



EOB 2/120

Read
'Bringing
Radar to Light'
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Well Done!

Secretary Volpe confers the Department's Award for Outstanding Achievement on former Deputy Administrator D. D. Thomas who retired last month after 32 years of Federal service. More than 700 persons, including the agency's three former administrators, turned out to honor Thomas at a party in Washington Feb. 26. Thomas received numerous gifts, including a college scholarship in his name for which more than \$5,000 was contributed nationally by employees and former employees.

Committee Recommends Automation Intensification

WASHINGTON—Greater use of automation in air traffic control to meet the challenges of aviation in the decades ahead has been recommended to Secretary of Transportation John A. Volpe by the Secretary's Air Traffic Control Advisory Committee.

Secretary Volpe praised the work of the 11-member advisory committee, stating: "They have underscored the urgency of our task in getting on with the job of expanding and improving our airport-airways system to match progress in aircraft design and continually increasing public demand for air transportation."

The semi-automated "third generation" air traffic control system, now being implemented nationwide, must be substantially upgraded if it is even to accommodate the aviation growth of the 1970s, according to the report. With major modifications, however, the useful life of the system could be extended into the 1990s, at which time a "fourth generation" system may be needed.

Activity to Double

The recently-issued report predicts that national indices of aviation activity will at least double by 1980—compared to 1968—and double again by 1995. Five airports now operate at saturation during peak hours. This number will rise to 20 by 1980 unless present expansion plans are accelerated. Demand for air traffic control is expected to almost triple by 1980 and to triple again by 1995.

The report states that three critical problem areas must be resolved if aviation growth is to continue: shortage of terminal capacity, the need for new means of assuring separation between aircraft and the limited capacity and increasing cost of air traffic control.

Major improvements in current

airport capacity must be achieved, without increasing perceived noise levels around airports, to gain public acceptance, the study points out.

It is possible to more than double current airport capacity through use of parallel runways, high speed turnoffs, advanced terminal automation and reduced separation between aircraft on final approach. Noise levels around airports could be reduced, even though traffic doubles, through engine-quieting techniques and advanced instrument landing systems which would permit aircraft to follow low-noise routes when landing or departing, the report suggests.

Problem Solvable

The committee believes it is now feasible to solve in large measure, the mid-air collision problem in substantial portions of the airspace without significantly restricting freedom of flight by automating and making more precise the air traffic advisory service. Among improvements recommended was upgrading of radar beacon transponders, including addition of another mode or channel to the present three-mode equipment to accommodate "discrete address."

Use of phased array interrogator antennas in denser terminal areas to improve position-fixing accuracy and achieve a faster data rate than is possible with present antennas was recommended, as was introduction of two-way data link communications for automatic transmission of routine ATC information and ground-computer generated collision-avoidance data.

With this equipment, aircraft could provide ATC with continuous, reliable and accurate information on their identity, position and altitude.

The report also recommends upgrading present radio navigation

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Harding Asks Invigorated Academy

By Theodore Maher

WASHINGTON—"These are exciting times for the agency and I look on my new position as an exciting challenge," said the agency's new Associate Administrator for Manpower, Bertrand M. Harding, on the day he was sworn in. Harding said he hopes, among other things, to see the FAA Academy "invigorated and developed into a training institution second to none in the entire Federal establishment. The Academy must become the sharp, cutting edge of our entire training effort."

The new Associate Administrator for Manpower said new FAA training programs will be instituted which will include "training and reorientation of current management personnel."

"Through my work on the Corson Committee, I have come to know some of the problems facing the FAA," he said. "I have had the opportunity, from the outside, of observing how the FAA works, and this has been a helpful beginning to my orientation. However, I am reserving judgment and plan to keep an open mind as I learn more about the organization."

New Designation

Commenting on the new, broader "Manpower" designation for the agency's top personnel and training position, he stated: "To me, this signifies that the problems of the people of this agency are of very real concern to the Administrator and that he would like to focus more attention on this area."

"It seems to me that one of the first challenges we must face is developing a better relationship between and better communications among FAA employees and FAA management. This must include

(Continued on Page 7)



Welcome Aboard

The new Associate Administrator for Manpower, Bertrand M. Harding (right), is congratulated by Administrator John H. Shaffer, after swearing-in ceremonies at Headquarters March 3. Shaffer administered the oath of office.

New Leadership Applied To Manpower Programs

WASHINGTON—The agency's manpower management and training programs were given new leadership March 3 with the appointment of Bertrand M. Harding to a new position as Associate Administrator for Manpower.

The former Acting Associate Administrator for Personnel and Training, Earl J. Anderson, has been named Acting Deputy Associate Administrator for Manpower.

Harding recently served as staff director to the Air Traffic Controller Career Committee chaired by John J. Corson.

His former Federal service includes 13 years with the Internal Revenue Service, two of which were as assistant commissioner and five as deputy commissioner. In these positions, he assisted in the overall direction and management of the IRS.

He served two years as assistant director and one year as acting director of the Office of Economic Opportunity. In the latter position, Harding reported directly to the President.

During his years of Federal service, Harding has received the Treasury Department's Exceptional Service Award, the National Civil Service League's Career Service Award, the Rockefeller Public Service Award and the Tax Executives Institute's Distinguished Service

Award, recognizing his work.

A native of Ft. Worth, Texas, Harding is a 1941 graduate of Antioch College.

At Headquarters swearing-in ceremonies, the Administrator introduced Harding as "the right man for the job at this time—a very important time for the agency in view of the recent Senate passage of the Aviation Expansion Act."



Handy Man

Doing several things at once, in-flight specialist Bill Reese of the Findlay, Ohio, FSS demonstrates how he and the nine other specialists at that facility performed a record of 178,161 flight services during 1969.

In preparation for taking over the editorial responsibility for issuance of current Changes to the FAR Volumes, Louise Coomes (left) and Hilda L. Weisbrod (right) of the General Counsel's office, receive instructions from Betty Lou Shaver (center), OST Editorial Branch.



Last year, the agency distributed cards bearing the word "CHANGE" in large letters to suggest that the FAA job can be done better, in many cases, by instituting changes in procedures and other aspects of agency activity.

The story of the Federal Aviation Regulations (FARs) exemplifies what can be done by putting the "CHANGE" philosophy into action. Changes in the preparation, printing and distribution of FARs, from signing to mailing, have brought about substantial improvements in service to the public, and will save the FAA some \$200,000 annually.

How was this accomplished?

Let's begin with a description of the FARs themselves—documents which constitute the agency's—and the aviation industry's—regulatory lifeblood. Through FARs, the FAA translates into specific rules and regulations such things as responsibilities for aviation safety, airworthiness of planes, airmen qualification and certification and efficient use of the navigable airspace. The 59 FAR Parts spell out such things as rules governing aircraft operation, regulations relating to certification and operation of air carriers and commercial aircraft, requirements for issuance of pilot licenses, and rules governing maintenance, repair and alteration of aircraft. FARs affect the daily activity of pilots, instructors, mechanics and even airline executives.

Study Team Established

To determine if greater efficiency and cost savings could be realized in the preparation, publication and distribution of FAR Parts, a study team was established by the Office of Management Systems at the request of Office of Headquarters Operations. The team's job was to recommend improvements that would bring FAR Parts and amendments to the public more quickly and, if possible, at lower cost to the government.

