

BEACON

NOVEMBER 1960



FEDERAL AVIATION AGENCY

Aeronautical Center

OKLAHOMA CITY

This month's issue carries a story on the new Manager of the Aeronautical Center. In some issue we will carry Mr. Bayne's comments in our guest editorial column, "Point of View."

The cover artwork was done by illustrator Bob Tinneman. An excellent portrayal of flight in the Autumn.

The back photograph shows part of the Oklahoma City skyline as seen from the top of the Federal Building.

The inside back cover weds the geometry of oil rigging with the architecture of the state capitol.

This month's calendar picture is the Lake Overholser shoreline near Oklahoma City.

The next issue of the Beacon --- the Editor believes --- will be published in magazine fold format.

In the next issue will be a complete story on the Flight Service Stations -- with pictures of this phase of FAA safety and service.

Looking back a few weeks! The comments on the Federal Aviation Agency exhibit at the Oklahoma State Fair have been warm and welcome, indeed! The personnel taking part in the exhibit reported that many adults -- a great number from other states --- were impressed with the animated end products of the FAA work; were grateful that such an exhibit could be put before the public.

The Beacon plans to run more stories on "people and their part in the field of aviation" in future issues. The one about Dorothy Morgan in this issue is the kind of feature we like to put in your magazine. If you know of such feature stories --- let your reporter know.

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POINT OF VIEW

This last month I had the pleasure of speaking to the FAA School graduates. That in itself is not too unusual, but these students were representatives of nine different countries -- many from the Iron or Bamboo Curtain fringes.

In these men could be seen reciprocity in action -- a familiarization course good for both our people and the students. Strangeness is often the breeding grounds of misunderstanding and hatred. During their weeks in Oklahoma City these men became close friends with many Americans -- assimilated the American concept of free living and, in turn, the citizens of Oklahoma City learned to understand these students from other nations. They were no longer "foreign" to each other.

I learned long ago that "people are people" wherever I went. Whether the man was from Turkey or Vietnam, Tunisia or Formosa, he has the same appreciation of the humorous, the intensity of learning, love of life, that we have.

The "host family" to these men from other countries -- as well as other people -- is helping set up a bulwark against totalitarianism in these other countries. These men go home with a true concept of our way of living.

I wish it could become universal in this country and elsewhere.


Tom Steed
United States Representative
4th District, Oklahoma



Bayne Becomes Center's Manager

Lewis Bayne, new manager of the Aeronautical Center, took over his duties October 10. His first official act was taking part in a treasury flag raising ceremony in front of the FAA Center Headquarters building.

Bayne received a new treasury flag — one awarded the Center for an over 90 percent employee participation in this year's savings bond drive.

Bayne succeeded Enar Olson, Acting FAA manager since June of this year. Olson became the Superintendent, FAA School.



State U. S. Savings Bond Director Braden gives new Treasury flag to Lew Bayne as E. B. Olson watches

Bayne, a native of the Washington, D.C., has considerable familiarity with local housing and space problems in the growing Center. In Washington he served as division chief in the FAA's Bureau of Facilities and Material.

The new manager said he has been in Oklahoma City 25 or 30 times previously during his FAA career which started in Washington in 1941.

Lewis Bayne and his wife, Jennie, live at 3704 N.W. 64th in Oklahoma City. Their daughter, Suzanne, is a freshman at Oklahoma University.

Air Traffic Documentary on CBS

The CBS television network, through its Sunday "20th Century" series, will present the story of air traffic problems and the control of that traffic through both the human and electronic factors.

"Traffic Jam Upstairs" will be telecast on Sunday, November 20, 1960. KWTW, Channel 9, in Oklahoma City, KOTV, Channel 6, in Tulsa, will carry the program at 5:30 P.M.

A highlight of the show is the description by narrator Walter Cronkite of a "no hands" landing under the automated control systems being developed by NAFEC in Atlantic City, New Jersey.

The script for "Traffic Jam Upstairs" was written by Richard Witkin, Aviation Editor of the New York Times.

CBS "Twentieth Century" productions recently won top honors and the "Emmy" award for the best public affairs TV show of the year.

FAA Buys Second C-135

During the month of October the FAA bought its second 3½ million dollar, high altitude jet aircraft.

The KC-135, transport version of the Boeing 707 jet passenger plane, arrived at Tinker Air Force Base from Moses Lake, Washington.

The big plane, after the refueling part that made it a tanker is removed, will be used for the next few months in the training of FAA flight inspectors and air carrier inspectors.

About next April the jet plane will be moved to Will Rogers to undergo the necessary installation of electronic gear used in high altitude checking of air navigational aids across the nation.

The first KC-135, not undergoing the installation of avionics gear, will be ready for use some time around the first of the year.



Outside of building which housed exhibit. On extreme left can be seen the CARI telemetering van and the mobile laboratory. Visitors were permitted to look inside each area. On the right is the FAA Aeronautical Center sign.

Overall view of the FAA exhibit at the Oklahoma State Fair. Left to right, front, airborne weather radar antenna, operational; scale-model of Aeronautical Center; simulated and lighted runway approach lighting system, and screening area of pictures.



This is dividing and screening area in front of the 1500 square feet of FAA exhibit. It consisted of Federal Aviation color pictures and a center display from the employment office.

FAA Aeronautical Center Exhibits Wares At Oklahoma State Fair

Something over 14-hundred square feet of floor space was given the FAA Aeronautical Center by the State Fair for showing off the Federal Aviation Agency.

During the eight-day run, fair officials estimated nearly 200-thousand visitors passed through the FAA exhibit area.

These pictures show what the public saw.



This is the Air Traffic Management (right in picture) and Air Navigation Facilities (left). ATM used (right to left) a lighted jet penetration and approach mock-up; enroute traffic control console, complete with mikes and speakers. Actual problems were simulated and worked out; animated Air Routes in U.S. display. An airplane (lighted) moved across the map while viewers listened to conversations between pilot and control center or tower. Incidentally, one traffic controller was "wired" for heartbeat by CARI. By the console, a "scope" showed his heartbeat. ANF had high speed teletypes, large 'scope showing impulses in high speed teletype. The teletype, by the way, printed out the FAA mission and ANF's part in that mission. A training teletype, skeletonized, showed in slow motion, how the teletype worked.



Civil Aeromedical Research Institute used 20 by 10 feet of space. Background showed, with pictures, various aspects of CARI research. Research treadmill was in constant use. A technician stood by to explain its usage and let the visitor try it. Projector in rear of exhibit showed (in film) facets of research work.



This area showed left to right, FAA aircraft in color and cockpit simulator. Visitors could hear tower calls and on a special mike-headset combine, talk to themselves. Instrument dials worked as they would in actual aircraft. This, plus data recorder console and an explanation of the electronic system in an FAA aircraft, drew a lot of attention. Above the exhibit is seen a 12 ft. long mahogany mount for large pictures of the Aeronautical Center.



Comandante Carlos Arroyo, Santiago, Chile and R. W. Pulling, Manager Facilities and Materiel Depot.

Colonel Carlos Arroyo (right) representing the South American Republic of Chile, accepts transfer documents for an aircraft equipped with special air navigation facilities. Making the presentation for the FAA is Mr. R. W. Pulling, Manager of the Facilities and Materiel Depot at the Oklahoma City Aeronautical Center. Colonel Arroyo departed for Chile Tuesday Morning and expects to arrive sometime Friday.

Colonel Arroyo is Chief of Commercial Aviation and Chief of Radio Aids to Air Navigation for the Chilean Government. Col. Arroyo also holds the commission of Lieutenant Colonel in the Chilean Air Force.

Colonel Arroyo has been in Oklahoma City most of the month to accept delivery of the C-45H Beechcraft which was outfitted for Flight Inspection purposes at the Facilities and Materiel Depot under the auspices of the Office of International Cooperation and the Federal Aviation Agency. This aircraft will be used in the Republic of Chile to flight check radio navigation aids consisting of five Instrument Landing Systems, twenty-three Omni-Ranges, eight Direction Finders, and a large number of Markers and Homing Beacon installations. In addition to these facilities already operational in the Republic of Chile, are five Airport Surveillance Radars (ASR) and five Precision Approach Radar (PAR) facilities, plus a number of high intensity lighting systems under construction at their major airports.

Colonel Arroyo is no stranger to the United States and in particular to Oklahoma City. He

was here last in 1955 attending the FAA School in Aviation Safety. Later he worked with the CAB Accident Investigation Department. In 1953 he attended the U.S. Air Force Instrument Flying School in Valdosta, Georgia. In his present position as Chief of Commercial Aviation, he flies into Miami, Florida about three times a year checking Chilean commercial airlines, plots, procedures and airline equipment.

The airplane he is receiving from the FAA is equipped with two-recorder console and all radio transmitters and receivers needed for flight checking Radio Navigation facilities. It also contains a special modern light weight transistorized High Frequency communication system designed especially for the Republic of Chile.

Also in attendance of the FAA Flight Inspection School at this time are, Captain German Retamal and Captain Alberto Varela from the Republic of Chile.

International Students Hear Congressman

The fourteen graduates of the Air Traffic Control Course for International Students at the Aeronautical Center heard from Congressman Tom Steed, 4th district U-S Representative from Shawnee, Oklahoma, this last month.

The students, representing some 9 countries, heard Congressman Steed talk about the "understanding" that such programs as this one can develop. Steed stressed the fact that understanding each other's customs and countries makes us all friends.

(Steed, by the way, authored the "Point of View" in this month's magazine.)

Graduating were Mohammad Ajab Atrafi of Afghanistan, Mohammed Bchir, Larbi Jermal-eddine and Mohammed Jilani Muhchari of Tunisia, Chung Fu Chang and Lone Sung Ree of the Republic of China, Vu Din Ngoc, Nguyen Huu Ton and Nguyen An Truong of Vietnam, Necati Citir and Aydemir K. Tamer of Turkey, Alfonso Fortin V of Honduras, Noe Sanches of Nicaragua and Robert Hall of the Bahamas.

It has come to our attention that Robert P. Ledbetter of our own Engineering Branch is the author of a very interesting article called "Eliminating Peak Clipping From Diode A-M Detectors." This article is currently appearing in the October edition of Electronic Equipment Engineering.



INDIAN VISITOR TOURS CENTER

A retired government official of India toured the FAA Aeronautical Center recently as one stop in his personal, international peace effort. Krishma Prasada, who was India's Director of Civil Aviation and Director General of Posts and Telegraphs, has carried on a kind of personal peace mission for the last seven years.

Prasada came to Oklahoma City at the request of local Rotarians. He is a committee member for Rotary International convention to be held at Los Angeles in 1962.

