractive USO hostess who visited him twice a week while he was undergoing eight months of training in the use of artificial limbs at Oakland Naval Hospital.

Though he quit high school to enter the service, Beasley decided to resume his education through courses offered under the military education and development program.

He now has the equivalent of two years of college and has set his sights on a formal college degree.

Meanwhile, he's doing an excellent job in the records section and is known for his ready smile and cooperative spirit.

As one of 280 handicapped employees among the 3,600 persons working at the Aeronautical Center, Eddie Beasley refuses to succumb to negative feelings. Instead, he looks ahead optimistically to achieving goals he set for himself.



Making His Own Way

Despite Vietnam wounds that cost him both his legs, Eddie Beasley is doing constructive full-time work in the Aircraft Records Section at the Aeronautical Center. He plans to finish college and ultimately begin a new career.

Promotion Policy Revised

WASHINGTON — Employees will have better opportunities for advancement, and agencies will have greater assurance that the best-qualified employees are selected for higher-level jobs under a revised Federal Merit Promotion Policy that goes into effect in July 1969.

The revised policy, a result of a thorough Civil Service Commission study of the 10-year-old Government-wide merit promotion system, was issued after extensive consultation with employee organizations and Federal agencies.

The new merit promotion policy is intended to help management select the best talent in the ranks of the career service to meet the many challenging problems facing the nation. It is also aimed at assuring employees that promotions are made on a fair, equitable basis. The revised policy places renewed emphasis on:

- Assuring that employees are considered for higher-level jobs for which they are eligible and in which they are interested.
- Providing the most effective evaluation methods to identify highly-qualified candidates for promotion, with written tests being allowed only when approved by the Commission.
- Requiring selection from among the best-qualified candidates.
- Eliminating all forms of discrimination or personal favoritism.
- Keeping employees fully in-

(Continued on Page 7)

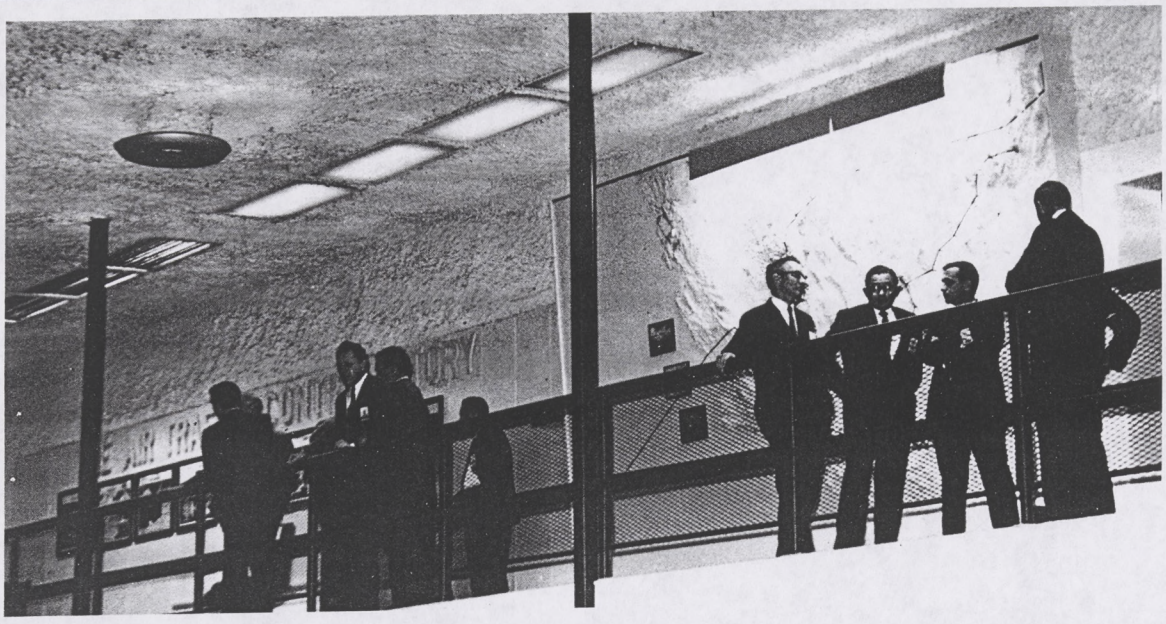
Flight Standards Awards Planned

WASHINGTON—A new awards program has been established to recognize outstanding Flight Standards field offices on both a regional and national level. Appropriately inscribed plaques will be presented annually, on a calendar year basis.

Although functions and activities of the various Flight Standards offices differ, all have the common mission of promoting the safety of flight. It is on this basis that selections will be made.

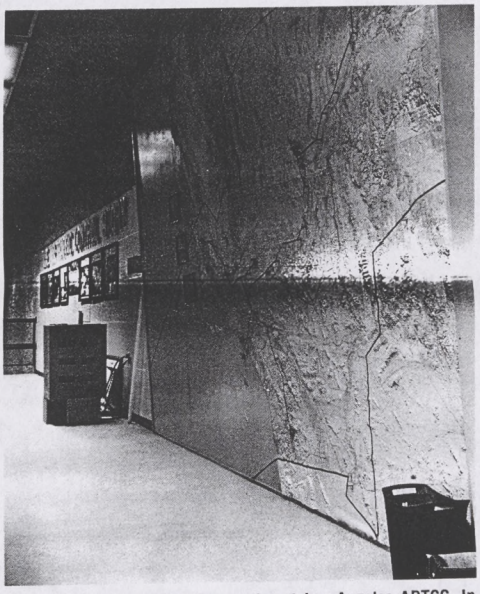
Under the program, one office from each region will be selected for special recognition. From these, and from an office nominated by the Chief, National Flight Inspection Division, a national winner

(Continued on page 7)



A group of interested Los Angeles Center visitors views the overall Center operations from the balcony. The Air Traffic Story, a live radar and radio display and a three dimensional area map make up this unique and complete "as it's happening" presentation.

A pictorial presentation, "The Air Traffic Control Story," vividly describing the Los Angeles ARTCC, is mounted on the wall. A live radar display augmented with actual pilot-to-controller communications is in the foreground.



A full-length view of the tour center at Los Angeles ARTCC. In the foreground is a contour geophysical map of the Los Angeles Flight Advisory Area. A radar display, a listening post to bring live radio contact to the visitor and a pictorial representation of air traffic control in action complete the tour center. A full audio-visual presentation can be given from this balcony site overlooking the operations and computer areas.

Cartographer Ken Clark explains "whys and hows" of radar mapping to Elaine Privett, Youth Opportunity Program worker, on the radar display.

FAA Story Told on Balcony . . .

CRACKING THE TOUR BARRIER

By Ben Freiman
Chief, Los Angeles ARTCC

The Los Angeles Center at Palmdale has been telling the FAA story in a dramatic, imaginative way.