The team—John R. Cranage of Management Systems and James A. Antonellis of Headquarters Operations, assisted by Thomas Buschbaum, a management intern—found that under the "old" system, it took an average of 58 calendar days from adoption of an FAR amendment to the time it was mailed to subscribers. Much of this time was consumed in preparing and proofreading the text of Changes and arranging for printing and distribution on a "single job" basis. Under the changed system, manuscript preparation is done in the Office of the General Counsel. The single-job method of printing was replaced by a Government Printing Office (GPO) program, set up with two commercial printers, who were able to provide speedier, more economical



The committee representing offices and services having rule-making responsibility meets to structure the 59 FAR Parts into 11 volumes. Attending (left to right) are Henry H. Osborne, Jr., Flight Standards; William J. Johncox, General Counsel; Joseph E. Scarlata, Air Traffic; Theodore H. Rutley (standing), Airports Service; James A. Antonellis, Headquarters Operations; and John W. McCloskey, Aviation Medicine.

The Federal Aviation Regulation (FAR) Story...

CHANGE, Rearrange For Better Service

terms by getting annual instead of individual job contracts.

These changes cut total process time virtually in half. Now, a maximum of 22 working days elapses from adoption of an amendment to mailing time.

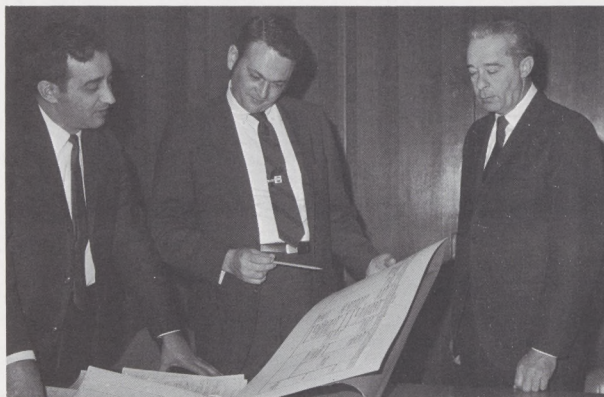
Formerly, basic FAR Parts were sold to the public by the GPO and the amendments—issued as Changes—were furnished free by FAA to purchasers asking for them. The study group found that only about 25 per cent of the purchasers subsequently asked the FAA for amendment service. In the agency's view, this was a serious, highly unsatisfactory situation: users of FARs should have, as quickly as possible, all Changes to Parts they purchase, since amendments frequently substantially change FAR provisions or requirements, and users obviously need the latest version of any Part, if they are to comply with its provisions. Even with limited distribution, the FAA's free amendment service was costing the agency \$206,000 annually.

Under the system developed by the study team, the 59 Parts are being

incorporated into 11 Volumes. The GPO will sell the basic FAR Volumes, as it has been doing for individual Parts, and will then mail appropriate Changes to public purchasers, automatically. When the 59 FAR Parts were sold individually, the GPO could not undertake the job of keeping and servicing 59 mailing lists. Consolidating Parts into Volumes reduced the scope of the job sufficiently for GPO to undertake the system, thus assuring that purchasers receive the latest Changes automatically.

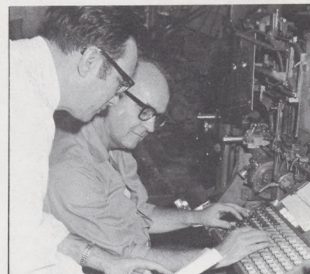
Determining which Parts should go into which Volume was not easy. It was done by a committee of staff members from Flight Standards Service, Air Traffic Service, Airports Service, Office of Aviation Medicine, Office of General Counsel and the Regulatory Council.

There is now no "free" mailing of amendments. The original price of each Volume is fixed to cover the estimated cost of future amendment mailings. At the same time, however, the agency has the assurance that everyone who purchased an FAR Vol-



A briefing on the manner in which the FAR preparation and publishing process was simplified from 14 to 6 steps, is given to William N. Bryan (right), Chief of the OST Publishing and Graphics Division, by members of the study team which recommended the new system—James A. Antonellis (left) of Headquarters Operations and John R. Cranage, Management Systems.

Typographical aspects of a current change to an FAR Part are discussed by Frank I. Gerardi, Chief of the OST Production Section, Printing Branch, with Linotype operator Donald L. Lester. This facet of the FAR operation remains in the OST plant; however, most of the work is currently being done by commercial firms.



ume will be supplied, promptly and automatically, with whatever amendments are subsequently issued to Parts in that Volume.

Purchasers of Parts, as well as those on the FAA amendment lists, were told about the new system by the Superintendent of Documents last April. Information on the changeover was released to news media by the FAA Office of Public Affairs.

The FAA and other Government users of the FARs were first notified in FAA Notice 2100.1, "New Issuance System for Federal Aviation Regulations," dated April 10, 1969. Special canvass cards were mailed to organizations receiving the Parts, asking them to indicate copies of each Volume required.

To date, six Volumes—I, II, V, VI, X and XI—have been published and distributed. The remaining five will be available before the end of 1970.

Distribution of Advisory Circulars and Notices of Proposed Rulemaking will continue under the present system, pending completion of a further study.

Public purchasers of the FAR Volumes are benefiting from the new system in a number of ways. Changes will now be available much more quickly than in the past. Also, amendments will go out automatically—no special request is required, as in the past.

Agency Benefited

The agency, too, is benefiting. Basically, there is the all important satisfaction of providing better and faster service to the public. As an added dividend, when all the Volumes are available and GPO is handling the amendment distribution fully, FAA will be saving the more than \$200,000 it has been spending annually on its free but limited amendment mailings. Although a lesser degree of selectivity in the purchase of FAR Parts is afforded the public, this is offset by faster service and automatic mailing.

As implementation of the Volume system is completed and user reaction crystallizes, it is likely that the Committee of rule-originating offices will reconvene to consider and propose changes in the Volumes and distribution of Parts into particular Volumes. Through these changes, a better "common audience" grouping of Parts may be possible and a Volume arrangement which will increase purchaser selectivity. Meanwhile, the present arrangement goes a long way toward bringing better service to the public at a greatly reduced cost to the Government.

This, then, is the FAR story—showing the benefits to the aviation public—and to the FAA budget—that can be realized through a carefully-planned program of management study and action—and "CHANGE."



Safety Minded

After Minnesota Governor Harold LeVander signed a proclamation designating December as "Aviation Recognition" month in Minnesota, he was presented with a plaque by Minneapolis Area Manager Robert O. Ziegler (right) designating him an "Honorary Accident Prevention Counselor." Standing from left to right are: George Holey, deputy commissioner, Minnesota Department of Aeronautics; Harry Demmerly, Accident Prevention Specialist, Minneapolis GADO; Thomas E. Ashley, Chief, Minneapolis Flight Standards Branch; Ziegler and Lawrence E. McCabe, commissioner, Minnesota Department of Aeronautics.

Reis-ElBara is NAFEC's New CR Chief

ATLANTIC CITY—The new Civil Rights Officer at NAFEC is 43-year-old Henry P. Reis-ElBara.