While at the Aeronautical Center, Prasada toured the warehouse area with Ralph Neely, Rotary Club of Oklahoma City, and Gary Costar, Plant Material Section, F and M Depot of the Center.

FIFTH ANNUAL ATCA MEETING

Air traffic controllers from all over the world met to lay the ground work for the formation of an International Air Traffic Control Association.

This, the 5th annual meeting of the Air Traffic Control Association and the 1st International meeting was held October 3rd, 4th, and 5th in San Francisco, the City by the Golden Gate and the city in which the United Nations was born. Meeting in the majestic Sheraton-Palace Hotel, controllers from 22 nations joined with controllers from our 50 states to hear Deputy Administrator, James T. Pyle praise air traffic controllers for their sustained dedication to the vital task of providing effective control of air

traffic and for the envious safety record they have attained.

Mr. Pyle, speaking before more than 600 air traffic controllers and guests told of the recent developments in "Project Friendship" and what the FAA was doing to overcome the difficult obstacles. Thoroughly aware of the tremendous importance of this project and its value to the control of air traffic throughout the world, Mr. Pyle said, "We must take the position that anything short of the establishment of a unified air traffic control system would defeat the purpose of the Federal Aviation Act."

In attempting to satisfy the requirements of the Department of Defense and at the same time protect the civil rights of the air traffic controller, the FAA has under consideration a proposal which would "provide for a mobilization plan whereby during peacetime, the Agency would be entirely civilian and operate under Civil Service laws." Essential personnel would be assigned mobilization tasks and would be changed over to a "special status" in case of war or national emergency.

Leaving "Project Friendship", Mr. Pyle told of the importance of obtaining scientific data under scientific conditions concerning the "on-the-job environmental stress factors" of the air traffic controller. He cited the research program now underway at the Aero Medical Laboratory, which, it is believed, will provide a scientific basis upon which meaningful and realistic legislation may be developed.

This meeting witnessed the intense and gratifying interest in the complex problems confronting the air traffic controller and their unanimous desire to seek an effective means of resolving them. In my observation, this meeting stood out as having a special and more meaningful purpose than any previous annual meeting. This year we, the air traffic controllers of the United States, were joined in our cause to promote the science of air control, by controllers of some 22 nations of the Free World. These men, with the same dedication to the cause, made it apparent that what effects the safety of air travel in the United States, effects the safety of air travel in England, Germany, France, Greece, Israel, Japan and all the nations of the world in this modern age of jets. This was made quite apparent to me when, upon checking in at the hotel, I met my very good friend from Athens, Greece, Nicolas Gonas. When Nick told me his government had sent him to the meeting to represent the air traffic controllers of Greece, I asked him when he had arrived. His reply was, "This afternoon,

18 hours after leaving Athens." P.S. It took me 12 hours from Oklahoma City.

These outstanding international representatives made it quite apparent to all in attendance that air traffic control problems can no longer be contained within the borders of any one country. They are indeed, International problems and we must call upon the knowledge of air traffic control throughout the world to teach an effective solution.

Interest focused on the many outstanding exhibits of electronic devices being developed to aid the controller and speed up the flow of air traffic. Some of these are already in use in our control facilities, while others are being evaluated at NAFEC. Still others, such as Bell Avionics Automatic Landing System and International Telephone and Telegraph's VORTAC Pictorial Display have been developed as an aid to the pilot. The forthcoming integration of these devices into our air traffic control system is being eagerly anticipated by air traffic controllers the world over.

Panel discussions stimulated much interest and produced many fruitful ideas. Forums were

held to discuss the problems involved in the control of Oceanic Air Traffic; to bring the members up to date on the advancements of Automation and how it will aid the air traffic controller. Other forums heard enlightening discussions on such things as the Noise Problem, Airport Environment and its effect on our air traffic control system; discussions of "The Future of Radar in Air Traffic Control" brought to light many new data processing techniques which it is hoped will, when integrated into our present radar equipments, provide the controller with the necessary tools with which the flow of air traffic can be expedited and greater utilization of available airspace can be made.

Culminating this 3 day meeting was the Annual Awards Banquet. Here awards for the Controller of the Year, the Facility of the Year, and recognition awards to individuals and facilities are made. This year, the controller of the Year Award was given to Clyde Denham of Chicago Midway Tower for his outstanding "save" of the pilot of a Beechcraft Bonanza who became lost on top of an overcast in the busy Chicago area.



These are part of the International October 21 graduating class - representing eight countries - who attended the Air Traffic Control Association convention in San Francisco, California.



Dr. Alberto Hurtado, Director of the Andean Institute at Lima, Peru, looks over some of the telemetering equipment used by the Civil Aeromedical Research Institute in experiments to determine the stamina and nervous reaction, timing of controllers and tower operators.

Dr. Hurtado was the main speaker at the Southwest Society of Experimental Biology and Medicine. The seminar was held the last week in October. Dr. Hurtado is an expert in high altitude medicine.

Crash Injury Expert at CARI

The ultimate goal in aviation today is safety in flying to avoid crashes and tragedy. A more immediate goal—survival if a crash does occur. There may be a day in the not too distant future when passengers in a plane that does crash will be able to step out of the wreckage and tell each other about the miracle of survival. However, it won't be a miracle. It will be the end result of careful studies carried out by a group of dedicated men in aviation.

Survival, after a crash is the business of A. Howard Hasbrook, recently appointed chief of the crash safety section at the FAA's Civil Aeromedical Research Institute at Norman, Oklahoma.



What Hasbrook and his fellow scientists learn may well lead to improved aircraft and safety equipment for complete survival.

The business of living through a crash is not new to Hasbrook. Before taking on his present job he aided in development of the capsule America's space Astronauts will use for their safe trip back to earth.

Just two years ago, Hasbrook received the flight safety award from Aviation Week for his outstanding work in the field of crash safety.

At the CARI quarters, Hasbrook will direct research in the field of crash-injury investigation of commercial and light plane accidents, the investigation of factors causing injury in accidents that can be survived, crash testing light planes, collision-force testing of seats, safety belts and other safety devices.

From this research will be developed methods for building into planes the best possibilities for survival.

Hasbrook was a member of the crash injury project at Cornell University for 10 years. He has also acted as a safety design consultant for airlines, aircraft manufacturers and other firms producing aviation equipment.

His interest in survival is not merely academic. He is a pilot and has been for more than a quarter of a century. He taught aviation cadets during World War Two, has done some experimental flight testing, charter and airline piloting.

Medical Advisory Council Established by FAA

An 11-man Medical Advisory Council has been established by the Civil Air Surgeon of the Federal Aviation Agency to assist the Agency's Bureau of Aviation Medicine with plans for developing, operating and coordinating FAA's medical program.

The eleven doctors invited by the Civil Air Surgeon to serve on the Council are physicians prominent in the field of aviation medicine.

In addition to conferring with and advising the Civil Air Surgeon on policy matters, the Council will make possible an exchange of views between the Agency and the medical profession at large on matters of common interest. The Council which will meet in Washington twice a year, will hold the first meeting in January, 1961.

In addition to the Council FAA is establishing a Medical Advisory Panel to provide an impartial review of petitions from airmen applicants for third class certificates for exemptions from medical standards of the Civil Air Regulations.

FAA to Simplify Safety Rules

The Federal Aviation Agency is initiating a comprehensive program to consolidate and simplify its aviation safety regulations in order to improve service to the aviation community.

The project will include reorganization of the regulations, simplification of the language and elimination of duplicate and obsolete rules. There will be no revision or substantive changes of the regulations themselves.

The proposed rules call for two-way radio communications at all airports where a traffic control tower is in operation by either the FAA or military authorities. The FAA believes that safety objectives would be risked unless instantaneous and continuous radio communications are maintained by the tower with all aircraft operations at controlled airports where traffic is complex and includes high-speed flight operations.

The proposed regulation, however, includes a provision permitting aircraft not equipped with two-way radio to land at or take off from a controlled airport if prior authorization is obtained from the tower.

The proposed rules further outline specific requirements for both fast and slow aircraft, as well as helicopters, when operating within airport traffic areas with regard to speeds, clearances, and approach and departure procedures and altitudes.

To date, the Agency has issued special civil air regulations governing the flight operations of aircraft operating in the vicinity of the New York International Airport and the Los Angeles International Airport. Both regulations were aimed at noise abatement and air safety through special landing, take-off, and flight operational

procedures and techniques. A similar regulation is currently being drawn by the FAA with respect to Washington National Airport.

If adopted, the proposal for national airport traffic area rules would minimize the need for such special regulations wherever a noise problem exists in a particular airport community.

The proposal provides for the development of local procedures to reduce local airport flight operational problems. Such procedures would be developed cooperatively at the community level. Local procedures would supplement but not supersede the applicable national rules. While the proposed national rules, for example, do not spell out a requirement for a preferential runway system, the proposal provides for local establishment of preferential runways in line with local requirements for special arrival and departure routes over the least congested areas as a means of minimizing noise problems.

The result will be a single simplified body of regulations which may be easily referred to and which will be readily understandable by the aviation public.

FAA Proposes Rules to Standardize

Flight Operations at Tower-Equipped Airports

The Federal Aviation Agency has proposed rules to standardize the flight operations of all aircraft operating in the vicinity of all airports with the primary aim of enhancing air safety in the vicinity of airports and reducing aircraft noise affecting airport communities.

The rule-making proposal marks the first time the Agency has proposed the adoption of national standards for traffic pattern rules governing flight operations on and around all airports.

The proposal would create an airport traffic area around each tower-equipped airport that would take in the airspace below 2,000 feet within a radius of 5 miles of the center of the airport. Any pilot not intending to land at the airport would be prohibited from flying through this area unless he received the tower's permission to do so.

Such a standard airport traffic area is believed necessary by the FAA because of the number of near mid-air collision incidents which have been caused by the interference of enroute aircraft operating in airport traffic patterns.

The proposal would also limit airspeeds of airports to not more than 180 miles per hour. If the operational limitations for a particular aircraft require greater speeds for reasons of safety, then the speed would be limited to the minimum necessary for the safe operations of that aircraft.

PROJECT STRAIGHT-LINE APPROVED

The application of the Project Straight-Line pattern of operations to Region One through Region Four has been approved. This follows a six-week trial period within the Cleveland Air Route Traffic Control Center AREA, during which Air Traffic Management, Facilities Maintenance and Materiel, and Bureau of Flight Standards Flight Inspection and Procedures Activities were conducted under an Area concept of administration. This decentralized many Regional responsibilities to a new and lower echelon of organization.

Intensive analysis of the Cleveland trial run convinced all participants and observers that important advantages and benefits were inherent in the new operational concept. Of primary importance were the increased effectiveness of supervision, the shortened time span for making local decisions, and the relief of Regional staff from the burden of involvement in the details of day-to-day management of field facilities and offices.