The long, wide balcony overlooking the main control room and computer center has been equipped with audio-visual aids to explain operations to a steady stream of center visitors.

A large wall-mounted contour map on the balcony depicts the 182,000 square mile Los Angeles Flight Advisory area. Colored designators on the map show radar sites, remote radio sites (RCAGs), microwave relay sites and connecting links to the Center.

A vertical radar scope display can depict any of the Center's radar presentations, but is normally set on the ASR-4 at Los Angeles International Airport. Visitors thus get first-hand glimpses of the volume and complexity of landing and takeoff traffic situations at one of the nation's busiest airports. Also, tour leaders can give visitors a detailed explanation of how radar is used by the FAA.

Used in conjunction with the radar display is a speaker box over which guests can hear direct controller-pilot dialogues, giving visitors both a visual and an audio presentation as it is taking place.

Remaining wall space is devoted to a pictorial display outlining various functions and operations of the Center. In a vivid presentation of air traffic control in action, a mock flight is carried from point of origin to point of destination, and the FAA role at each point is explained.

Currently in the planning stage is a smaller-scale flight progress board, with strips, shrimp boats and flight plans. When completed, Center visitors on the balcony will have available to them essentially as much information on air traffic control as will be available to controllers at the various positions on the control room floor below.

Dum De Dum Dum . . .

A Veteran Controller Reminisces

By Carl Swanson, Jr.
Chief, Tucson Tower

TUCSON, Ariz. — Ceiling and visibility were unlimited. You could see a hundred miles. My partner and I were working the day watch out of Tucson International. He's Dan Pomeroy, maintenance technician. My name is Swanson.

We were at Marana Air Park temporary tower for Arizona Civil Air Patrol's annual two-day Search and Rescue (SAR) test.

Our cab—an Army Air Corps tower from World War II: open stairway; treads, no risers. Too hot? Open the door and windows. Cool? Put on a sweater. However, November in Arizona is mild and beautiful.

Pomeroy had checked out the Friez wind instruments, still in the tower. The panel was identical to one I remembered as a CAF-4 trainee in 1942.

We had two Gonsets, a BEI-900, a light gun and an altimeter. Pomeroy made a trip to Marana tower earlier in the week to check out power, wind instruments and antennas. The antennas? Fairly new; left from the Korean War.

There must be many *Horizons* readers who knew Marana Air Park well. Clarence Cornelius is one. He's Chief of the Palmdale FSS now, but he flew BT-13s there as a cadet in WWII. Marana was a swinging basic flight training field. Bill Wintering, Phoenix TRACON, flew there in later years as a cadet in T-28s, when the Air Park was operated by Darr Aero Tech as a contract flight school. Korea was the scene then. And the tower had its first civilian (but non-CAA) controllers. Bob Bassett was one of them.

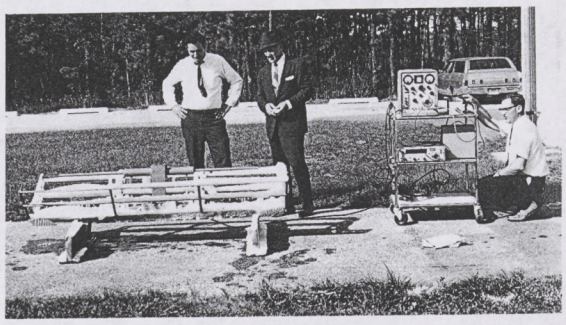
Our traffic on the two days we were there was not too great, but interesting—ranging from an Intermountain Aviation DC-6 through a USAF C-47, the whole gamut of general aviation types, to a buzzy flight of choppers. Lots of "hits-'n'-gits," several chances to use a light gun (on which I have maintained great proficiency over the years), and even one request for an IFR clearance.

To cadets who trained here during two wars, the countryside must seem the same. Newman Peak, Picacho Peak (where the only skirmish in Arizona Territory between Confederate and Union soldiers took place), and the Phoenix-Tucson highway (now a freeway), the cotton fields and all . . . it's the same.

Come to think of it, the Air Park has many of the same types of aircraft that often parked there during the Korean War. There is one anomaly today: parked and mothballed on the ramp are four Convair 880s . . . a turbine intrusion on the piston past.

Haunted Cab

Manning a temporary tower at Marana Air Park for a CAP Search and Rescue test, Tucson International Tower Chief Carl Swanson, Jr. had vivid recollections of the basic training planes and the pilots who passed through as cadets in World War II and the Korean conflict, when the tower was in regular use.



Test Iced Antenna

An experimental antenna for the glide slope of an instrument landing system undergoes lab tests at NAFEC after being covered with snow and ice in an environmental chamber. Observing the test are (from left) Armando Elia, a representative of the manufacturer of the antenna; Albert Stein, technical representative from Airborne Systems Section, Washington; and Robert Frack, test engineer.

Antenna Patterns Evaluated To Improve Communication

ATLANTIC CITY — Variations in VHF and UHF antenna patterns are due mostly to siting and, to a lesser extent, to antenna polarization and installation configuration, recent agency flight tests show.

Tests at NAFEC were part of a continuing program to improve radio communications between aircraft and communications facilities for ARTC centers and for control towers.

The tests showed that when there is not enough lateral space for VHF swastika-shaped antennas, two dissimilar polarized antennas can be mounted vertically on the same pole, with a 10-foot separation.

Radiation patterns and gains were determined in the tests and standard reference patterns were established for the following ground-to-air or air-to-ground antennas: VHF swastika, VHF coaxial, two types of UHF disc cones, and two types of UHF collinear arrays, a technical report states.

Examining outages due to snow and icing on antennas, the project proved that low-cost silicone rubber heaters are practical for deicing existing antennas. Some of the field tests were conducted at RCAG sites in Montoursville and Phillipsburg, Pa. They followed earlier tests made in the FAA's environment laboratory located at NAFEC.

Foam dielectric cable used for transmission lines was also tested and found to reduce transmission losses and cable maintenance.

A report on the project, "Test and Evaluation of VHF-UHF Antennas," FAA number NA-68-1, has been prepared by FAA project manager James G. Dong. It contains graphs of horizontal and vertical patterns of the various antennas evaluated, as well as plots showing signal variation at various altitudes obtained from orbital and radial flights.

Convicts Helped to Turn New Leaf

TRACY, Calif.—Young men imprisoned here are being shown *avenues toward a brighter future through a new program in which* the FAA is playing a key role.

With the agency's help and encouragement, inmates at the California Department of Corrections' minimum security facility are taking a close look at rewarding careers open to many of them in the field of aviation.