He became involved officially in civil rights matters in 1961, when he was an investigator with General Services Administration in New York City. In this position, he investigated complaints of possible discrimination and conducted equal employment opportunity surveys.

Joining NAFEC in 1965 as Chief of Compliance and Security, he became Equal Opportunity Officer. He has been active in a program assuring that companies obtaining contracts at NAFEC have proper minority representation.

Named to the Equal Employment Opportunity Council of Atlantic County, Reis-ElBara has had numerous contacts with union locals to promote an increase in their minority membership. He is chairman of the equal opportunity committee of the Federal Executive Association of Central and Southern New Jersey, which represents Federal agencies in the region.

An accomplished after-dinner speaker, he has conveyed his philosophy on civil rights and human relations to many organizations throughout southern New Jersey. As area governor of Toastmasters International, he won 12 speech contests two years ago.

In some of his appearances, he discusses and demonstrates unarmed defense. He is an expert in karate and judo.

Reis-ElBara served in the U.S. Army in the Pacific. As World War II ended, he switched to the paratroopers and later served in the Korean conflict. Leaving active duty in 1957, he served with Special Forces in the reserves and as a major with the National Guard un-

til he retired recently. Reis-ElBara was born in New Haven, Conn.



Henry P. Reis-ElBara

FAA Asks Bids for Study On Engine Emission Control

WASHINGTON—The FAA is soliciting bids for a study leading to establishment of design criteria for the control and reduction of the oxides of nitrogen emitted from jet aircraft engines.

DOT Secretary John A. Volpe noted that a government-industry program already is underway that will virtually eliminate visible pollutants from jet engines by late 1972 through the installation of smoke reduction devices.

"A similar effort is needed now to reduce the invisible contaminants such as nitrogen oxides," he said,

"and the proposed study is an important step in that direction."

Administrator John H. Shaffer said the study will seek to develop ways to reduce oxides of nitrogen without causing increases in other emissions, such as carbon monoxide and unburned hydrocarbons.

Design criteria established from the study are to be evolved through use of mathematical models and supporting experimentation showing the combustion process modifications that can result in reduced emissions from jet engines of moderate-to-high compression ratio.

Airport Weather For 41 Fields Is Now Available

WASHINGTON — Climatological summaries classifying visibilities below one-half mile and ceilings below 200 feet at 41 medium and high density airports in the United States have been published by the FAA.

The reports can be used to evaluate the cost/benefits of all weather landing systems and fog dissipation techniques at each of the locations studied.

The reports summarize weather data for the ten-year period, January 1956 through December 1965, for most of the 41 airports. Data from Dulles International covers the period January 1963 through December 1965 and Kansas Mid-Continental Airport for the period of July 1957 through December 1965.

The reports, "Climatological Summaries, RD 69-22, Vols. 1 through 41," were prepared for FAA by Environmental Science Services Administration of the Department of Commerce.

Copies of the climatological studies are available through Distribution, TAD 484.3.



A Career Glimpse

While controllers (from left), Joseph Griffin, Frank Crilley and Armand Laliberte, keep traffic moving at the Boston Center, ATCS John Murphy (standing, right) describes use of communications equipment to high school guidance counselors who recently toured the facility during an aviation career seminar sponsored by the Boston Area Office.

STOLport Meet Scheduled

WASHINGTON—Two days of meetings on the planning and design of metropolitan area STOLports (landing facilities for short takeoff and landing aircraft) have

been scheduled by the FAA in conjunction with a previously-announced April conference on airworthiness standards for transport category V/STOL aircraft.

The STOLport meetings will be held Apr. 20 and 24, bracketing the three-day V/STOL airworthiness conference, which is set for Apr. 21-22-23. Both meetings will be held at Headquarters.

The opening STOLport session will feature presentations by FAA personnel concerning the various components to be considered in the planning and design of STOLports. Among items to be discussed are runway length determination, obstruction clearance surfaces, terminal navigational aids, marking and lighting, special features of elevated facilities, safety, noise, initial planning considerations and possible funding of development for such facilities.

The follow-up meeting on Apr. 24 will take up a preliminary draft of an FAA advisory circular on the planning and design of STOLports.

Persons interested in attending either the Apr. 20 or Apr. 24 meetings or both should contact George Buley, AS-560, Airports Service.



Aviation Boosters

Among aviation people honored by Kern County at the First Annual Awards Dinner in Bakersfield, Calif. recently were Lynn Hink (left), Chief, Air Traffic Division and Arvin O. Basnight (right), Western Region Director. In center is Bill Drum, Kern County Aviation Director. Also honored for contributions were the three facility chiefs at Bakersfield (not pictured): Don Edwards, FSS; Jack Hammond, AFS and local coordinator and Clyde Boughton, tower.

\$714,000 Contract Let For New Project at Dulles

CHANTILLY, Va.—To cope with the rapidly-growing international passenger traffic at Dulles International Airport, the FAA is improving the international passenger arrival and departure facilities.

Under a \$714,000 contract awarded by FAA's Bureau of National Capital Airports to the A. A. Beiro Construction Company, Inc., of Alexandria, Va., the international passenger processing facility at the eastern end of the Dulles passenger terminal building will be expanded and modernized to double its peak hour process capacity, from 300 to 600 passengers.

Improvements include expanding the present facility from 14,000 to 27,000 square feet and adding two automatic conveyor belts to carry baggage from the baggage trains to a passenger pickup area close to the passenger processing facilities, saving passengers many steps.

Also, the number of inspection booths used by officials of Customs, Immigration and Naturalization,

Agriculture and Public Health agencies, will be increased from 10 to 16. New mobile lounge gates will be built so that international passengers can go by lounge directly from their aircraft to the processing points. At the present time, two temporary mobile lounge unloading positions serve the international arrival facility. Upon completion of this work, four permanent docks will be available for passenger handling.

The work now underway will be completed by late summer.

International passengers are the fastest-growing group of users at Dulles International Airport, and the introduction of the large subsonic jets—such as the Boeing 747—is expected to further increase international passenger traffic there.

In 1969, the number of international passengers using Dulles increased almost 45 per cent, to a total of 248,063. The number of domestic passengers using Dulles, meanwhile, increased about 18 per cent.

FAA HORIZONS

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Kudos for an ACDO

Plaque naming the Kennedy ACDO as the Eastern Region's "Flight Standards Field Office of the Year" is presented by Eastern Region Director George M. Gary (center, right) to Richard Kleinert (center, left) while the people who helped make it all possible look on. Among those on hand for the ceremony were Harry Bernard (right), Chief of the Flight Standards Division and A. J. Behrens (left), Chief of the Air Carrier Branch.

Kennedy ACDO Is Honored

NEW YORK—An impressive list of accomplishments during the past year brought the Air Carrier District Office (ACDO) at Kennedy Airport the title of the Eastern Region "Flight Standards Field Office of the Year."

The ACDO's accomplishments included pioneering work leading to the approval of the Inertial Navigation System for worldwide operation and authorization of area navigation between New York and Chicago.

The office also distinguished itself through participation in the

development of special IFR helicopter and STOL criteria for operation in the New York high density traffic area. The ACDO played a major role in the attempted apprehension at JFK of the individual who hijacked an airliner from California to Italy. Commendation letters were received by two ACDO inspectors for their part in the action.