The Air Traffic Management Area staff will average about 7 in number, ranging from a low of 3 persons to a high of 14, depending upon work load factors. Approximately 200 ATM employees will be required to man all 27 of the new Area complexes. The required positions will be drawn from within current ceilings.

The typical F&M Area staff will consist of some 20 employees, ranging in size from 6 to 32, again depending upon work load factors. A total of 552 persons will be required to handle the Area F&M work load, with about 90% of these being required for the Maintenance activities, with the remaining 10% representing a new group of material and supply technicians who will provide close-in logistic support for the maintenance operation. The majority of the positions required will be obtained by assimilation of existing Airways Technical District Offices, as their functions are taken over by the Area level. Once the new Area pattern is established, Airways Technical Field Offices will be directly supervised by the Area staff.

The Flight Inspection and Procedures operations and services of the Bureau of Flight Standards will also be closely linked with the new Area organization, by realignment of existing relationships at both the Regional and Flight Inspection District Office levels. Flight Standards' participation in the Cleveland test showed that such realignments were both practical and desirable.

In approving the installation of the Straight-

Line concept, the Administrator stressed the significant gains to be realized in reduced span of control and enhanced supervision. For example, in the case of the ATM field organization the four Regional Field Division Chiefs presently have 588 ATM facility level supervisors directly reporting to the regional level. Under the new pattern, this will be reduced to 27 Area Supervisors, or an average of six per Region. Each Area Supervisor, in turn, will have less than 25 Facility Chiefs under his direct supervision, which is a much more manageable span of control.

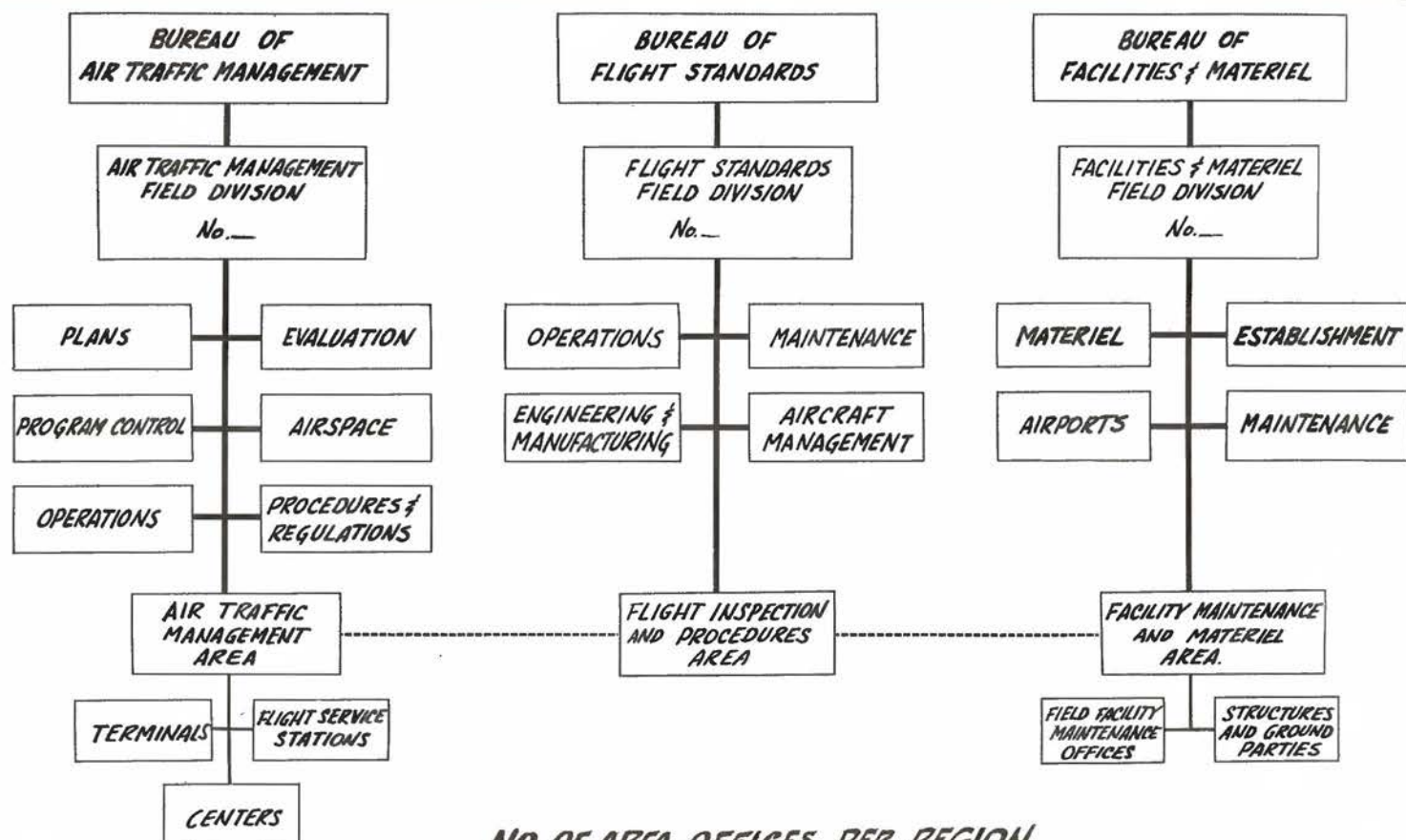
In the case of the Maintenance activities of the F&M field organization, there are presently 99 field Chiefs of ATDOs and Structures and Grounds parties reporting to four Regional Branch Chiefs, and this will be reduced to the 27 Area Maintenance Supervisors.

The Stright-Line mode of operation will also transplant certain Regional functions to the Area level, permitting a reduction in Regional staff and a tapering off of a sharp growth trend in Regional staff for the functions transferred. By placing both supervisory and technical specialist personnel closer to the scene of normal operations, a capability will be created for dealing more effectively with many problems at or near their source, with the full benefit of supervisory guidance from persons intimately familiar with Area conditions and requirements.

Because the ATM, F&M, and FS staffs will be sharing a common office, professional staff and other resources will be grouped in a manner that assures ease of coordination and the taking of joint actions necessary to increased total effectiveness.

The Agency has convened a Steering Committee to plan and to oversee the nationwide installation of the Straight-Line or Area concept of organization and operations. The Office of Management Services, the Office of Personnel and Training, and the Bureaus of Air Traffic Management, Facilities and Materiel, and Flight Standards are all participating in the work of this Committee. Physical and personnel moves will begin just as soon as adequate arrangements can be made for space and utilities. In the selection of new locations and office space for the Area level complexes, consideration will be given to accommodating the space requirements of other FAA activities that happen to be located in the near proximity of the new offices, in order to achieve further consolidations and space economies.

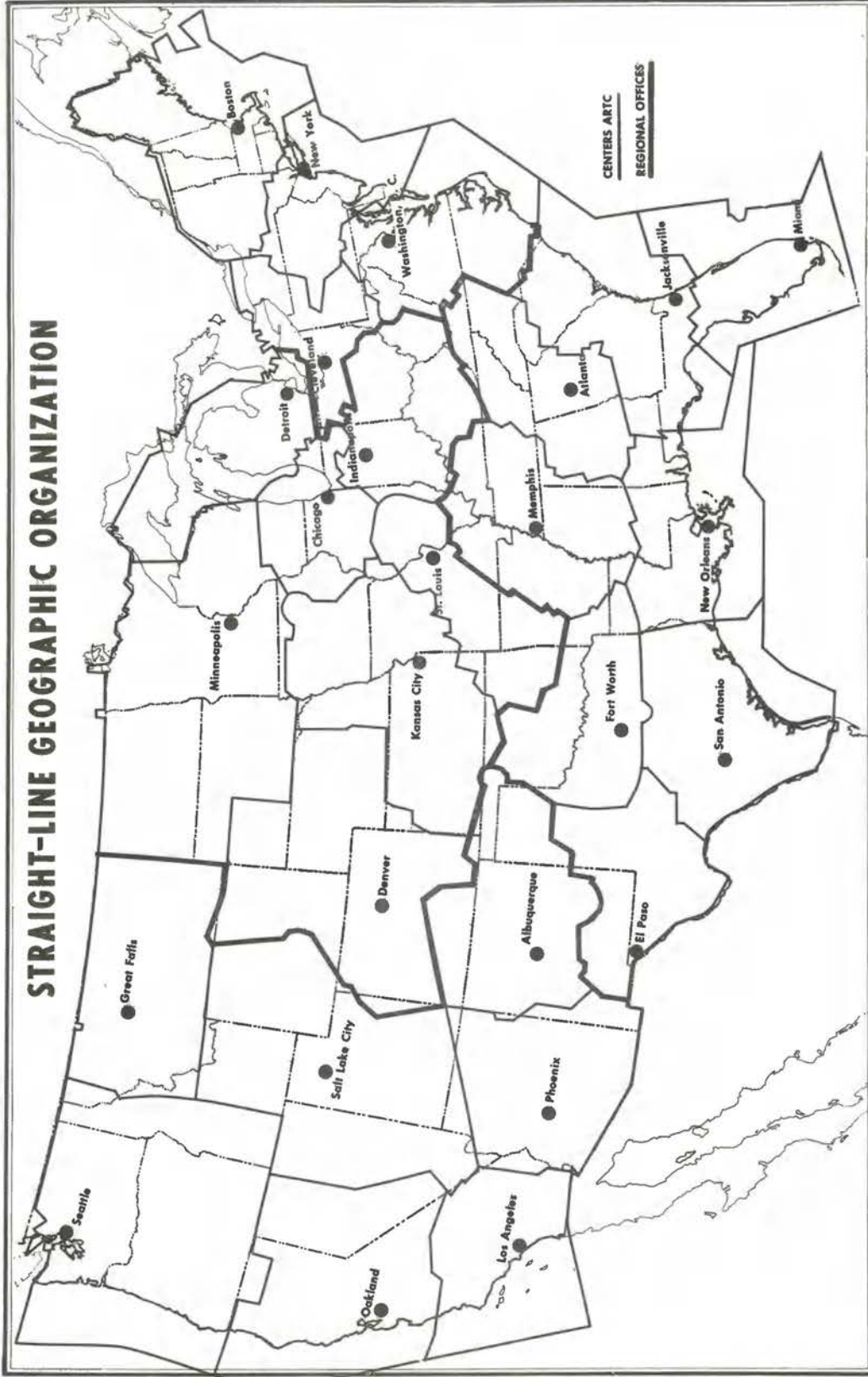
STRAIGHT-LINE ORGANIZATION



NO. OF AREA OFFICES PER REGION

Region I	4
Region II	9
Region III	7
Region IV	7
TOTAL	27

STRAIGHT-LINE GEOGRAPHIC ORGANIZATION



INCREASED FLIGHT SERVICES FOR GENERAL AVIATION PILOTS

Washington, D. C.—The Federal Aviation Agency is widening the activities of its nationwide system of Flight Service Stations to provide the General Aviation community with pre-flight and inflight services comparable to those available to the air carrier industry. To receive these benefits the general aviation pilot has but to visit or call any Flight Service Station. Expanded inflight services are available to the pilot by simply filing a flight plan and establishing communications with specified Stations along the route of his flight.