So intense is the interest in aviation among men incarcerated here that 160 of them signed up for a year-long course aimed at preparing them for FAA written examinations. And, at latest count, 21 successfully passed one examination or another.

Among those who helped get the new aviation career program off the ground were John Zentner, supervising inspector at the Oakland General Aviation District Office, and Roger Chastaine, maintenance inspector at the GADO. Both men visited the facility many times to confer with staff members and talk with inmates interested in aviation.

Chastaine played an active part in a career conference held recently at the institution. On the aviation interest group panel with him were Walter Daigle, another Oakland GADO inspector, and Carl Estep, Chief of the Stockton tower.

Chastaine also administered written examinations which prisoners took at the culmination of their aviation studies. Fourteen passed the private pilot exam and five the exam for commercial pilot. One passed the flight instructor test and one passed the ground instructor fundamental exam.

The Western Region Public Affairs Office, headed by Gene Kropf, supplied materials which are used in the facility's aviation courses. Kropf also arranged to supply training films and slides.

FAA items are among instructional aids used in the courses. Some aids were prepared by inmates. Others were purchased by the institution or donated by various interested parties. Training charts, study manuals and equipment brochures were provided by manufacturers of airframes, engines and avionics equipment. Fixed base operators in the area donated an audio-visual course.

All of these efforts are giving men imprisoned here a heartening glimpse of both the rewards and responsibilities that will go with freedom.

Officials at the Tracy minimum security facility have expressed their warm appreciation for the assistance the FAA is providing to help inmates "go straight" once they have served their sentences.

Rehabilitation Role

As one way of helping in rehabilitation of prisoners at the Deuel Correctional Institution, FAA training films and other visual aids were presented to an official of the state detention facility during a recent career conference. From left are: Carl Estep, Chief, Stockton Tower; Walter Daigle, Oakland GADO; Capt. Miles Sanders, program moderator; Roger Chastaine, Oakland GADO; and Sgt. Samuel Cowden, course sponsor at the institution.

Indianapolis Is Among Nation's Busiest Centers

INDIANAPOLIS—The ARTCC here joined the ranks of the elite on Dec. 22, when it surpassed one million traffic operations for calendar year 1968.

Controller Deane Larson issued the departure clearance for the one-millionth operation when a military aircraft departed Patterson AFB, Ohio, for a flight to Richards-Gebaur AFB, Grandview, Mo.

According to Center Chief Lonnie Parrish, traffic handled by the facility almost doubled in the past five years. In the past year alone the center experienced about a 20 per cent increase in traffic, making it one of the nation's busiest.

Employment Opportunities

Recruitment exhibit for public display recently renovated and set up by the P & T staff is used by William Ramsey, Assistant Minneapolis Area Manager, to explain the duties of an air carrier inspector to Betty Tutewohl, secretary to the Area Manager.

HORIZONS

FAA HORIZONS, the official employee publication of the U.S. Department of Transportation, Federal Aviation Administration, is published biweekly by the Employee Information Division, Office of Information Services, FAA, 800 Independence Ave., Washington, D.C., 20590. Telephone: WO. 2-5575. Articles of general interest to employees should be submitted directly to Regional FAA Public Affairs Officers: George Fay, Alaskan Region; Robert Fulton, Eastern Region; Jack Barker, Southern Region; Joseph Frets, Central Region; K. K. Jones, Southwest Region; Eugene Kropf, Western Region; George Miyachi, Pacific Region; Edwin Shoop Jr., NAFEC, and Mark Weaver, Aeronautical Center.

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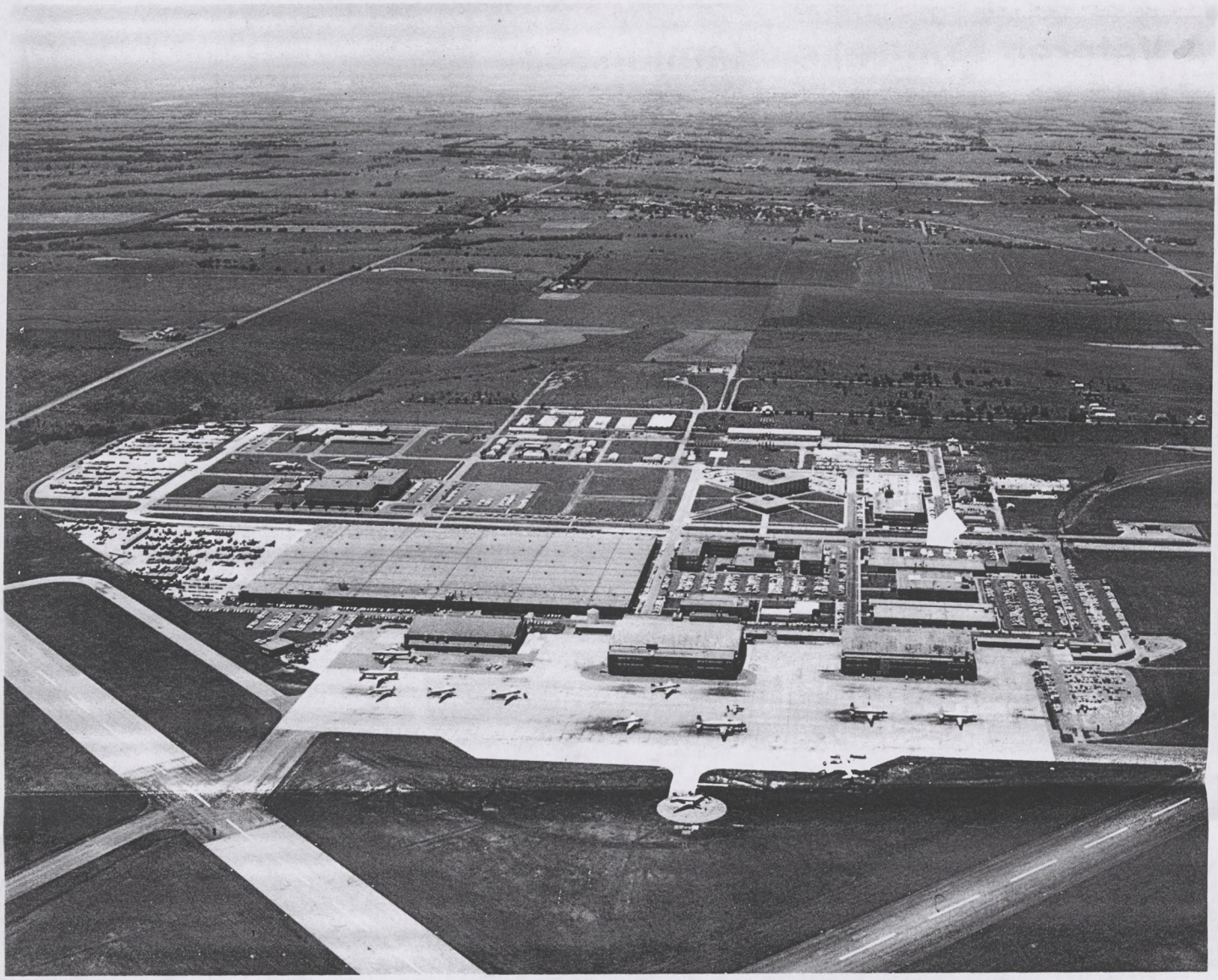


rrow points to FAA Academy, where 17 classrooms have been refurbished to serve several thousand air traffic control trainees who will pass through the Aeronautical Center each year.