The ACDO was nominated for the award, covering the 1969 calendar year, by A. J. Behrens, Chief of the Flight Standards Division's Air Carrier Branch.

Facility Site Guide Issued

By David Hess

WASHINGTON—The FAA has issued a new advisory circular describing the types, function and site requirements of air traffic control and air navigational facilities that are built either on or near airports.

Entitled, "Airport Design Standards—Site Requirements for Terminal Navigational Facilities," the circular provides guidance for engineers and airport management regarding the location, layout, clearance and area requirements for FAA air traffic control and air navigational facilities.

The 71-page publication is illustrated with 34 photographs, drawings and layout plans of various types of installations. It also provides information on current FAA policy and programs for establishing terminal air navigational aids.

The eight chapters in the circular contain information on Federal assistance for installation of certain facilities, the instrument landing system for precision instrument approaches, navigational aids for non-precision instrument approaches, approach lighting systems, visual approach aids and airport beacons, air traffic control installation such as the various types of radar equipment and special requirements for Category II all weather landing systems. Also included is a bibliography citing other appropriate FAA publications and Federal Aviation Regulations.

"Airport Design Standards—Site Requirements for Terminal Navigational Facilities," AC 150/5300-2A, replaces a cancelled advisory circular, AC 150/5300-2, "Airport Design Requirements for Terminal Navigational Aids."



Quarter Century of Service

Receiving his 25-year service pin from Administrator John H. Shaffer is NAFEC Director Jack Webb. The ceremony took place at Headquarters during a recent meeting of the directors of FAA's regions and centers.

Agency Ponders Lighting Changes On Civil Aircraft

By Irv Ripps

WASHINGTON — Regulatory action to upgrade anticollision light systems used on U.S. civil aircraft is now under consideration by the FAA.

In issuing an Advance Notice of Proposed Rule Making, the agency said sufficient technical data to support changes in the anticollision light system requirements may now be available as a result of its own research efforts and those of the National Aeronautics and Space Administration. It noted that previous efforts to formulate improved regulations in this area have been hampered by lack of data.

Before going forward with a definite proposal for new standards, however, the FAA believes that the entire technical situation with respect to anticollision light standards should be reviewed by obtaining the views of aircraft manufacturers, appliance manufacturers, operators, government agencies, and others.

Important Questions Asked

Among questions asked are:

- Should the currently prescribed color for anticollision lights be changed from red to white? Some hold the view that a strobe white light is more conspicuous than the presently required red.

- Should the FAA require that anticollision lights be displayed during daylight hours?

- Should the currently prescribed minimum intensity level (100 effective candles in the horizontal plane) be raised for anticollision lights and to what level?

- Should even older planes, exempt under current rules, be required to have anticollision lights?

- What other issues relating to anticollision light standards should be considered?

Current rules require all large airplanes (those over 12,500 lbs.) and most small planes certificated for night operation to have an anticollision light system. This system consists of one or more flashing, red lights installed in such locations as to be capable of illuminating the vital areas around the airplane without impairing the flight crew's vision or detracting from the conspicuity of the position lights on the wingtips and the tail. Position lights are red on the left wingtip, green on the right and white on the tail.

Anticollision lights also must meet certain standards with respect to field of coverage, flashing characteristics, color and light intensity.

System Change Proposed

In 1963, the FAA proposed changing the standards for anticollision lights to a system consisting of high intensity flashing, or sweep beam, lights in each position light sector. It was thought these lights should have the same color as the corresponding position light and comply with currently prescribed flashing rate, intensity level and intensity distribution standards. But no real evidence was uncovered at that time to show that the proposed lighting system, or that any known anticollision lighting system, was superior to the one required under FAA rules. Accordingly, the proposal was withdrawn.

Comments on the advance notice (Docket No. 10129, Notice 70-7) are to be submitted by April 30, 1970, to FAA Rules Docket, GC-24, at Headquarters.



Field Office of Year

Flight Standards Division Chief John M. Cyrocki (foreground left) presents a plaque and citation to Chief Advisor William E. Cunningham, in a special ceremony held in the San Francisco IFO, the Pacific Region "Field Office of the Year." Cunningham's facility also received FAA's Special Achievement Award. Looking on are (from left): IFOers Frances Nolan, Robert Kuehn, Palma Ringdahl, John Bowers, Walter Pless, William Molesworth, James Pumford, Troy Morris, Laurence Tapper and Lowell Dravenstadt.

IFO Achievements Praised

HONOLULU—Efficient administration of manpower and operational funds, resulting in considerable savings despite a workload increase, brought the San Francisco International Field Office (IFO) the honor of being named the Pacific Region's "Flight Standards Field Office of the Year."

"The outstanding degree of initiative and aggressiveness displayed by personnel of the San Francisco IFO in accomplishing work program requests is far above that expected from an office without certificate responsibility," said Pacific Region Director Philip M. Swatek.

"The great number of commendations from the aviation public praising the quality of service rendered by the IFO is indeed a commendable testimonial," he said.

The IFO averaged more than 1,000 man-hours per airman certification inspector—considerably above Flight Standards guidelines which specify that airman certifi-

cation inspectors shall perform 750 man-hours each.

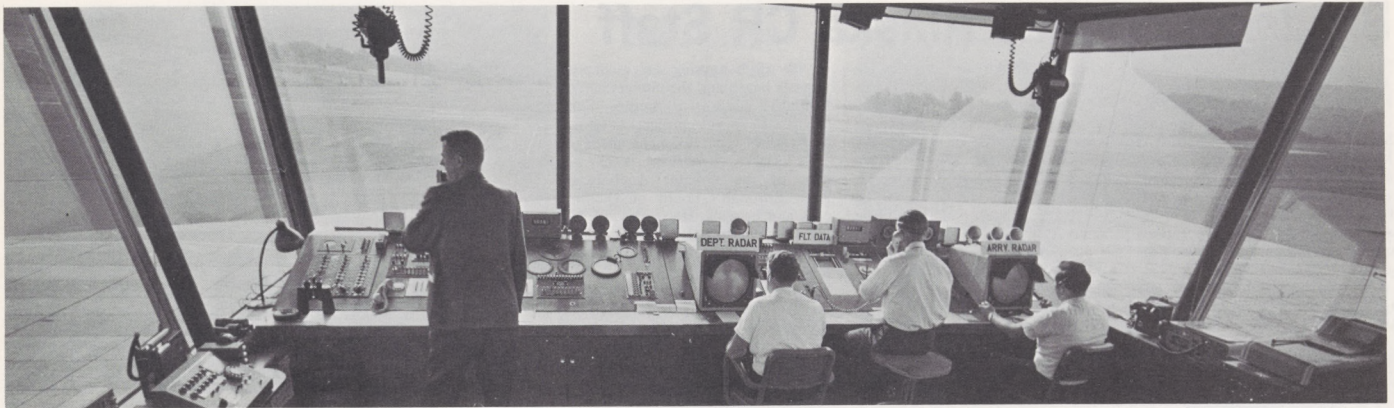
For superior assistance rendered to the European Region, the IFO recently received the agency's Special Achievement Award, on the recommendation of Raymond B. Maloy, that region's director.