Flight Service Stations are air traffic management facilities which have no direct control functions. Initially, they were established to relay traffic control information between air route traffic control centers and aircraft flying under instrument flight rules. Today, when pilots and controllers can speak directly to one another this is not necessary. However, with the tremendous expansion of aviation during the past few years the Flight Service Station has assumed an increasingly important position in the overall air traffic picture. While still of significant use to the instrument pilot, they now are of paramount use to the pilot flying under Visual Flight Rules who must "see and be seen" to avoid trouble aloft. More than 75 percent of the country's 360,000 actively certified airmen are in this category: those who fly for business purposes or their own convenience and pleasure. For the increased safety and support of this immense group, Flight Service Stations, beginning October 15, 1960, will offer complete pre-flight briefings and inflight "following service."

To this end a Pilot Weather Briefing Course was worked out in cooperation with the United States Weather Bureau and those Flight Service Specialists who pass it successfully are certificated by the Weather Bureau to do this highly specialized work.

During the pre-flight briefing a flight plan will be made out and all available information that may affect the safe completion of the proposed flight will be brought to the pilot's attention and discussed with him. His flight stations will be selected and the particulars of his flight sent to each of them and to his destination station. Thus his presence in the air will be on record and if, for any reason he does not check in with the watch station within one hour of his designated time, an alert will be sent out for his aircraft.

Washington, D. C.—An experimental weather radar distribution system, using conventional telephone lines in place of expensive coaxial cables to transfer data from the weather station to the Flight Service Station, is being operated successfully at the Washington National Airport. Developed from outmoded equipment by the Federal Aviation Agency's Bureau of Research and Development, it can pick up cloud formations from 150 to 200 miles away, up to an altitude of 40,000 feet, and present them without distortion on the radarscope.

Purpose of the experiment, to provide current weather information for pre-flight and inflight briefings, is being achieved to an even greater degree than had been expected and holds immense promise for the future. General aviation pilots, who operate largely outside of the air traffic control system, are expressing particular enthusiasm for the service.

A report from the Chief of the Washington Flight Service Station, recounting the activities of a recent evening watch, also reflects enthusiasm.

The report further stated that on that same evening weather radar information had been furnished 40 pilots. It cited several instances of re-routings which enabled pilots to avoid the storms. One pilot telephoned from Fredericksburg, Va., to thank the Station for its assistance. He said the storm had moved into his area just after he brought his plane down and he was grateful not to have encountered it. Another advised the Station that he had overheard information being passed on to a third aircraft, had changed his route of flight accordingly, and proceeded without trouble to his destination.

Army Cooperates

A practical program to test the weather radar system's accuracy is shortly to be started by the Bureau of Research and Development in conjunction with the United States Army. For a period of six months, pilots stationed at Fort Belvoir, Va., will furnish descriptions of weather encountered or observed when in flight to or from the base at Davison Field. As the observations are received on the radars in the Flight Service Station and the Weather Bureau, simultaneous photographs will be made of the respective scopes. At the end of the trial period the photographs will be evaluated and a report made on the reliability of this experimental system. Its adoption, after refinement and further experimentation, could mean better dissemination of weather information, tailored to the needs of individual pilots.

JET GEMS
JET AIRCRAFT PROGRESS - POWERPLANT PLACEMENT PICTORIAL



Figure 1.

The propjet powerplant "nacelle" placement on the Lockheed Electra. Similar configurations are found on or near the wing on aircraft designed for short range (500 - 1200 miles).

Aircraft originally designed for operation from 5000-8000 ft. runways. 300-400 MPH appears to be the economic limit in operation speeds of propjet aircraft. They are needed as "feeders" for the big jets requiring 10,000 to 12,000 ft. runways, with full loads on hot days, at higher field elevations. (The Eastern version of the Electra is planned for the Aeronautical Center soon.)



Figure 2.

Figure 2 - Quick change (2 hrs) "pod" Turbojet, By-pass, Turbofan or Aftfan powerplant placement on high speed, swept wing aircraft including the Boeing 707/720, Convair 880/600/990 and Douglas DC-8 series. The Boeing 720 in the accompanying photograph is a "stretched" medium range (3300 miles max.) 600 MPH aircraft carrying 80 first class or 150 tourist passengers having airport performance improvements which will be explained in later GEMS. (A Boeing 720 and Convair 880 are planned for the Aeronautical Center next year.)



Figure 3. French Caravelle 530 MPH, 60-80 passenger, 6700 ft. runway (60° F day) upto 1500 mile range aircraft bought by United Airlines. Two Rolls Royce Avon engines, one mounted each side of rear end of fuselage. (Passenger tail loading ramp like Martin 404.)

Figure 4. Caravelle (above) bought by General Electric as a demonstration and test bed for two of their CJ805-23 16,000 lb. thrust Aftfan engines at right. Should give the current 24,000 lb. thrust Caravelle a 8000 lb. thrust "hotter" push to combat the small airport runway "squeeze" to feed the big jets.

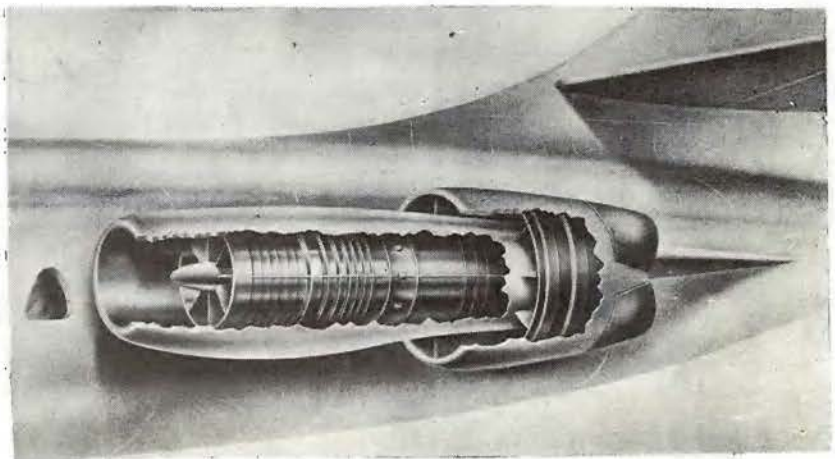




Figure 5. Lockheed JetStar. 8-10 passenger 500 MPH business aircraft ordered by several corporations. The four tail mounted turbojets are 3000 lb. thrust P & W JT-12's. The wing "glove" tanks each hold 640 gallons of kerosene. Predicted range 2900 miles.

Figure 6. English de Havilland Comet 4B 72 passenger 450 MPH 3000 mile range aircraft operated by BOAC to feed their big American jets. Four 10,500 lb. thrust Rolls Royce Avon Turbojets "imbedded" in the wings. The Comet I accidents of 1952-1954 era provided designers considerable information regarding jet aircraft safe design requirements. Engine serviceability unsatisfactory to most designers.



Figure 7. English Triple turbojet (the RR Avon 10,500 lb. thrust) Turbojet engines mounted in the rear fuselage of the de Havilland 121, 100 passenger 600 MPH, short haul (up to 1700 miles), 7000 ft. runway feeder aircraft. Eastern Airlines said to be dickering with Boeing for similar triple turbojet Model 727 with Allison built Rolls Royce engines.

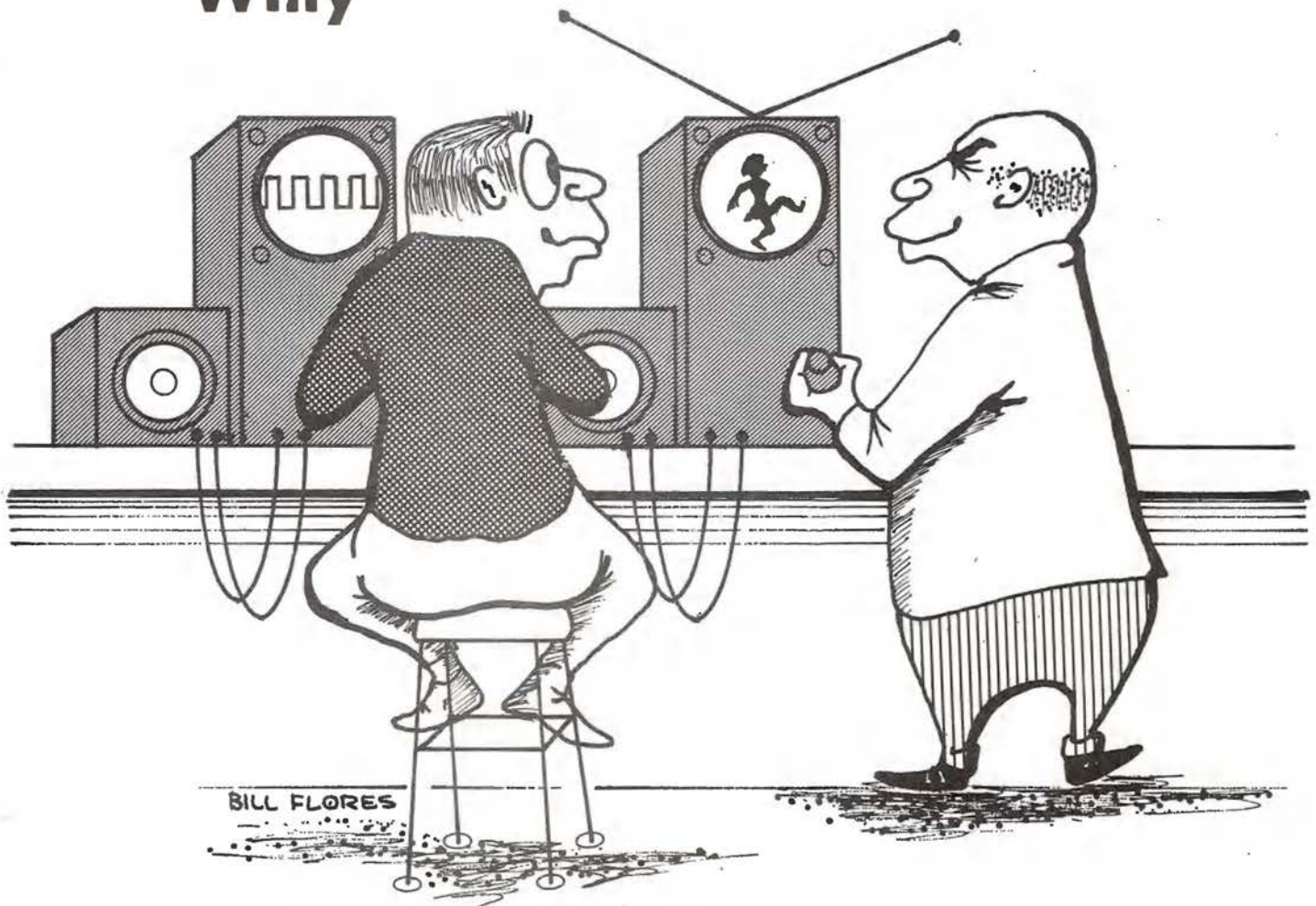


Figure 8. English Vickers VC-10, 575 MPH, 200 passenger aircraft, slated for BOAC transocean competition with big U.S. jets about 1965. Unlike the above DH121 which is about to be flown, this is an artist's conception. Some components are under construction.