New ATCS Training . . .

Where School Is St

Some 2,400 young men and women comprising the next generation of traffic controllers will train in the attractive campus-like atmosphere of the FAA Academy at Oklahoma City this year.

For the first time in five years, air traffic basic training is again centralized at Oklahoma City. New methods of teaching, in line with the latest educational techniques, have been incorporated in the curriculum. Trainees will be helped along, too, by the latest in audio-visual aids and by a recently bolstered staff of skilled FAA instructors.

This combination of new methods and new laboratories, coupled with new concepts of air traffic training, is expected to reduce sharply the amount of time required to convert trainees into full-fledged journeymen.

All new courses at the Academy are "job-oriented," in contrast to the "subject-oriented" approach of the past. "Need to know" information is stressed; "nice to know" aspects have been eliminated.

FAA air traffic control tasks—the tasks at centers, towers and flight service stations—have been analyzed so that instruction can be tailored to the demands of these tasks. Skills are developed and knowledge is imparted in relation to requirements of the job for which the trainee was hired.

Students' Grasp Seen Instantly

As important as the teaching is the way the teaching is presented. A method well-known and highly recommended by academic circles is helping to streamline the task of air traffic instruction. Known as Student Centered Training, or Learner Controlled Training, the method encourages high achievement.

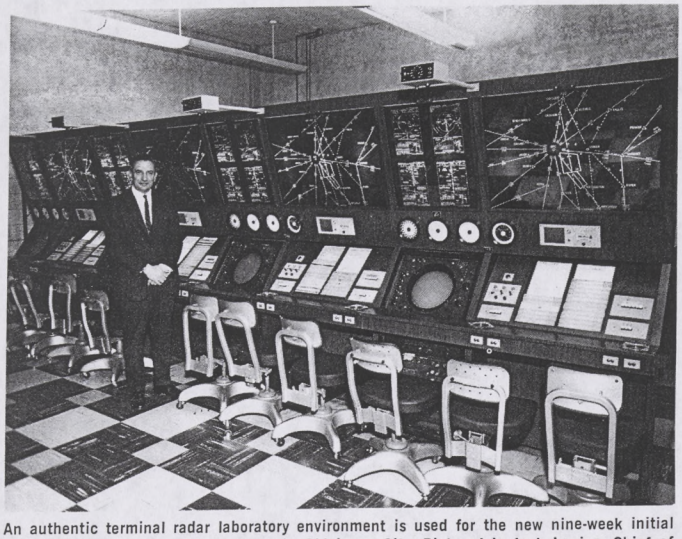
Under this modern teaching method, the instructor presents a subject to the class, illustrating key points using slides or motion pictures. Then, to check the student's grasp of what has just been conveyed, the instructor flashes a series of multiple-choice test questions about the material on a screen. Students answer by pushing one of a series of buttons on their desks. Students' answers show up on a light panel at a master console in front of the instructor.

Thus, the instructor knows immediately whether material presented is being grasped and he is able to identify those students having difficulty. Learning problems are resolved as soon as they show up.

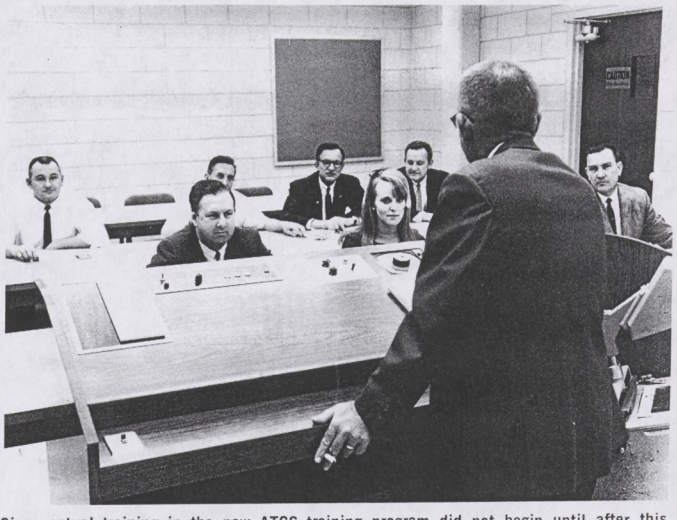
One or two wrong answers may indicate that these trainees are not learning as rapidly as the majority in the class. Several incorrect student responses to one question, however, tell the instructor he must go over his material.

Since all students answer every question, each becomes more deeply involved in the learning situation.

Laboratories supplementing classroom work likewise carry out the job-oriented emphasis. The labs are designed to duplicate on-the-job environment, confronting the students with on-the-job work situations.

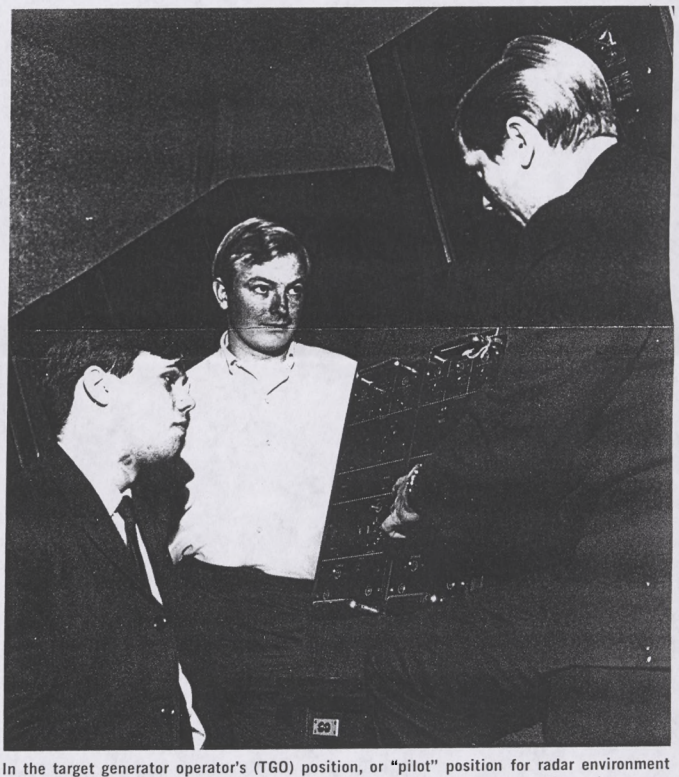


An authentic terminal radar laboratory environment is used for the new nine-week initial training course at the FAA Academy in Oklahoma City. Pictured is Jack Lanius, Chief of the Terminal Section.