In a special ceremony held in the San Francisco IFO recently, the division Chief of Pacific Region Flight Standards, John M. Cyrocki, presented a plaque and a citation to Chief Advisor William E. Cunningham. Among those present at the ceremony were the following IFO personnel: John H. Bowers, Joseph L. Cooper, John R. Fulton, Joseph R. McBride, William M. Molesworth, Troy J. Morris, James M. Pumford, Robert Rasmussen, Laurence F. Tapper, Robert A. Kuehn, Lowell V. Dravenstadt, Walter R. Pless, Mary E. Johnston, Palma E. Ringdahl, Frances E. Nolan and Cleo C. Ullman. Pacific Region Air Carrier Branch Chief Frederick Brown, Jr. also attended.



Earns Spanish Medal

For valuable service to the Spanish government as airport advisor on the FAA Advisory Group in Spain, Roger Y. Pierre (center) of the Support System Branch, Systems Research and Development Service, recently was awarded a medal and certificate. SRDS Director John A. Weber (left) presented Pierre a citation for Distinguished Service, and Charles O. Cary, Director of the Office of International Aviation Affairs, awarded him the Cross of the Order of Aeronautical Merit from the Spanish Air Ministry.



Working in the sunlight, controllers scan the departure and arrival BRITE radar displays in the Wilkes-Barre, Pa., Tower. From left to right controllers on duty are: Tower Chief James Jenkins, Frank Chappelle, Jerry Delaney and Ed Pashinski. (Below): the darkened TRACON shown here is now closed, and soon the equipment will be moved to another site where it is needed. On watch are ATCS Jerry Delaney (left) and Tower Chief James Jenkins.

Something New on the Tower Scene . . .

BRINGING RADAR TO LIGHT

It used to be that controllers had to sit in the gloom of darkened rooms within tower structures to be able to observe incoming and departing air traffic on their radarscopes. No longer. Using the new, television-type Bright Radar Indicator Tower Equipment (BRITE) displays now in operation at a number of towers, controllers can clearly see targets under the ordinary, variable lighting conditions to be found "topside" in tower cabs.

Controllers like the new system. Approach and departure controllers can glance outside from time to time to see the weather situation which can change from minute to minute.

Communications between the radar and local controllers are simplified through use of the new system. The time-consuming calls between the tower cab and the TRACON room below are eliminated. Working side by side with other controllers, radar controllers can pass flight strips to their co-workers and talk directly to each other.

Tests conducted recently at the Wilkes-Barre, Pa., Tower showed that the system's contrast, brightness and resolution were excellent and that it was feasible to conduct radar traffic control from the tower cab.

The image on the BRITE display screen was compared with that on a conventional radarscope during agency flight checks of the system at Wilkes-Barre. The BRITE display image compared favorably in every respect with that on the direct view scope. After a 60-day test period, during which the system successfully passed stringent reliability tests, the BRITE units were left in place in the Wilkes-Barre Tower cab and are permanently in operation there. The tower's "dark room"—the TRACON—has been mothballed.

Coordination Is Easier

"Our new BRITE displays make our coordination job much easier," said James Jenkins, Chief of the Wilkes-Barre Tower. "Radar controllers can see what is going on. They can observe the constant changes taking place in the weather. When they want to talk to other controllers, they're able to pick a time when they see that the others are least busy. The controllers tell me they're very happy with the system. It's working out very well."

Jenkins reports that not once since the BRITE consoles were installed in the tower cab has it been necessary to go back to TRACON operation because of a failure in the BRITE system.

BRITE displays have already been installed at 84 towers throughout the country. At these locations, they are not used to supplant but to supplement the IFR rooms located below the tower cabs. Local controllers are finding the BRITE displays give them a better picture of the traffic situation in the surrounding area.

The displays are planned also for installation in towers serving airports scheduled to get ASRs in the program provided for under the now-pending Airport-Airways legislation.

ATC Requests Tests

The request for evaluation of the feasibility of the system was made to the Systems Research and Development Service by the Air Traffic Service.

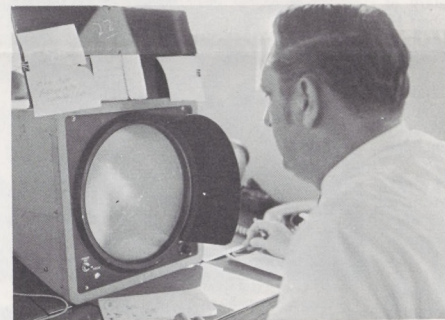
Testing at Wilkes-Barre was decided upon in response to this request and was conducted around the clock and under virtually all traffic conditions and lighting extremes.

During the test period, controllers and radar technicians gave their opinions on the BRITE displays on questionnaires. Among the objectives of the Wilkes-Barre test was determining the feasibility of the concept of providing all air traffic services—including radar services—from the tower cab and determining the best position and equipment arrangements to insure maximum benefits.

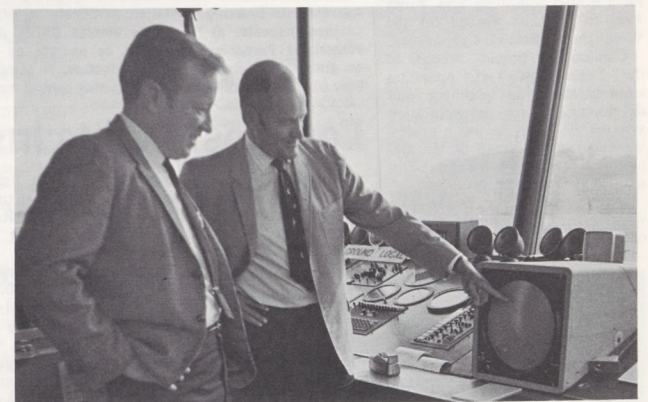
Results of the tests pave the way for wider use of the BRITE system. Installation of BRITE displays at presently TRACON-equipped airports could free TRACON equipment for installation at other locations where it is more badly needed.

Joseph Maye of the Terminal Section, ATC Procedures Branch, SRDS, who conducted the Wilkes-Barre tests said he sees the natural evolution of a tower in this manner: it starts as a VFR tower, goes to a non-radar approach control facility, then to a BRITE display radar approach control facility and finally to a high-density tower with its separate TRACON room plus a BRITE display for local control in the cab.

The future of BRITE appears bright.



Watch Supervisor Pete Gavlick watches local traffic on the BRITE display in the tower cab at Wilkes-Barre.



Pointing out a target is NAFEC Project Manager Roy Bradley while Joseph P. Maye, SRDS, Sub-project Manager, watches.

One improvement currently under study is use of a low-cost TV microwave system to remote the BRITE television picture to a satellite VFR tower. Should such a system prove feasible, controllers in VFR towers within 20 miles of an ASR radar site may someday be provided with a clear

and accurate TV picture of their entire control area.

But even under present operational conditions, the BRITE system is popular with tower controllers. Apart from the savings in cost it makes possible, it is helping them to do a better job topside.

Bradshaw Heads Alaska CR Staff

ANCHORAGE — A former Army captain who was the first Negro to be appointed to the faculty of Fresno State College has been named Chief of the Alaskan Region's Civil Rights staff. He is 43-year-old William A. Bradshaw, who came to the FAA in 1966 from the Alaska State Housing Authority where he was operations officer for the urban renewal program.