Discussion of tail turbojet mounting features next issue.

"Hi" Pressure

Willy

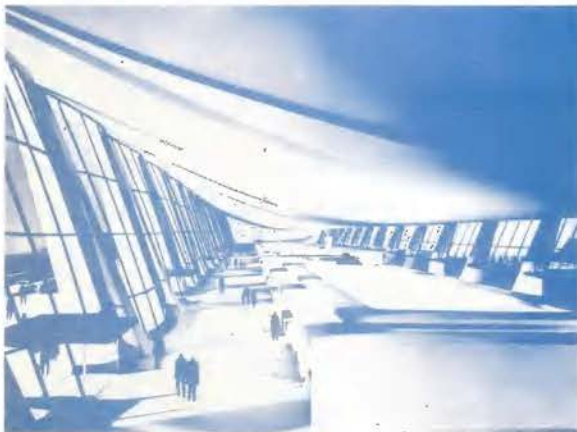


DULLES INTERNATIONAL AIRPORT



E. R. Quesada, Administrator of the Federal Aviation Agency, points to one of the entrances in a model of the terminal building. Passengers will enter and leave from this side of the building.

The control tower dominates the picture of the model of the airfield side of Dulles International terminal. The tower is topped by a radar antenna.



An interior view of the 150 foot terminal building at Dulles. This picture of a model shows passengers entering from the right where the upper level road will bring passengers to the airport.



Administrator Quesada examines a model of the mobile lounge. He is looking at the end of the lounge which is equipped with a folding ramp for transferring passengers to various jet transports. The opposite end fits against the terminal building.

A complete picture of the jet-age terminal requirements is going up in Virginia, just 25 miles west of Washington, D.C. It was a rural area, but now the country quiet is noisy with the roar of bulldozers.

Dulles International Airport is rising from the fields—a modernistic setting on 98-hundred acres of land. Due for completion and dedication in 1961, Dulles International will be one of the world's most unique airports—and twice the size of New York's Idlewild.

Among the innovations is the Mobile Lounge for passengers. Up to 90 passengers will ride to the airplane. It will be the largest passenger carrying vehicle ever built to be operated on rubber tires. In size it will be comparable to eight intercity buses arranged with two side by side, two more parked to the rear of these and then four more stacked on top of the first four.

It is anticipated that the number of passengers using Dulles International will reach four million by 1965; between six and seven million by 1970, and between eight and 10 million by 1975.

Thunderbirds Visit Center

In the wake of their precision flying show at the Oklahoma State University "Air Space Age Day" at Stillwater, the U-S Air Force Thunderbirds paid a visit to the FAA Aeronautical Center.



The Thunderbirds met with Center Manager Lewis Bayne. Left to right in the picture are: Captain Jerry Larson, spare pilot; Captain Herman Griffin, solo pilot; Captain Raymond Kaysa, transport pilot; Captain Richard Thorndike, transport pilot; Major Robert S. Fitzgerald, commander-leader; Captain Robert Cass, right wing pilot; Captain Ronald Everett, narrator, and Captain Robert Janca, left wing pilot.

The Aeronautical Center joined in the OSU Air Space Age Day by displaying an animated exhibit in one of the hangars at the airport.

It's estimated that nearly 100-thousand persons turned out for the exhibits and air show.

The following is the kind of appreciation we felt needed to be put in "The Beacon." It's a letter from pilot Bill Carmody of San Benito, Texas:

I would like to say "thanks to all FAA radio station operators. They are helpful, courteous, friendly, and seem anxious to go out of their way in order that my flying trips may be more pleasant and safe. And . . . a pat on the back to the tower operators. An airplane radio which refuses to fine-tune, plus a pilot who isn't too good at tuning, is enough to try the patience of almost any one. The tower man takes this in stride; does his job. He's always thinking of the safety of everyone involved.

Last, but not least, the weather men are to be congratulated for the splendid job they do. It's a tough job. This man has kept me on the ground—out of trouble several times.

It's a great team!

Bill Carmody



WELCOME HOME GEORGE!

The Department of Air Traffic Management is happy to welcome into their fold Mr. George M. Waller, new Department Head. Mr. Waller comes to us with an outstanding background in the CAA and FAA.

George's aeronautical career began in Oklahoma and it is a pleasure to welcome him back to his native state.

Born in 1918 at Yukon, Oklahoma. Completed elementary school at Yukon; High School at Jay and received a B.A. degree from Northeastern State College at Tahlequah, Oklahoma. Also studied at Oklahoma City University and the University of Maryland.

Met and married Miss Betty Shuler while he was working as a Controller at La Guardia Tower in 1946.

George has just returned from Paris, France, where he served as Air Traffic Control Advisor, Europe and U. S. Civil Representative on the Committee for European Airspace Coordination (a NATO Committee). Previous assignments include two years in Washington in charge of Centralized ATM Training Programs; Chief, ICAO Technical Assistance Mission to the Philippines; ATC Advisor to Turkey; four years in Germany where duties include establishment and supervision of the ATC Training Programs for the U. S. High Commission for Germany following World War II; and Chief Controller at Greater Pittsburg Airport. During the war he served in military services as an ATC Con-

troller and Instructor in North Africa and the Middle East. Also served as an ATC Instructor in the first "Foreign National Training Program" which was conducted at Kansas City in 1944 and in subsequent programs at the Aeronautical Center in 1947-48.

George has a private pilots license having learned to fly in 1939 at Spartan School of Aeronautics in Tulsa, Oklahoma.

The Department of Air Traffic Management is proud of its progress and accomplishments of the past and we know that George's experience will add to the continued progress of this growing department.

PILOT'S FRIEND CALLS IT QUILTS

A milestone in the operation of the FAA's Flight Assistance Station at Will Rogers Field, Oklahoma City, was reached last month.

The first man retired.

Frank Wieler, an aviation operations specialist supervisor, retired after 34 years of service with the FAA and the CAA.

The 63 year old Wieler supervised three men who provide information, by radio to pilots helping them make quicker, safer flights; keeps tabs on flight plans and communicates, by teletype, with similar stations throughout the country weather and other information pertinent to fliers.

Wieler is a native Oklahoman; comes from Fairview and is returning to his home town. He began his work back in the days of the old Fort Tri-motor, "Tin Goose." Before being assigned to Oklahoma City he worked at airports in Tulsa and Little Rock.

Charles Gaylor, senior supervisor at the station, quoted Wieler as saying he was going to return to his farm to "fish, loaf, and enjoy life."

To help make the farm chores easier Wieler was given a power saw by his co-workers.

Pat Smith, Department of Flight Standards Training and Bob Kraybill, Engineering Branch, were married August 27th at the First Christian Church of Miami. Given in marriage by her father, the bride wore a white street length jacket dress of brocade taffeta.

Pat and Bob were back at work September 12, after a two week honeymoon in Denver, Colorado Springs, etc. We wish them all the happiness in the world and hope that all their troubles will be "little ones."



Dorothy Morgan presently employed in the Program Materiel Branch

ECHO 1 BRINGS ECHO OF PAST

By Violet Owens

"will be very exciting to make a trip into outer space but guess I'll have to sit this one out." These were the words of Dorothy Morgan as she sat on a moonlit patio with 25 Aeromaids watching Echo 1, the balloon satellite, pass over Oklahoma City. The "girls" had just enjoyed a cook-out at the home of Millie Banister for their monthly meeting - - - were comfortably sprawled on lawn furniture - - - and in just the right mood to hear Dorothy relate her experiences in pioneer aviation as a stunt pilot.

In 1929 she signed up for a \$50 course in flying lessons which seemed reasonable, however, the renting of a plane at \$15 to \$21 per hour caused Dorothy to look around for a way to finance her hobby. She learned that a plane was available "for free" IF she would participate in air shows by doing grandstand stunt flying Handbills, preceding her appearance, told about the woman stunt flier who would be there for the Sunday afternoon air show. Dorothy taught herself stunt acrobatics merely by watching men doing that work in practice. One of her favorite stunts, was the loop-the-loop three times going one direction then to turn around and come back looping the loop three times on the return trip. She demonstrated the roll, several wing-overs, and climaxed her exhibition with the "spin of death" in which she put her plane into a tail spin at an altitude of 2,000 feet, only to level off, cut off the motor, and making a landing from a point not many feet above the ground.

Her uniform of this era included helmet, goggles, pants and boots. "I couldn't have left the

ground without them." During early flying she would dip the ship when she wanted to look over the side. The instructor almost jumped overboard when she put her hand out of the plane for a left hand turn (during a flying lesson). Both were wearing helmets with so called connecting communication lines while flying over Packingtown when she heard him mumble through the line, "Hold your nose." When Dorothy let go everything to pinch her nose with two fingers, he repeated, 'Hold your nose UP!' This instruction came in the form of a shout as the plane headed toward the ground. "Any boy or girl these days knows more about flying than I did then," she said.



Dorothy Morgan, at one time Oklahoma's only woman transport pilot and first woman in the U. S. to hold position as manager of Municipal Air Terminal.

The highlight of her flying career came when Dorothy set the new altitude record for light planes. Clad in fur lined suits, she and one of the men associated with her in work at the field, set off with high courage to combat the elements — "far above the clouds." As expected, they encountered freezing temperatures without proper equipment for defrosting. The plane glided back to earth requiring almost an hour, without gasoline which had given out after the two had been in the air for two hours and five minutes. Holding her light craft steadily in its downward course the girl pilot battled with two snow storms and flew through rain on the way down with a motor dead at 7,000 feet. But she had

broken the record, establishing a new one at 16,090 feet for planes weighing less than 1,000 pounds.