Since actual training in the new ATCS training program did not begin until after this story was prepared, a simulated class is formed to show how student responder equipment looks from the viewpoint of the instructor (back to camera).

Teletype operation is among subjects taught in the procedures laboratory during the 14-week FSS training course. G. C. Loper, Chief of FSS section instruction, heads this segment of the training.



In the target generator operator's (TGO) position, or "pilot" position for radar environment laboratory, the student acts as the pilot to portray a target aircraft on the radar scope. Pictured are two Air Force students attending a five-week AF Indoctrination class, with Russell Mueller of the Cleveland Area Office instructing.

'eamlined

In the nine-week terminal training class, for example, students wearing headsets sit before a screen on which aircraft are shown landing, departing and taxiing. Simulated pilot-to-tower transmissions are heard by the trainees, who are asked to respond properly to a variety of traffic control problems.

FSS Replica Used in Training

In flight service training classes, trainees work in a FSS replica which contains standard communication equipment—weather reading instruments, teletypewriters, radios and direction finders.

In radar training labs, students view actual blips moving on a radar scope and issue air traffic instructions to provide proper separation.

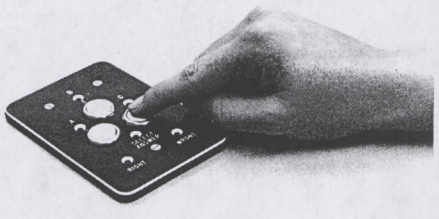
Classes are kept small, with no more than 20 students in each. The Air Traffic Training Branch's faculty numbers almost 150 instructors. Most of them are former controllers or specialists, and many had teaching experience before joining the FAA. New instructors are themselves given special instruction before they face their first classes.

Four new courses are now being taught at the Academy. A new nine-week terminal course and 14-week FSS course started Nov. 19. A nine-week en route (center) course and a three-week radar course started Jan. 7.

"We believe that our new approach to air traffic training, our well-equipped, modern labs and our skilled instructors will reduce by as much as 50 per cent the time required to bring trainees to full-fledged journeyman status," said Dick Marks, Chief, Air Traffic Training Branch. Marks, a former controller himself, was Chief of the Los Angeles Center before coming to Oklahoma City.

Working with him in conducting air traffic training are three section chiefs: John Moore, en route; John Lanius terminal; and Godfrey Loper, Flight Service.

Streamlined Academy training is helping the FAA meet the challenge of steadily growing air traffic.



Students' grasp of the subject just presented can be seen quickly by the instructor, after each student selects his "a, b or c" answer and results of the entire class show up on a master console panel. Several incorrect responses indicate the instructor should review points needing clarification.

'Third Bird' Purchased For Use of Flying Club

By Thom Hook

WASHINGTON—An assembly-line fresh, blue-and-white Cessna 150 "Commuter" has been added to the FAA Flying Club, Inc. for use by some 80 members.

The plane was flown from the factory in Wichita to the club's new base at Hyde Field, Md., near Andrews AFB, by Henri Keyzer-Andre, the club's maintenance officer. Keyzer-Andre is a regulations and directives writer in Flight Standards Service.

"With our new plane, learning to fly is even more fun for our student members," says Ivon Ressler, club president and a supply staff worker at FAA Headquarters. "The new 150 rents for only $8 an hour."

As the club expanded after its founding in 1963, a new aircraft has been purchased every two years, starting with the first Cessna 150 in December 1965; a Cessna 172 equipped for IFR flight in February 1967 (which rents to members for $12.50 an hour) and the latest 150 just received.

Membership is open to any federal employee, civilian or military, subject to approval by the club's officers. An initiation fee of $50 and monthly dues of $7.50 permits members to rent planes at special low rates.

Principal club officers are: Ivon Ressler, Logistics, FAA Headquarters, president; Bill Phelon, Federal Trade Commission, vice-president; Gladys Carroll, FAA Office of Audit, secretary (new officer); Marie McAllister, SST Program Control, corporate secretary; and Bud Tillman, Budget Analysis, treasurer.

Much of the responsibility for the club's programs is centered in various working committees. Committees, and their chairmen, are: maintenance—Henri Keyzer-Andre; safety—Clyde Pace, Deputy Director, Airports Service; operations and training—Chalmers Frazer, Executive Officer to the Associate Administrator for Plans; membership and publicity—John Moundalexis, Assistant Chief, Management Analysis Division; and rules—Bill Phelon, FTC.

Although bearing the agency name, the flying club has no official connection.

New Commuter Plane

Preparing for a flight in the new Cessna 150 recently purchased by the FAA Flying Club, Inc. of Washington, D. C. are Linda Bracken, clerk-typist, and Henri Keyzer-Andre, regulations and directives writer, both of the Maintenance Division of Flight Standards Service. Linda will report to Chicago in April to become a United Air Lines stewardess.

Late, But Appropriate

Although, this photo of carolers at Central Region headquarters didn't quite make the Christmas issue, it provides us an opportunity to carry over into the New Year this excellent depiction of Christmas spirit. Elizabeth Walker, secretary to the Chief of the Airway Facilities Division, plays the organ while volunteers from throughout the building give their best. Note matching Christmas costumes.

AF Selects Frank Clifford To Judge Base Newspapers

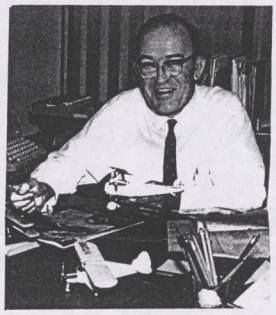
WASHINGTON — Frank Clifford of the Office of Information Services has been selected as one of five civilian journalists who will pick the winners in the 1968 Air Force Newspaper Contest.

Clifford, Associate Editor of *FAA Aviation News,* was named to the judges' panel by Maj. Gen. William C. Garland, Air Force Director of Information.

Other judges will be John Foltz, chairman of the Defense Information School at Fort Benjamin Harrison, Ind.; Marc Huett, Chief of the Washington, D. C. bureau of the *Stars & Stripes;* Hugh Lucas, Associate Editor of American Aviation Publications and Dwight Rangeler, Editor of McGraw-Hill News.