Prior to his appointment as the region's Civil Rights Officer, Bradshaw was a supervisory program

analyst in the Airway Facilities Division.

Following ten years of military service with the Army, Bradshaw earned a Bachelor of Science degree in political science from Fresno State College. After post-graduate work in social science, he was made a member of the college faculty. For excellence in the field of economics, he received the Order of Artis and also became a member of Pi Gamma Mu, the honorary political science society.

While in Fresno, Bradshaw was

on the city's housing and advisory appeals board and the city council's legislative advisory committee. For five years, he was project director of Fresno's redevelopment agency.

In Alaska, Bradshaw is chairman of the Greater Anchorage Area Borough's board of examiners and appeals. He is also chairman of the board of trustees of the state chapter of the National Multiple Sclerosis Society.

Bradshaw is also on the board of the American Society for Public Administration, Cook Inlet chapter.



William A. Bradshaw, Jr.

'Census of Civil Aircraft' Is Printed in New Edition

WASHINGTON—A new edition of the "Census of U.S. Civil Aircraft" has been published by the FAA.

The 165-page book contains extensive information on both the size and composition of the U.S. civil aircraft fleet as of Dec. 31, 1968. Historical data is included as well to enable industry and other aviation groups to evaluate recent progress in aviation and estimate future trends.

Both the air carrier and general aviation aircraft fleets are covered in the publication. Under air carrier, for example, there are tables showing the composition of the

U.S. air carrier fleet by type of aircraft, the revenue load capacity of the air carrier fleet, and total flight time by type of aircraft in the U.S. air carrier fleet. Included under general aviation are tables showing general aviation air traffic activity, eligible general aviation aircraft by type of aircraft and primary use, and growth forecast for the general aviation aircraft fleet.

A breakdown of civil aircraft registration by type, state and county also is contained in the book.

Copies may be obtained through Distribution, TAD-484.3.

DOT Swears in 2 New Secretaries

WASHINGTON — Charles D. Baker, Former Undersecretary of Transportation, and Dr. Robert H. Cannon, Jr., were both sworn in as Assistant Secretaries of Transportation on March 12. Baker is Assistant Secretary for Policy and International Affairs while Cannon took over as Assistant Secretary for Advanced Development and Technology.

Baker succeeds Dr. Paul Cherington, who resigned to return to Harvard Graduate School of Business as James J. Hill Professor of Transportation, effective Feb. 15.

Prior to his recent DOT appointment, Baker was vice president and director of transportation for a Boston consulting firm. From 1955 to 1961 he worked for the Westinghouse Electric Corporation.

Cannon will provide support to the Department's six operating administrations in planning and developing future transportation systems. Formerly he was a professor and vice chairman of the Department of Aeronautics and Astronautics at Stanford University.

He replaces Secor D. Browne who resigned to become Chairman of the Civil Aeronautics Board.



Authorized to Repair

Awarding an FAA repair station certificate is Otto Holzer (center) maintenance inspector at the Santa Monica GADO. Accepting the certificate, authorizing Parker-Hannifin Corp. to operate an approved repair station on aircraft accessories they manufacture, is company representative Gene Rice (right). Del Bricker, company quality control manager, looks on.

Low Cost Lights Installed

RAPID CITY, S.D.—To provide an improved final approach for pilots during the important transition from instrument to visual flight, a new medium intensity ap-

proach lighting system with runway alignment indicator lights (MALS/RAIL) was completed recently at the municipal airport here.

The total cost of the installation was \$30,000, including equipment and construction, or about one-eighth the cost of a standard configuration "A" high intensity approach lighting system.

The first MALS/RAIL installed in the Central Region consists of 45 steady burning white lights (MALS) of 75-watt and 150-watt intensity. In addition, eight sequenced flashing condenser discharge lights flash twice a second at 10,000 effective candlepower.

A solid state current sensing device wired into the runway lighting circuit gives "on-off" and "low-high" control from the ATCT and control panels.

Twenty-two similar systems are presently programmed for the Central Region.



Improved Approach

Standing beside one of 45 lights in the new Medium Intensity Approach Lighting System installed at Rapid City, S.D., Municipal Airport, Harry M. Martinson (left) discusses the system with AFS Chief Donald S. Barnes. Martinson is Central Region F and E construction representative.



A Hero Honored

Veterans groups join with the Joseph Scibilia family to unveil a memorial to Sp4 Robert Scibilia in downtown Boston. The young GI was killed last May in Vietnam. His father, Joseph (fourth from left) is a crew chief at the Boston Center. Mrs. Joseph Scibilia stands next to her husband.

FAAer's Son Is Honored Near U.S. Patriots' Shrine

By Frank Puglisi

BOSTON—A small plot of hallowed ground in the shadow of Faneuil Hall, the original meeting place for patriots who led the American Revolution, was the scene recently for the dedication of a memorial to a soldier who gave his life in South Vietnam.

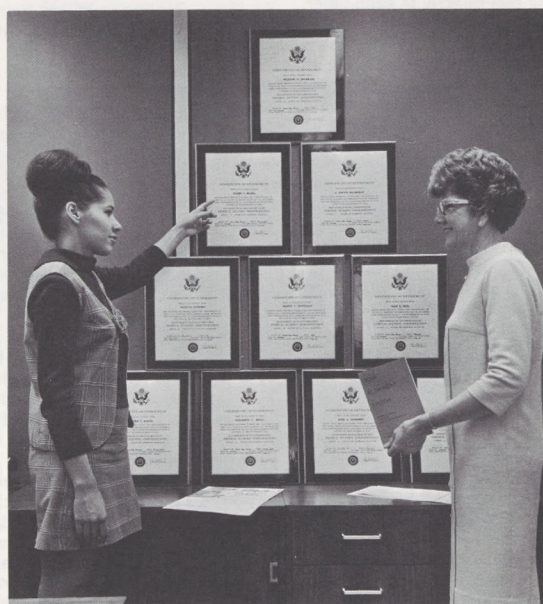
The soldier, Sp4 Robert Scibilia, was the son of Joseph Scibilia, a crew chief at the Boston Center. The 21-year-old rifleman with the Ninth Infantry Division was killed in action in the Mekong Delta on May 23, 1969. For extraordinary heroism on that day, he was posthumously decorated with the Distinguished Service Cross.

The citation accompanying the award note that "Sp4 Scibilia distinguished himself by exceptionally valorous actions while serving as a rifleman during an operation near the village of My Tho. "After an intense enemy barrage forced his

company to withdraw and regroup, Specialist Scibilia crawled toward the entrenched enemy and then stood to fire his M-72 and silence the position. He then directed his fire against another fortification, eliminating the positions and advancing against yet another which he destroyed with hand grenades. Although wounded during this last action, he continued to press his attack until he fell mortally wounded."

Specialist Scibilia's other decorations include the Bronze Star with Oak Leaf Cluster, Army Commendation Medal for Heroism with Oak Leaf Cluster and the Purple Heart.


To further honor the young soldier's memory, a scholarship fund in his name is being established. Contributions may be mailed to the Bobby Scibilia Fund, FAA Air Route Traffic Control Center, Nashua, N. H. 08060.




Vacancies Exist

Central Region Recruitment Specialist Ruby Jo Rachel (left) ponders the problem of finding employees to fill vacancies created by ten recent retirements processed by Doris Snow, Personnel Specialist.