Dorothy became manager of the municipal airport at Will Rogers Field, in fact she was the first woman in the United States to fill a position of this kind. Her first day was rather exciting when the kidnappers of Charles Urschel were brought back to trial. "There were Tommy guns bristling all over the place" she recalled. Serving as manager of the airport in those days was more than an 8 to 5 operation, in fact not only 10 to 12 hours were necessary every day but she also had to be on tap for night call around the clock. When cattle came on the runway from nearby farms, it was quite a chore to chase them away and pilots were notified (by tape to Chicago) of this obstacle. Then there was the time when migratory ducks mistook the water standing on runways for a genuine lake and stopped for an overnight rest. A plane coming in for landing was subject to a head-on with the whole flock. That was when Dorothy learned to shoot ducks for safety's sake. Occasionally the landing lights went on the blink and smudge pots were placed instead. Of course the brilliantly lighted oil derricks of the "oil boom days" served as a beacon for Oklahoma City at night. Dorothy had no patience with the pilot who landed at Chickasha saying "I couldn't find Oklahoma City."

Then there was the agricultural phase of this work in looking after the 640 acres involved. Sowing grain, combining, storing, and marketing provided a yearly hassle never to be forgotten by everyone concerned.

Do-it-yourself projects were put through tests prior to actual installation such as landing lights which were tested by local pilots at night in order to select the lights most effective for the field. Week-ends were the busiest due to the fact that this was the time available for those who worked at their regular jobs during the week. Distinguished visitors had a way of dropping in unannounced and Dorothy turned on that "chamber of commerce personality" for such famous people as Will Rogers, Wiley Post, Amelia Earhart, General Doolittle, Ruth Nichols, and many others. Many interesting anecdotes were related while the pilots waited for planes to be serviced.

While Dorothy was manager of the airport some of the girls went swimming in the lake at the southwest edge of the field. (NOTE: the lake was located at the exact spot where the Headquarters Building of present Aeronautical Center now stands.) Many aviation predictions

named Oklahoma City as the air center of the southwest. In spite of fond hopes and dreams for the future, no one envisioned the establishment of a world center at the lake site on an Oklahoma prairie where the girls could "hang your clothes on an airplane propeller and swim without a soul in sight."

For many years Mrs. Morgan was active in national aeronautical affairs serving as officer for various women pilot's organizations. Her husband, Merrill Morgan, was Branch Chief of Air Carrier Operations with the Civil Aeronautics Administration Standardization Center where he taught refresher courses to the inspectors who passed on the airline pilots when they renewed their licenses. Of course when the Morgans made a cross-country flight, Dorothy was in there back-seat driving like any good wife.

Dorothy's daughter, Sharon, was married recently in Oklahoma City and the wedding party would not have been complete without friends from the Aeronautical Center participating. Depot Manager, R. W. Pulling, gave away the bride and Doris Nichols, secretary to the Manager of the Aeronautical Center, was soloist for the occasion. Dorothy is employed in the Program Material Branch where she keeps abreast with the world of aviation and though things have changed considerably during 30 years, there is little doubt that this has been and always will be her "first love."

Center Employees' Association Takes Part in Handicapped Essay Contest

Each year, the Oklahoma Governor's Committee on Employment of the Handicapped, in cooperation with the President's Committee, sponsors a state-wide essay contest. This year the Aeronautical Center Employee's Association is one of the 10 sponsors, giving a 100 dollar U-S Savings Bond.

The contest is limited to the eleventh and 12th grade students in public, private, and parochial high schools in the state.

The title of this years essay is "Jobs for the Handicapped—A Community Challenge."

The first-place winner will receive a 200 dollar Savings Bond, an expense-paid trip to Washington, D.C., and a two-year, tuition and fee scholarship.

The state first-place winner will compete in the national contest where prizes range from 100 to one-thousand dollars.

FAA Nondiscrimination Policy

It is the policy of the Federal Aviation Agency that there will be no discrimination against or in favor of an employee or an application for employment because of race, color, religion, or national origin.

Procedures have been established concerning the handling of complaints of discrimination. Any employee may file a complaint based on discrimination with a Deputy Employment Policy Officer representing a Bureau, Office or major field organization of the FAA; with the Employment Policy officer for the FAA; or with the President's Committee on Government Employment Policy.

Complaints regarding discrimination must be in writing and except in unusual circumstances, must be filed within 45 days of the specific personnel action which brings about the complaint. However, a discrimination complaint involving a separation for cause action must be made not more than 10 days after the effective date of such action.

Each complaint must:

- (1) Specify whether the alleged discrimination is based on race, color, religion or national origin.
- (2) Disclose the specific action or personnel matter about which the complaint is made.
- (3) Identify the position involved, its grade, and the unit or office in which located.
- (4) Identify the official responsible for the action, if known.
- (5) Give the date of the action.
- (6) Contain all factual information which the complainant may have to support the allegation of discrimination.

In addition to the foregoing, a complaint involving a disciplinary action must set forth sufficient facts or circumstances to form a substantial basis to support the specific allegations of discrimination as opposed to the complainant's denial of a "letter of charges" on which the disciplinary action was based.

If the complainant has furnished the information indicated, an investigation of the issues presented in the complaint shall be undertaken immediately either by the responsible Assistant Employment Policy Officer, or the Employment Policy Officer.

If you feel discriminated against in some personnel action, you are urged first to seek an informal adjustment of your problem with your supervisor or personnel officer before submitting a written complaint for formal consideration.

This open discussion of your complaint will, in many instances, cause immediate correction of any action taken in error. If you do not get satisfaction at the supervisory level, your Deputy Employment Policy Officer or Personnel Officer is available at all times to assist you in the procedures to be followed in filing a written formal complaint.

TRAINING CORNER

Each new day seems to open the door a little wider in the never completely accomplished area of training. Perhaps you've participated in some of the training being carried on here at the Aeronautical Center as a part of the Employee Development Program. Whether you have or not, you may be interested in the kinds of training that have been accomplished and the number of people who have taken part. Let's take a look at the score sheet for Fiscal 1960. Keep in mind that the training reported below is for Aeronautical Center employees only.

COURSE	TOTAL NO. OF TRAINEES
MANAGEMENT TRAINING	
a. Management for Supervisors	
Phase I Personnel Administration.....	350
b. Management for Supervisors	
Phase II	94
c. Senior Secretarial Development.....	27
d. FAA Executive School	7
e. Personnel Management for	
Executives	4
TOTAL	482
GENERAL TRAINING	
a. Orientation	849
b. Effective Writing	28
c. Reading Techniques	12
d. FAA Course for Radiological	
Monitors	30
TOTAL	919
OTHER (Clerical, Typing, Telephone,	
Duplicating, Position Class., Perf.	
Rtg., Instr. Trng., etc.)	
o. IBM 704 Programming	10
b. Calculator Use	42
c. First Aid	341
d. Records Disposition Work Shop.....	14
e. Training Aids Demonstration.....	70
f. Data Processing Seminar.....	11
TOTAL	488
GRAND TOTAL	1,889

Another way of putting it is in the number of hours devoted to training. This totals 811 at 17,669 hours.

At this point I must pay tribute to the many persons from all areas of the Aeronautical Center who shared much of the instructional load in specialized areas where their know how was essential.

The score sheet doesn't end here.

Under the provisions of Public Law 85-507 we have both the privilege and obligation to provide Out-of-Agency training at Government expense within the framework of the needs and financial capabilities of the Agency.

Here the score reads:

Two hundred one enrollments in
Sixteen different kinds or courses of training at

Three different colleges or universities

At a cost of \$10,314.21

Representing twenty eight thousand, one hundred sixteen hours of training (28,116)

And this doesn't include attendance to Meetings and Factory training programs.

Still to be recognized is the training many of our employees are accomplishing strictly on their own as a part of their personal self-improvement efforts.

All this adds up to a better qualified work force, ready and able to make a more effective contribution to this Agency.

COMPLETED STAFF WORK

"Completed Staff Work" is the study of a problem and the presentation of a solution, by a Staff Officer, in such form that all that remains to be done on the part of the Head of the Division is to indicate his approval or disapproval of the completed action. The words "completed action" are emphasized because the more difficult the problem is, the more the tendency is to present the problem to the Chief in piecemeal fashion. It is YOUR duty as a Staff Officer to work out the details, no matter how perplexing they may be. You may and should consult other Staff Officers. The product, whether it involves the pronouncement of a new policy or affects an established one, should, when presented to the Chief for approval or disapproval, be worked out in finished form.

The impulse which often comes to the inexperienced officer to ask the Chief what to do recurs more often when the problem is difficult. It is accompanied by a feeling of mental frustration. It is so easy to ask the Chief what to do and it appears to be so easy for him to answer.

Resist that impulse. You will succumb to it only IF YOU DO NOT KNOW YOUR JOB. It is your job to advise your Chief what he ought to do, not to ask him what you ought to do. He needs answers, not questions. Your job is study, write, restudy, and rewrite until you have evolved a single proposed action—the best one of all you have considered. Your Chief merely approves or disapproves.

Do not worry your Chief with long explanations and memoranda. Writing a memorandum to your Chief does NOT constitute completed staff work, but writing a memorandum for your Chief to send to someone else does. Your views should be placed before him in finished form so that he can make them his views simply by signing his name. In most instances, completed staff work results in a single document prepared for the signature of the Chief, without accompanying comment. If the proper result is reached, the Chief will usually recognize it at once. If he wants comment or explanation, he will ask for it.

When you have finished your completed staff work, the final test is this:

IF YOU WERE THE CHIEF, WOULD YOU BE WILLING TO SIGN THE PAPER YOU HAVE PREPARED AND STAKE YOUR PROFESSIONAL REPUTATION ON ITS BEING RIGHT?

If the answer is in the negative, take it back and work it over because it is not yet completed staff work.

Author Unknown

FAA Employee Given High Honor By Oklahoma Air National Guard

James E. Long, Aircraft Mechanic in the Line Maintenance Branch at the Aeronautical Center is also an Air National Guardsman—Technical Sergeant James E. Long.

Sergeant Long was named Airman of the Year in recent ceremonies at Will Rogers Field.

Long is a member of the 137th Consolidated Aircraft Squadron, serving as an engine instructor. Long spent 10 years in the Air Force; has been a member of the Oklahoma Guard for the past four years.

He served three years with the Air Force at Kelly Field in San Antonio, then was on duty at Great Lakes.

Long received a trophy, a savings bond and a commendation from Colonel Gillis Johnson, commander of the 137th Air Defense Wing.



MEET THE NEW PRESIDENT OF SOUTHWEST TOASTMASTER'S CLUB

Recently elected to the office of president is our own Ed Young, Production Specialist of the Plant Material Engineering Shop Unit, Program Material Branch.