The panel will convene at the Pentagon January 28 through 30 for three days of judging military newspapers published at Air Force installations in the U. S. and abroad. More than 400 military newspapers have been entered in the competition.

Clifford, who retired from the Air Force with 21 years of service in 1962, was formerly a staff writer on *Airman Magazine* and for three years was editor of the Air Force News Service. He joined the FAA in 1962 and has been Associate Editor of *FAA Aviation News* for the past two years.



Frank Clifford

Two Deer Bagged On 'Reservation' By NAFEC Pair

ATLANTIC CITY — Hunting season at NAFEC lasts only a single day, but this year hunters managed to bag four deer.

Out of ten Center employees who went hunting, two got deer. They were Lt. Jesse R. Leek of the Center police force, and Fireman Benjamin Riccardi. The other two deer were shot by non-Center employees who also went on the hunt.

Disappointed Center hunters were Albert Belli, Charles Buelow, Curtis Carley, William Demones, Chester Husta, Theodore Koiro, John Maurer and Robert Swanseen.

Leek estimates there may be 20 or more deer on Center property, which covers 5,054 acres, a good section of which is wooded rural area. In the past, operations officers occasionally have had to move deer away from the airport.

Youngsters Get Basics

GREEN BAY, Wis.—Members of Boy Scout Explorer Post 560 are finding out early in life that it's not just a man's world after all.

Lloyd Anderson, controller at the Green Bay Tower and the local Boy Scout committee chairman, teaches an aviation course to a group of Explorer Scouts that now includes a dozen girls.

Although Anderson admits he had reservations about admitting girls to the group, he found the 42-member co-educational ground school class an exceptionally harmonious one. Much to his surprise, everything has been all business at the meetings and, if anything, the girls are more attentive.

Interest is so high among girls in the group that efforts are underway to organize a Girl Scout Post devoted exclusively to aviation.

This is Anderson's third year with the Explorer Post. He finds teaching the younger generation about aviation is rewarding.

As a result of the Explorer program, Anderson's 16-year-old son, Steven, plans a career in aviation.

Girls and Boys Together

Girls are proving just as eager to learn about aviation as boys, says Lloyd Anderson, air traffic control specialist at Green Bay Tower, as he points out mechanical fundamentals to three youngsters in his co-ed ground school class. Youths (from left) are: Mary Morgan, Lauretta Joslin and Dan Pierre.

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Preliminary Investigation of the NAS Stage A Backup Channel as Related to the Resolution and Detection of Aircraft, Chapman, Clifford. Report NA 68-39, NAFEC, Atlantic City, Oct. 1968. Source: TAD-484.3.

DIRECT LINE

This is your direct line to the top! Your questions will get answers! Employees are encouraged to discuss questions with supervisors or their local personnel office, but for those who do not have ready access to a personnel office, this column will provide an opportunity to get questions answered. Send your letter to Acting PT-1, Federal Aviation Administration, 800 Independence Avenue, S.W., Washington, D. C., 20590. Ground Rules: • All questions must be signed. • This column should not be used to supplant formal grievance and appeals procedures. • Questions should concern personnel and training policies, programs and procedures, not operational or technical matters. What's your question?

Question: The temperature inside our VORTAC building was above 100 degrees for approximately 85% of the summer and remained around 106 degrees for approximately three weeks. Is there any Civil Service rule on working in an unhealthy atmosphere such as this?

Answer: Although there is no specific CSC regulation, it is agency policy to protect the health and well being of personnel. Regions are required to include in their budget estimates the cost of procuring and installing temperature/humidity control equipment in facilities qualifying under Order 6970.1A. For additional information, consult your supervisor.

I have two questions:

Question: (1) Is it true that FBI agents and Border Patrol personnel are entitled to full retirement with 20 years of service?

Answer: (1) Yes, such employees may retire (without reduction for *being under age 55) if they are age 50 or over and have at least 20* years of service in law enforcement work, including at least one year immediately preceding retirement. Their retirement annuity is computed by multiplying their creditable years of service by 2%, and applying this percentage to the average "high five" salary earned by the employee.

Question: (2) We have been led to believe that the job-incurred fatality rate is much higher for General Aviation and Air Carrier Inspectors than for FBI or Border Patrol men. If this is true, why this inequity?

Answer: (2) Comparative fatality statistics are not available on General Aviation and Air Carrier Inspectors and Law Enforcement Officers of other Government agencies. However, legislative history on early retirement refers only to certain employees whose duties are primarily the investigation, apprehension, or detention of persons suspected or convicted of offenses against the criminal laws of the United States and who, because of the physical requirements and the hazardous activities involved, are no longer capable of carrying on efficiently; and their replacement by younger men would improve the service. FAA inspectors are not required to apprehend and detain people, and there is no evidence that replacement of experienced, mature inspectors by younger men would improve the quality or character of FAA's service to the aviation industry.

Question: At my facility, personnel are scheduled to work for the balance of the year on a rotating basis. However, due to one man on extended sick leave and a shortage of personnel, we are required to work overtime, when necessary. We are consistently short of personnel on Sunday. Thus, we are required to work overtime on Sunday which, in many cases, is the first day of our work week rather than the last day. We have been advised that overtime can be justified only on the day we are short-handed and not the last of the week. Do you feel that the reasoning applied in the situation that has been outlined above is correct or do you think that it is in error?

Answer: The reasoning is correct. An employee on a regularly scheduled five-day work week is paid overtime for the day he performs such work. An employee on a regularly scheduled 48-hour work week of six eight-hour days is paid overtime for the sixth eight-hour day worked in the administrative work week (Sunday through Saturday).

Question: During December 1967, a special CSC survey was made within FAA concerning the recruitment and retention of pilot-rated employees. What is the latest word on the results of this survey and recommendations for pay increase?

Answer: Except for certain Air Carrier Operation Inspector (ACOI) positions already covered, special pay adjustments could not be justified. Section 5303 of Title 5, United States Code, provides that higher pay rate ranges may be established "when pay rates in private enterprise . . . are so substantially above the pay rates of statutory pay schedules as to handicap significantly the Government's recruitment or retention of well-qualified individuals . . ." The Civil Service Commission reviewed the status of recruitment and retention of pilot personnel in FAA. While a difference in pay to FAA pilots and private industry pilots was identified, there was no indication of problems with regard to the recruitment or retention of qualified pilot personnel.

Question: Some time ago, *Intercom* stated that on the days before and after actual holidays, staffing shall not be reduced solely in an effort to reduce payroll costs. For example, my scheduled days off are Sunday and Monday. The holiday is Monday. Can my supervisor force me to take Tuesday off in lieu of the holiday?

Answer: Yes. The intent of the law providing holiday benefits to employees required to work tours other than the normal Monday through Friday schedules is that employees will be given a day off in lieu of the holiday. If the agency's operations do not permit giving a day off, the employee is given holiday pay to compensate him for having to work. Thus, operational conditions must dictate whether employees will be given the day off or required to work.