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: The Associate Administrator for Manpower, Direct Line, FAA, 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: Agency Order 3550.7 dated Dec. 6, 1968 states that an employee in a position covered by that order shall be paid overtime pay in an amount equal to one and one-half times his hourly rate of basic pay for all overtime worked during a pay period in which he has worked four hours or more of overtime. How is it possible to meet this payment with compensatory time off (hour for hour), inasmuch as compensatory time off denies an employee in a position covered the pay he is entitled to (one and one-half times his hourly pay rate)?

Answer: It is not possible to grant an employee one and one-half hours compensatory time for each hour worked in a position covered for the following reasons: the true time and one-half law (P.L. 90-556) did not change the methods (money or compensatory time) of paying for overtime work. It simply changed the amount of money paid to certain employees. The law that provides for compensatory time on a one-hour basis (5 U.S.C. 5543) still remains in effect. Provisions regarding the granting of compensatory time in lieu of money also remain in effect. (See PT P 3550.11, Chapter 2, for further details.)

Question: Can I change my opinion from telecommunications operator to air traffic control specialist without taking the Civil Service examination?

Answer: Current Civil Service Commission qualification standards for air traffic control specialist, CSC Handbook X-118, specifically require passing the written aptitude test for GS-2152-5 and GS-2152-7 before initial assignment to an ATCS position. An exception to the written test is made for applicants who meet the general and specialized experience requirements for GS-2152-9 or above.

Question: I am a GS-11 electronics technician. There are no GS-12 electronics "technicians-in-depth" at my location and I believe that all of us should be GS-12s. I've already talked to my supervisors without success. How can I pursue this matter?

Answer: Your best bet is to contact your local personnel office, preferably through the proper supervisory channels. In doing so, ask them to take a look at your position description to make sure your job is properly classified.

Question: In the Nov. 10, 1969 "Direct Line" you stated that the law (5 U.S.C. 6101) provides that employees should be scheduled to work the same hours of the day each day of the basic workweek. Does this mean that personnel on rotating shifts should work only one specific shift during each basic workweek (e.g., five each 0800-1600 shifts per basic workweek)?

Answer: Ordinarily, this would be so. However, the same law pro-

vides for situations such as those with a 24 hour a day, seven day a week operation, by stating that agencies may authorize exceptions when they would be seriously handicapped in carrying out their functions or when costs would be substantially increased. Agency Handbook 3600.3, Chapter 4, discusses tours of duty in more detail.

Harding

(Continued from Page 1)

improving the relationship between management and employee organizations—an area that particularly requires attention at this time.

"At the same time, we must discover new ways to improve the total environment in which all our employees work. This includes such things as recruiting and training programs, work environment, compensation, career development prospects and retirement considerations. Improvements in these areas are being sought for all FAA employees.

"Considerable attention has been focused recently on air traffic controllers. This is a very important group. We must improve—and we are improving—the controllers' environment. But, there are other groups within the agency whose situation also must be studied, understood and improved. The FAA is large, complex organization. If any segment of it fails to operate properly, the entire organization is affected."

Problems Discussed

Discussing the problems of minority group members—problems with which he had a firsthand acquaintance in his former position as acting director of the Office of Economic Opportunity—he said he would begin by following one of the recommendations of the Corson Committee.

"We must increase our efforts to recruit more minority group employees for positions in air traffic control," he said. "We will not dilute our standards for trainees, but will make a special effort to attract qualified minority group members to agency jobs."

On the topic of FAA management, Harding commented, "We must develop a stronger, more people-oriented management corps within the FAA. The agency has many talented managers who have great technical know-how. In many instances, however, they must be encouraged to direct more of their attention to the equally real human problems confronting us. Our objective will be to develop a corps of management people who grasp both technical problems and human factors."

Finishing on a personal note, Harding remarked that he has always been fascinated by organizations, the manner in which they work and the ways in which they can be made to work better.

Automation

(Continued from Page 1)

aids, wide implementation of area navigation and rapid implementation of scanning beam microwave instrument landing systems. Unlike present ILS systems, which are basically unidirectional, the scanning beam ILS covers a broad area permitting variations in flight and glide paths on both takeoff and landing. This facilitates reduction of noise over airport communities.

Despite these improvements, the report notes, the third generation ATC system is likely to reach near saturation at major hubs by the year 2000 and require at least 35,000 personnel.

The report recommends prompt development of a follow-on fourth generation system and upgrading of the third generation system to include such functions as sequencing and metering of traffic and conflict prediction and resolution.

"A higher level of automation, would have the controller provide system status inputs such as weather and wind shifts, blocked runways, aircraft emergencies and ATC equipment failure, so that the ATC system automatically accommodates to these inputs in directing traffic," the report states. It predicts that computer technology available by 1975 "will be adequate to cope with twice the projected 1995 traffic."

Members Listed

The committee was headed by Ben Alexander, chairman of the board of the General Research Corp. Other members were: Lawrence A. Goldmuntz, Executive Secretary, Office of the Assistant Secretary for Research and Technology, DOT; Thomas S. Amlic, Technical Director, Naval Weapons Center, China Lake, Calif.; James E. Densmore (ex officio), Deputy Assistant Secretary for Research and Technology, DOT; Robert R. Everett, president, MITRE Corporation; Edward L. Glaser, director, Jennings Computing Center and professor of engineering, Case Western Reserve University; Richard R. Hough, vice president, American Telephone and Telegraph Company; John R. Meyer, president, National Bureau of Economic Research; Courtland D. Perkins, chairman, department of aerospace and mechanical sciences, Princeton University; Jack P. Ruina, vice president for special laboratories, Massachusetts Institute of Technology; and General J. Francis Taylor, president, Aeronautical Radio, Incorporated.

The two-volume report is available through Distribution, TAD-484.3.

List Committee

In the March 3 FAA Horizons listing of the names of committee members who will select the national winner in the Flight Standards Field Office of the Year Program, the name of Harry A. Turnpaugh, Chief of the Flight Standards Service's Maintenance Division was inadvertently omitted.

The full selection committee consists of, besides Turnpaugh: James F. Rudolph, Director, Flight Standards Service, chairman; E. M. Mundy, Executive Officer; Allen M. Morrissey, Chief, Evaluation Staff; Herbert H. Slaughter, Jr., Chief, Engineering and Manufacturing Division; Joseph A. Ferraresi, Chief, Operations Division and William G. Shreve, Jr., Chief Aircraft Programs Division.



Teaches Agency Sleuths

FAAers benefit from the excellence for which Clifford G. Sheker (left) was recently honored when he received the National Transportation Safety Board Chairman's Award for Exceptional Service. Sheker teaches aircraft accident investigation techniques at the FAA/NTSB-sponsored National Aircraft Accident Investigation School at the Aeronautical Center. NTSB Chairman John Reed made the presentation.

Central Flow Control Starts

By Don Byers

WASHINGTON—A Central Flow Control Facility has been established by the FAA to minimize enroute air traffic delays and traffic congestion due to weather by rerouting traffic.

Previously, flow planning has been handled on an individual basis by each of the 21 air route traffic control centers in the 48 mainland states. Although local flow control procedures have reduced or eliminated many delays, they represented a short-term response to obvious and immediate local congestion problems. At times, individual center restrictions have backed up into other center areas and increased total system delay.