Ed's group of Toastmasters is one of 3100 clubs whose 80,000 members meet not only for the purpose of learning to make a successful speech but also to apply the values gained through this association to everyday situations. The ability to affect courteous and effective communication through daily usage of this knowledge is evident in all phases of his life.

Ed's business responsibility requires that he give explicit directives to shop personnel and clear cut answers to the many inquiries regarding work orders, scheduling manhours, and a variety of shop problems. A reputation for remaining calm, cool, and collected regardless of the bedlam which sometimes breaks loose in the smoothest of smooth-running organizations is invaluable to him. As an example, when more work is scheduled for a given period than there are manhours available in the various shops, Ed quietly takes the work order schedule apart by pay periods, considers the completion dates of previously committed work, relies on 22 years of experience in this field, and comes up with a program of scheduled manhours well calculated to accomplish the work as required. The touch of the Toastmaster is demonstrated when a Production Specialist uses the power of persuasion, rather than pressure, to convince workers of the importance in meeting a promised schedule. He prefers a personal chat with the shop boys before a crisis develops rather than explain to the boys in Washington when a work order is incomplete; consequently he has full

support in meeting the desired goals of production.

Since Ed is without a secretary to handle the stenographic details of his office, he uses that Toastmaster personality in a telephonic request for assistance from the work order clerk who offices in the Headquarters Bldg. Often a work order, memo or message is dictated by phone, transcribed, typewritten, and on its way by tube before the work order clerk realizes that only a Toastmaster could get such service with a smile. Then too, she is grateful for the way this man has organized his thoughts before dictation and fluently expresses himself without ah's, uh's, well - - but - - thus saving time.

Another mark of distinction for the Toastmaster is his lack of apology for being unaccustomed to public speaking. When the Aeromaids called on Ed recently for a speech at the Citizenship Breakfast, he pulled no punches in relating the cold, hard facts of "Communism and Its Threat to the Free World." Until then, Ed had been practicing before Toastmaster groups all over the state and was aware of the fact that a good speech does not necessarily have to begin with an anecdote. He pointed out that just as Sampson slew the Philistines with the jaw bone of an ass, so have many speeches been ruined by the same weapon. In conclusion, he pointed out that any self-respecting Toastmaster knows when to stop talking. Like this.

AIR TRAVEL ZOOMS			
Certificated Air Carriers	1939	1949	1959
Number of Airlines 	23	45	56
Cities Served (Excluding Alaska) 	286	638	721
Aircraft in Service 	347	1,083	1,908
Number of Passengers Carried 	1,864,000	16,723,000	55,875,000
Seats Available (Daily) 	5,100	35,900	109,710
Average Fare (Per Mile) 	5.62c	6.23c	5.93c
Cruising Speed Of Fastest Transport 	220 mph	315 mph	615 mph

FOR EXECUTIVES ONLY — OR WHAT THE BOSS THINKS ABOUT HIS JOB!

A supervisor has practically nothing to do except decide what is to be done; to tell someone to do it; to listen to reasons why it should not be done, or should be done by someone else, or done a different way; to follow up to see if the thing has been done; to discover that it has not; to ask why; to listen to excuses from the person who should have done it; to follow up to see if the work has been done properly at last, only to discover that it has been done incorrectly; to point out how it should have been done; to conclude that as long as it has been done to let it stay as it is; to wonder if there is not yet time to get rid of a person who cannot do a thing properly; but also to reflect that he probably has a wife and ten kids, and that anyway, someone else would be just as bad if not worse; to consider how much simpler and better the work would have been done if he had done it himself in the first place; to reflect sadly that one could have done it right in twenty minutes, and that, as things turned out, one has had to spend two days to find out why it has taken three weeks for someone else to do the work the wrong way.

FROM THE OLD EGYPTIAN

THIS CAN HAPPEN TO YOU

Through the grace of God and certainly nothing short of a miracle, Red and Madelyn Phillips are with us today. Red Phillips, DATM instructor, and his wife Madelyn came as close to death as any human being could and live to tell about and the account of this story is fantastic. Yet it is possible for this same thing to happen to any one of us. This, briefly, is what happened:

The Phillips, having recently purchased a home on N.W. 31st Street, had just completed the exhaustive chore of getting settled. As these lengthening fall nights grew cooler, Red found it necessary to turn on the gas floor furnace to keep the room temperature comfortable. It wasn't until these two were at death's door that a defective flue was found to be the cause of this near tragedy. We are writing about this not only to let Red and Madelyn know how thankful we are that it turned out as it did but also to tell everyone to make certain their heating system and all gas appliances are in good condition and vented properly.

Madelyn became strangely ill first and the doctor immediately diagnosed her condition as a mental collapse and recommended she be admitted to a sanitarium. This of course, came as

a terrific shock to Red and less than 24 hours later he collapsed. Their good friends, the Jack Kilmers (Jack is also a DATM instructor) had been caring for them and Clydine, Jack's wife, became ill after staying all night with the Phillips. This started Jack trying to think of every possible reason for these strange events and decided to get Red and Madelyn to a hospital for an examination. When they arrived at the hospital the doctor immediately administered oxygen and when seeing the results of their blood tests was dumbfounded to think that they had lived with this lethal dose of carbon-monoxide gas in their systems.

Jack Kilmer had, in the meantime, called the Fire Inspector out to inspect the Phillips' home and the cause was found to be a blocked vent on their floor furnace. The Fire Inspector said there was more than twice the lethal dosage of monoxide gas being emitted from this furnace.

Needless to say we are all thankful it turned out the way it did and no end of thanks go to such thoughtful friends as the Jack Kilmers. We hope that no one else will have to go through such an experience and this certainly points out the necessity of having periodic and thorough checks made of all gas appliances.

Directed Study Courses Shipped to Germany

Evidence of the world-wide recognition of training conducted by the FAA School was recently demonstrated by the shipment of several copies of all Directed Study courses to the Government of West Germany. Seven cartons was filled to complete the shipping order.

Similar overseas shipments of text materials to various points in the Free World have become routine from the mail rooms at the Center in recent years.

A SHORT, SHORT STORY

The huge rocket ship had blasted off and its 200 passengers settled back in their seats. A recorded announcement crackled over the public address system:

"Good evening. Venus Airlines welcomes you aboard the first passenger-carrying, commercial rocket flight from New York to Paris. This will be a fully-automatic flight. There is no crew aboard. The entire flight from takeoff to landing is completely programmed. The failsafe instrumentation and controls have been thoroughly checked. There is no need to worry to worry to worry to worry to worry . . .

COMMUNICATIONS EQUIPMENT CLASS 160 CONVENED AUG. 8, 1960 TO OCT. 28, 1960

NAME	REG	STATION	NAME	REG	STATION
Akers, R. G.	3	Ypsilanti, Mich.	Lee, F. A.	6	Honolulu
Arakaki, T. H.	6	Honolulu	McCanlies, H. A., Jr.	4	Arcata, Cal.
Artis, E. E.	5	Anchorage, Alaska	Maupin, B. E.	2	Jackson, Miss.
Autrey, O. M.	2	Ft. Worth, Tex.	McElwaine, V. A.	3	LongRock, Wisc
Baker, W. A.	4	Seattle, Wash.	Nance, R. R.	4	Grants, N. M.
Birch, R. L.	4	Laramie, Wyo.	Nasu, W. R.	6	Unassigned
Chalk, J. A.	4	Stockton, Cal.	Praslicka, W. F.	2	Ft. Worth, Tex.
Cook, D. F.	2	Jackson, Miss.	Rodes, G. N.	5	Anchorage, Alaska
Egan, E. T.	1	Idelwild, N. Y.	Santos, J. C.	1	Elmira, N. Y.
Haivala, W. E.	3	Wichita, Kans.	Schooler, J. W.	3	Butler, Mo.
Hammke, D. F.	2	Tulsa, Okla.	Shedd, D. P.	4	LongBeach, Cal
Hatfield, O. E.	2	Tulsa, Okla.	Spruill, E. J. Q.	1	Richmond, Va.
Healy, F. R.	5	ColdBay, Alaska	Underwood, T. D.	4	Akron, Colo.
Jones, Phil	1	Charleston, WVA	Urban, G. P.	4	San Francisco
Keene, W. A.	1	Elmira, N. Y.	Young, L. D.	4	Winnemucca, N.

COMMUNICATIONS EQUIPMENT CLASS 161 CONVENED AUG. 22, 1960 TO NOV10, 1960

Arbster, T. F.	6	Honolulu	Kuhns, L. R.	1	Martinsburg
BeLue, R.	3	Detroit, Mich.	Loneragan, E. J.	5	Anchorage
Bryant, R. P.	4	SaltLakeCity, Ut.	Milner, S. C.	2	Tulsa, Okla.
Casteel, T. W.	1	Greenwood, Miss	Moxley, T. R.	4	Gooding, Ida.
Cherry, G. F.	1	Baltimore, Md.	Oberman, R. H.	4	Raton, NMex.
Clark, K. E.	4	Ct. Falls, Mont.	Patterson, T. G.	3	Butler, Mo.
Dickens, W. R.	1	Roanoke, Va.	Rogers, G. W.	2	NewBern, NC
Ehlbert, C. M., Jr.	4	Thermal, Cal.	Scantling, C. P.	2	Anderson, SC
Fellows, B. J.	2	Ft. Worth, Tex.	Schneiderman, E. N.	2	Miami, Fla.
Flynn, M. G.	2	Knoxville, Tenn.	Smith, H. H., Jr.	4	SaltLakeCity, Ut
Gerdes, L. D.	3	Bradford, Ill.	Smith, J. P.	1	GordonsvilleVA
Gilmore, L. D.	5	Fairbanks, Alaska	Stine, W. L.	2	Charleston, SC
Gordon, L. C.	4	Hanksville, Ut.	Stuart, N. R.	1	Roanoke, Va.
Grandell, L. B.	3	Detroit, Mich.	Stubbe, F. W.	4	Los Angeles
Hazelton, E. R.	4	Ct. Falls, Mont.	Tsuda, J. S.	4	Sacramento
Johnson, D. U., Jr.	3	Chicago, Ill.	Zlomke, D. L.	1	Baltimore, Md.