For Equal Employment Opportunity

Participating in the Organizational Bias Seminar held in Minneapolis recently were (left to right): Kermitt Wheeler, FAA Headquarters Office of Compliance and Security, Equal Opportunity Division; John Howerton, Executive Officer, Office of Headquarters Operations; and Dr. Leonard Aries, vice president, national Conference of Christians and Jews; Shirley James, Second Coast Guard District, St. Louis; Murray Torrance, Ninth Coast Guard District, Cleveland; and Don Higgins, EEO Program Coordinator, FAA Office of Personnel at Headquarters.

Bias, Equal Employment Discussed

MINNEAPOLIS — Challenges and problems of equal employment were explored in a recent organizational bias seminar sponsored by FAA's Management and General Training Division. Some 40 agency employees attended.

The seminar included presentations by representatives from industry, the academic world and government. Sessions were designed to acquaint participants with prejudices by exposing them to unusual situations and concepts. Attitudes of those attending the seminar and socio-economic aspects of the civil rights issue were considered and discussed.

Seminar objectives were four-fold:

- To broaden participants' understanding of discrimination and the civil rights issue;
- To help participants examine their own attitudes and the impact of these attitudes on organizations;
- To motivate participants to change attitudes where needed and make positive contributions to solutions of equal employment problems; and
- To obtain suggestions from participants on ways to improve the agency's non-discrimination program.

Robert Ziegler, Area Manager, welcomed the group to Minneapolis. Don Higgins, Equal Opportunity Program Coordinator, Office of Personnel, was seminar manager, and Ed Landgraf, Employment Development Officer, Central Region, was regional coordinator for the program.

In addition to FAA personnel, two Coast Guard representatives participated.

'Facility of the Year' Award Goes to Atlanta

ATLANTA—The tower at Municipal Airport here has received the Earl F. Ward "Facility of the Year Memorial Award" for 1968 given by the Air Traffic Controllers Association.

Lester Shipp, Atlanta Tower's Chief Controller, accepted the honor on behalf of facility personnel during ATCA's recent awards banquet in San Francisco.

The award recognized the tower's sustained high degree of efficiency and its pioneering of terminal radar service while serving as the operational proving ground for the prototype of the semi-automated Advance Radar Traffic Control System (ARTS). Also recognized was work done by tower personnel in the professional development and evaluation of Mode C Alphanumeric Beacon Reported Altitude Procedures, which has since been incorporated into the agency's Air Traffic Procedures Manual.

Atlanta Tower personnel were cited for efficiently handling heavy air traffic during extensive construction and repair work which closed the airport's primary runway. This situation was compounded by intermittent closure of the secondary runway and the consistently heavy volume of traffic. Atlanta Municipal is the nation's fourth busiest airport in terms of numbers of passengers enplaned and deplaned, and fifth in total air carrier operations.

The citation to the tower also noted several commendations received by the facility as a result of the confidence and support placed in tower personnel by Georgia's governor, Atlanta's mayor and the many users of the ATC system at Atlanta.

Atlanta Tower is the nation's only facility equipped with the Advance Radar Traffic Control System installed about three years ago for operational evaluation and full field testing. However, similar systems now are planned for all major U. S. air terminals.

Experience gained by Atlanta controllers in ARTS operation provided valuable information and guidance to the agency's Systems Research and Development, Air Traffic and Systems Maintenance Services in further development of the National Airspace System, En Route Stage A Sub-system. A prototype of this is being installed at the Jacksonville Center for testing and evaluation in an en route environment. Similar semi-automated en route control systems are planned for other ARTC Centers throughout the country.

Promotion

(Continued from Page 1)

formed about their agency's promotion program and about their own promotion opportunities.

- Providing attractive career opportunities for employees.

All employees in the competitive service are covered by the policy. All white-collar and blue-collar occupations are represented, with jobs ranging from the simplest to the most complex. More than 60 agencies, varying in size from just a few employees to hundreds of thousands and in complexity and dispersion from a single headquarters office to an intricate structure of worldwide installations, are involved. As a result of this variation, promotion procedures will vary to some extent from agency to agency or occupation to occupation.

As under the present policy, promotion programs of the different agencies will operate under merit principles and general procedures established by the Commission. Each agency develops its own promotion guidelines, adapted to the agency's own needs, which set forth the policies and procedures governing promotion practices.

DOT was required to modify its promotion guidelines by Jan. 1, 1969 to reflect the revised Federal Merit Promotion Policy and FAA must revise its promotion plan by July 1, 1969.

Awards

(Continued from page 1)

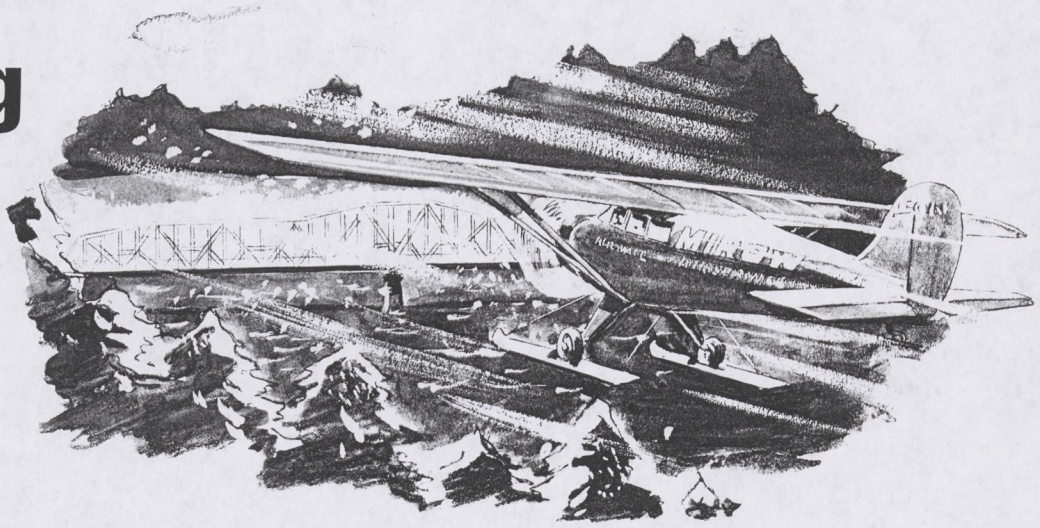
will be selected for the Flight Standards "Field Office of the Year" award.