The Central Flow Control Facility, located on the sixth floor at Headquarters, is now operating 15 hours a day, seven days a week, with two working shifts. Six experienced flow controllers from various centers are assigned to the facility on a rotating, temporary-duty basis. There also are four supervisory personnel from Headquarters and Weather Bureau meteorologists on the staff.

Congestion Forecast

Potential congestion problems are forecast by the Central Flow Control Facility through an analysis of weather trends and forecast delay information provided by the various centers.

During a six-week test period, which preceded the start of full operation, the Central Flow Control Facility first tried rerouting transcontinental traffic. Reductions in delays of up to 40 minutes were recorded for individual aircraft.

Other facility accomplishments during the test period included:

- Virtual elimination of enroute delays to long-distance traffic moving into Kennedy International Airport.
- Better distribution of workload within individual centers by suggestions of alternate routes during periods of congestion.
- Better balance of aircraft in holding patterns for JFK.
- Unsaturation of preferred IFR (Instrument Flight Rules) routes to JFK from the West Coast.
- Alleviation of congestion in the Chicago area normally caused by traffic coming from Los Angeles and San Francisco to New York.
- Alleviation of the Cleveland

Air Route Traffic Control Center's congestion by better altitude stratification of individual sectors and rerouting of aircraft.

Today, the Central Flow Control Facility monitors traffic throughout the system, with special attention to the following routes:

New York and Chicago; New York and Boston (and overseas points fed by Boston); New York and Miami; Boston and the West Coast; Chicago and Denver; Seattle and major West Coast population centers; Chicago and Atlanta, Jacksonville, Miami and Houston; Chicago and Pittsburgh, Cleveland and Detroit; and Los Angeles, San Francisco and Seattle.

The Air Traffic Service, responsible for the safe and efficient flow of the nation's air traffic, expects the new Central Flow Control Facility to greatly improve nationwide air traffic service and also provide indispensable information about needed route improvements and solutions to existing airways structure problems. The facility also may be invaluable in standardizing and coordinating flow control procedures and practices.

Safety

(Continued from Page 1)

your present excellent achievement in this endeavor."

"It is my intention that we show substantial improvement not only in the reduction of injuries but also in reduction of material losses associated with our operations," the Secretary said.

In conveying the Secretary's comments to agency officials, Administrator Shaffer stated that FAA employees can take pride in the recognition given them by the Secretary for the reduction in on-the-job injuries.

"We should not lose sight of the Secretary's personal interest in this program," the Administrator said. He pointed out that because of the size of the agency, achievement of the Departmental goal will depend largely on the continuing efforts and improvements made by FAA employees.

"On the job safety is a basic and continuing responsibility at all levels," the Administrator emphasized. "Put in another way, every employee should regard safety as a basic responsibility."



Future controllers get an introductory check-through of the 9020 Computer which will help automate towers and centers in the future. These students are in a six-month basic course before entering the regular Air Traffic Controllers' training courses. Left to right are: Roberto Salazar, Oakland; Paul McGee, Chicago; Annie Miller, Point Barrow, Alaska; Instructor Jack Plankey, and Fred Lano of Minneapolis.

*For the Disadvantaged,
For Minorities,
A New Road Opens Up. . . .*

TO MAKE IT POSSIBLE

Bringing hope—and the promise of rewarding careers—to youngsters from minority groups and other disadvantaged youths is the objective of a new training program which began recently at the Aeronautical Center.

"To make it possible" might well be the theme of this new FAA effort. Making possible new opportunities for young men and women and opening doors to a better way of life at a time when some had begun to give up hope is FAA's aim in the training program.

The 136 students who will attend classes for a period of 26 weeks, in successive groups, come from all sections of the Nation, including Alaska and Hawaii. The first contingent of students to enter Aeronautical Center classrooms under the new program—known officially as "Project 150"—includes 17 blacks, three Mexican-Americans, two Alaskan Indians and one American of Oriental descent.

"Project 150" trainees will receive the groundwork required for beginning careers in air traffic control and facility maintenance. Of the 136 in the program, 100 are looking forward to working in air traffic control and 36 hope to work as electronics technicians.

Students aspiring to each of these specialties receive 26 weeks of basic studies which will pave the way for them when they begin regular training courses following "graduation" from "Project 150."

Those headed toward air traffic careers will be given brushup work in mathematics and social

studies. Other courses will tie in to their future occupations. The courses include communications, air traffic control procedures, familiarization with Federal Air Regulations (FARs) and elementary air traffic control problems.

Electronics technician students receive a much heavier load of mathematics. This begins with refresher studies in basic mathematics and proceeds to trigonometry. These students will study circuitry, tubes, transistors, transmitters and receivers. The last five weeks of the study will consist almost entirely of job-oriented courses relating to the function and maintenance of air navigational aids.

All of the students are high school graduates and range in age from their late teens to early twenties. Because of their backgrounds, many of them may have difficulty grasping sections of their studies. In these cases, a carefully planned program of remedial instruction is available to help them over such obstacles. To get "Project 150" students accustomed to the necessity for concentration and application to their work, the courses include a two-hour supervised study period.

Students enrolled in the first series of classes include Robert L. Bailey, Olathe, Kans.; Raymond L. Brown, Oakland; Donald J. Browne, Atlanta; Dayle L. Denton, Ft. Worth; Joseph L. Erlandson, Olathe; Riley J. Freeman, Philadelphia; Elbert J. Henry, Atlanta; Ronald S. Heyward, Philadelphia; Bobby Jennings,



Students in the "Project 150" basic training course for electronics technicians get a feel for the usages of the Voltmeter from Instructor Ferman Miller. Shown (left to right) are: Ambrozo Munoz, Chicago; James Hill, Atlanta; Miller; Alfonso Medine, Atlanta; and Max Seetomona, Anchorage.)

Oakland; Claude C. Johnson, Ft. Worth; Everett C. Johnson, Indianapolis; Jesse B. Johnson, Philadelphia; Frederick T. Lano, Farmington, Minn.; Paul G. McGee, Chicago; Annie Miller, Pt. Barrow, Alas.; Roger E. Pieratt, Kansas City, Mo.; Jerome N. Schiltgen, Farmington; Gary W. Stevens, Great Falls, Mont.; Ray W. Thufedal, Minneapolis; and Edward J. Ulanich, Chicago.

Arthur S. Washburn is supervising instructor in the program. Other instructors are Irwin D. Mailberg, Richard St. Clair, Robert L. Webb, John H. Plankey, Herbert H. Marshall, Kermit M. Ross, Otha L. Crawford and Vivian F. Clemmons.

When the students complete their six-month courses, they will return to their regions and be assigned to positions. They will then be included in the region's quota for study at the Academy under the regular courses of instruction in air traffic and electronics specialties. Their second trip to Oklahoma City will not be as members of the "Project 150" group, however. They will be enrolling as employees who are qualified for specific courses that will help them up the career ladder.

Through small classes, special remedial instruction and consideration for the individual it is believed that most of the 136 students will be able to "make the grade"—and begin to move forward in life through rewarding careers. "Project 150," it is hoped, will be their first springboard to success.