Field offices eligible for awards are: General Aviation District Offices, Air Carrier District Offices, Flight Standards District Offices, Systemsworthiness Analysis Teams, Engineering and Manufacturing District Offices, Aircraft Engineering District Offices, Engineering Field Elements, Flight Inspection District Offices, Flight Inspection Field Offices, Flight Inspection Groups, Aircraft Maintenance Bases, Flight Safety Groups, International Field Offices and Avionics Maintenance and Calibration Units.

The first Regional Awards for calendar year 1969 are expected to be announced in February 1970. The national winner selected by Flight Standards Service is expected to be announced in March 1970.

Groping up the Yukon

Another in our series of exciting true adventures of present-day FAAers...



EDITOR'S NOTE: One of the far north's most celebrated fliers, Jack Jefford, Chief of the Operations Section, Flight Standards Division, Alaskan Region, has had many adventures in more than 30 years as a pilot. Once, he huddled five days in the wreckage of his aircraft on a remote Alaska mountain until rescue came. However, Jefford considers his closest brush with death was flying at less than tree-top height for three hours and fifty minutes over the Alaskan interior at night, in a storm, with a badly-injured, unconscious sourdough aboard. The former bush pilot's story of that harrowing mercy mission on Feb. 17, 1939, was told to June Anderson of the Anchorage FIDO.

By June Anderson

Because of the gathering Arctic dusk and blowing snow, the 137 residents of Kaltag, a native village on the right bank of the Yukon, weren't expecting the Mirow Air Service mail plane from Nulato. They were surprised, therefore, to hear the familiar drone of the Stinson approaching the village. At the controls was bush pilot Jack Jefford, pioneering a twice-weekly Yukon mail route which, until recently, had been served by dog sled alone.

Because of the weather, Jefford planned to spend the night in Kaltag, an intermediate point on his mail run.

The ski-equipped plane barely skidded to a stop when a Yukon Indian named Edgar Kallands, waiting in the blowing snow, rushed up.

"We got a badly hurt guy here," the Indian yelled as Jefford climbed out of the Stinson. "You got to fly him to Tanana hospital."

Whirlpools of Snow

The freezing wind whipped whirlpools of snow around the two men. "Are you crazy?" Jefford snapped. "Nobody's going anywhere in this weather unless they're damned fools."

Kallands' dark eyes studied Jefford for a moment. "Mr. Jefford, you go tell this man you won't take him."

Jefford followed Kallands to the nearby trading post. On a bunk in the dimly lit log structure, a grizzled prospector lay writhing in agony. "He broke his leg," Kallands said. "Then his dog team got away from him—left him on trail. He crawled here through snow—many miles. . . . If we don't get him to hospital. . . . I go with you, Mr. Jefford."

"All right," said Jefford quietly. "Let's go."

With the help of the only two white men in the village—the postmaster and the school teacher—and several natives, the old man was hoisted gently into the plane, moaning softly. Shortly afterward, the sourdough fainted, and thus was mercifully spared the ordeal to follow.

As Jefford's plane took off into the teeth of the blizzard, natives on the ground shook their heads. Jefford kept low over the ribbon of Yukon ice, trying to follow the thin line of black spruce edging the river, trying also to avoid being lured up one of the countless sloughs that fork off from the river—each leading to disaster. Kallands was able to help, because he knew the country well, but in the snow and growing darkness, the thing both men dreaded most happened: they missed the town of Tanana, where the Yukon and Tanana rivers join. It occurred to Jefford to do a 180 and search for the town, but he knew this would only waste precious fuel. He decided the best thing was to keep going toward Fairbanks and the nearest hospital. The plane kept hugging the Tanana River, which now began to uncoil beneath them.

A Bridge Somewhere Ahead

They had to stay no more than a few feet off the surface to keep the river in sight. This confronted them with another chilling specter. Between them and Fairbanks, a railroad bridge spans the river at the little town of Nenana. If the town's power plant failed as it often did in blizzards like tonight's, the bridge would be unlighted. And, at their present altitude, if the bridge was unlighted, they wouldn't see it in time . . . wouldn't be able to pull up.

The danger-haunted night seemed to grow darker, the blizzard worse. Jefford knew they could be forced down at any time. In mid-winter, in the Yukon's paralyzing sub-zero cold, survival would be unlikely. The bush pilot couldn't stop thinking of that uncompromising solid bridge waiting for their plane in the darkness ahead.

There was grim irony in their predicament, Jefford mused. If they weren't forced to land . . . if they didn't lose their way . . . if they didn't crash . . . if they didn't clobber the Nenana bridge—then there was nothing to worry about except groping their way to Fairbanks and landing at an unlighted, postage-stamp airstrip, in a snowstorm, in the dark.

Jack Jefford, the Alaskan Region's Chief Pilot, is shown unloading cargo from his Stinson aircraft during the late '30s, when he flew for Mirow Air Service at Nome.

Fuel Almost Gone

Jefford kept his worries to himself, staring glumly ahead. Then he saw a faint glow through the snowy murk. "The bridge!" he yelled. "It's lighted." Easily, he cleared the network of ice-coated girders and watched them slip away from the plane, his relief so intense he almost forgot his other problems.

But only for a moment, because a glance showed the fuel gauge riding almost on "empty." The odds were running out. Even so, with luck, with no miscalculations, they might just make it, Jefford hoped.

He tried to contact Fairbanks radio without success; then finally, was able to raise Anchorage.

"Tell Fairbanks my fuel's down to 35 minutes—just enough to give me one pass at their field," he said.

For the next half hour—the blackest, most harrowing time span in his life—he leaned forward in his seat, nerves tense, eyes alternately searching for the barely visible ground, alternately glancing at the fuel gauge. Each minute seemed an eternity. A mounting sense of desperation, of sheer hopelessness, of gloom pervaded the cockpit.

Then a raucous voice he remembers being "beautiful as an angel's" broke through the radio static.

Automobiles Outline Airport

The raspy voice was earthly; it belonged to Tom Appleton, a Fairbanks mechanic who shortly before had mobilized all the automobiles in the vicinity. Now their gleaming headlights outlined the borders of the Fairbanks airport faintly through the blowing snow.

Standing outside the radio shack with gusts of snow coiling around him like streamers of frozen smoke, both hands gripping the mike, Appleton listened intently to the sound of the Stinson's engine, unseen in the Arctic darkness beyond.

Calmly, precisely, coaxing the utmost out of the two-way radio, Appleton skillfully "talked" Jefford in to a safe landing on the storm-shrouded airstrip, not much bigger than a moose pasture.

Shook by their ordeal, pale and tired, Jefford and Kallands climbed from the plane and helped load the still-unconscious sourdough into a waiting ambulance.

Out of curiosity, before going into town for a badly-needed rest, Jefford checked the fuel in his plane.

Only a few spoonfuls remained—about enough for two minutes of flight—but enough, as it turned out, to conquer the merciless north on that February night.