RADAR CLASS 150-A CONVENED JULY 25, 1960 TO NOVEMBER 10, 1960

NAME	REG	STATION	NAME	REG	STATION
Alspach, B. W.	2	Abilene, Tex.	Evans, D. V.	4	Great Falls, Mont.
Badgett, R. L.	4	Fairchild, Wash.	Granberry, F. G.	2	Jacksonville, Fla.
Barrett, W. E.	4	Los Angeles, Cal.	Harrison, D. R.	1	Norfolk, Va.
Beck, T. T.	2	Savannah, Ga.	Haydel, R. R.	2	Ft. Worth, Tex.
Beagley, R. E.	2	Charleston, S. C.	Hinshaw, L. H.	2	Greensboro, N. C.
Bott, D. L.	1	Hudson, B. P.	Hudson, B. P.	4	Los Angeles, Cal.
own, L. M.	2	Perrin AFB, Tex.	Kasten, P. W.	3	Minneapolis, Minn.
dwallard, T. B.	5	Anchorage, Alaska	Kumpar, W. E.	4	Los Angeles, Cal.
arroll, Jack	2	Macon, Ga.	Mack, R. E.	1	Cleveland, Ohio
Chin, J. T.	1	Washington, D. C.	Manganello, Chas.	1	Rome, N. Y.
Daly, P. F.	1	Washington, D. C.			

RADAR CLASS 150-B CONVENED JULY 25, 1960 TO NOVEMBER 10, 1960

Marshall, T. W.	1	Pittsburgh, Pa.	Stith, C. L.	2	Tulsa, Okla.
McCloskey, E. F.	1	AtlanticCity, N. J.	Thompson, L. L.	5	Anchorage, Alaska
Mitchell, J. R.	2	Miami, Fla.	Tidwell, W. H.	2	TexasKans, Ark.
Morgan, A. C.	4	Houquim, Wash.	Tiller, N. D.	2	W. RobbinsAFB, Ga.
Morton, J. P.	2	Ft. Worth, Tex.	Vanandri, R. L.	2	Jackson, Miss.
Post, R. C., Jr.	6	Honolulu, Hawaii	Weitz, J. M.	2	Beaufort, S. C.
Raith, R. O.	3	Falmouth, Mass.	Wilson, G. D.	2	Ft. Worth, Tex.
Ramsey, P. H.	2	St. Louis, Mo.	Woods, G. D.	1	London, Ohio
Rea, B. E.	2	Abilene, Tex.	Yee, Kim K.	6	Honolulu, Hawaii
Russell, C. C.	4	Jackson, Miss.	Yoneshige, R. R.	6	Wake Island
		Las Vegas, N. M.			

RADAR CLASS 151-A CONVENED AUGUST 22, 1960 TO NOVEMBER 4, 1960

Aiu, C. L.	6	Agana, Guam	Cox, R. T.	4	Los Angeles, Ca
Barnhart, W. S.	1	Charleston, WV	Davis, H. E., Jr.	1	Covington, Ky.
Barlow, W. J.	4	Mather AFB	Deal, R. F.	2	MuscleShoals, A
Baxley, C. D.	2	TexasKans, Ark.	Dismukes, E. H.	4	SanDiego, Cal.
Beagley, J. R.	4	Denver, Colo.	Dolva, V. A.	4	Gt. Falls, Mont.
Bell, R. E.	2	Jacksonville, Fla	Earl, G. E.	4	Mather AFB
Blalock, T. E.	2	Robins AFB, Ga.	Ellis, S. A.	4	Oakland, Cal.
Briscos, R. F.	2	SanAntonio, Tex.	Hatt, W. W.	1	Jamaica, N. Y.
Brown, R. A.	3	Minneapolis, M.	Hill, L. B.	1	Buffalo, N. Y.
Buck, J. H.	2	Raleigh, N. C.	Hofferber, R. W.	4	Tacoma, Wash.
Chorice, G. C.	3	Indianapolis, Ind	Holman, M. G.	4	Los Angeles, C.
Coeelho, J. D.	1	Albany, N. Y.	Varano, Juan	OIC	Argentina

RADAR CLASS 151-B CONVENED AUGUST 22, 1960 TO NOVEMBER 4, 1960

Holmes, J. A.	6	Honolulu	Nicolas, M. S.	1	Idelwild, N. Y.
Ice, E. L.	1	Pittsburgh, Pa.	Pilkinton, G. A.	2	Memphis, Tenn
Ivill, S.	2	Miami, Fla.	Richardson, R. T.	1	Syracuse, N. Y.
Kim, E. H.	4	Los Angeles, Ca.	Schatz, R. P.	4	Los Angeles, C.
Kitazawa, F.	OIC	Japan	Tait, A. D.	4	March Rapcon
Koeppler, R. R.	4	Seattle, Wash.	Taylor, D. A.	2	Okla. City, Okla.
Lange, D. D.	5	Fairbanks, Alaska	Thayer, P. J.	2	Jacksonville, F.
Lau, N. Y. T.	6	Wake Island	Vanne, J. C.	4	
Lindenfelser, J. P.	1	Philipsburg, Pa.	Varano, A. J.	1	Philadelphia, Pa
McCroby, J. M.	2	WR AFB, Ga.	Wilder, B. G.	1	Covington, Ky.
McFarland, L. A.	1	Washington, DC	Wolny, S. E.	OIC	Argentina
Miller, M. H.	2	Beaufort, SC			

RADAR CLASS 148 RML T/R CONVENED AUGUST 15, 1960 TO SEPT. 9, 1960

NAME	REG	STATION	NAME	REG	STATION
Blythe, R. E.	2	Atlanta, Ga.	Kuroiwa, K. K.	6	Agana, Guam
Byrd, R. C.	2	SanAntonio, Tex.	Kushima, J. T.	1	Wake Island
Campbell, P. H.	2	Jacksonville, Fl.	Lamora, R. J.	1	Quonset Point
Cheek, J. R.	2	Charleston, SC	Laurentino, V. A.	1	Idelwild Airport
Crabtree, Z. G.	2	Mobile, Ala.	Parish, T., Jr.	4	Albuquerque
Dart, D. R.	4	Mather AFB	Patterson, H. G.	4	Dallas, Ore.
Davis, A. T.	2	Orlando, Fla.	Rausch, D. L.	1	Idelwild Airport
Davis, H. H., Jr.	2	Mobile, Ala.	Rolands, H.	3	Detroit, Mich.
Drews, K. E.	4	Los Angeles, C.	Schilling, F. J.	1	Atlantic City
Fitzroy, J. R.	1	Jamaica, N. Y.	Schmidt, W. A.	2	SanAntonio, T.
Fox, J. D.	2	Orlando, Fla.	Simpson, R. R.	4	Los Angeles, C.
Goodson, R. E.	2	Jackson, Miss.	Smith, M.	4	KlamathFalls, O
Haydell, W. C.	2	Longview, Tex.	Towey, J. G.	4	Miramar
Head, E. C.	2	Texarkana, Ark.	Walters, F. P.	1	Cleveland, Ohio

RADAR CLASS 148 ARSR-1 CONVENED AUGUST 15, 1960 TO SEPTEMBER 2, 1960

Barrett, W. J.	4	Oakland, Cal.	Howard, S. A.	2	Tallahassee, F.
Bayson, T. L.	2	Jackson, Miss.	Kibbe, L. L.	2	Ft. Worth, Tex.
Black, W. D.	4	SaltLakeCity, Ut.	Langford, J. D.	2	Valdosta, Ga.
Bradford, C. V.	2	Houston, Tex.	Lowe, S. G.	1	Danville, NY
Bradley, A. G.	2	Jackson, Miss.	McCutcheon, D. E.	5	Anchorage, Alaska
Brown, D. R.	4	Albuquerque	Mohon, B. G.	2	Mobile, Ala.
Dildie, R. E.	2	Jackson, Miss.	Murillo, A. D.	4	SanDiego, Cal.
Diller, R. E.	4	OakintAirport	Robinson, W. H.	4	SaltLakeCity, Ind
Gleason, R. L.	4	Phoenix, Ariz.	Wolf, J. T.	3	Indianapolis, Ind
Harvey, J. T., Jr.	2	Miami, Fla.	Wolfe, C. P.	4	SaltLakeCity, Ut
Hoising, H. C.	3	Omaha, Nebr.			

RADAR CLASS 148 ASR-3 CONVENED AUGUST 15, 1960 TO SEPTEMBER 2, 1960

Acuna, R. L.	3	Lincoln, Nebr.	Keesler, M. P.	1	Syracuse, N. Y.
Burroughs, H. A.	4	MoffettField, Ca.	Larsen, U. M.	4	San Francisco
Caldwell, H., Jr.	1	WP AFB	Lynch, D. E.	1	Rome, N. Y.
Chasse, R. W.	2	Jacksonville, Fla.	Phillips, R. J.	2	Houston, Tex.
Diknas, B. K.	1	Covington, Ky.	Powell, D.	1	LaGuardia, NY
Fike, W. S.	1	WP AFB	Roman, K. C., Jr.	1	Baltimore, Md.
Hwang, J. W.	OIC	Korea	Steward, R. J.	5	Fairbanks, Alaska
Herbicek, W. J.	1	AtlanticCity, NJ	Sweeney, J. T.	3	Wichita, Kans.
Isaac, W. O.	5	Anchorage, Alaska	Williams, C. M.	WO	Wash. Office

RML REPEATERS CLASS 14 CONVENED AUGUST 15, 1960 TO SEPTEMBER 2, 1960

Aiken, W. T., Jr.	2	Ft. Lauderdale, F.	Lanford, H. A.	2	Spartanburg, SC
Barnum, R. E.	4	Medford, Ore.	Lumsden, W. S.	4	Portland, Ore.
Ellis, J. H.	2	VeroBeach, Fla.	McGahee, B. F.	2	LaGrange, Ga.
Hewitt, R. S.	3	Moline, Ill.	Strand, K. I.	2	SanAntonio, Tex

RADAR CLASS 147 VHF/DF-1 CONVENED AUGUST 8, 1960 TO AUGUST 12, 1960

Brown, E. W.	4	Burbank, Cal.	Roderick, J. H.	4	SaltLakeCity, Ut
Leising, W. C.	3	St. Louis, Mo.	Sauter, R. C.	1	Baltimore, Md.
Ott, D.	1	Norfolk, Va.	Schrank, A. A.	2	SanAntonio, Tex

RADAR CLASS 147 AMPLITRON CONVENED AUGUST 8, 1960 TO AUGUST 12, 1960

Andrews, W. E.	3	St. Louis, Mo.	Hendricks, C. E.	3	KansasCity, Mo
Bendall, R. A.	2	Memphis, Tenn.	Hull, W. H.	4	SaltLakeCity, Ut
Black, W. D.	4	SaltLakeCity, Ut.	Laurentino, V. A.	1	IdelwildAirport
Blythe, R. E.	2	Atlanta, Ga.	Patterson, H. G.	4	Dallas, Ore.
Campbell, P. H.	2	Jacksonville	Prochaska, W. T.	3	St. Louis, Mo.
Daniel, G. W.	2	Nashville, Tenn	Rausch, D. L.	1	Idelwild, NY
Davis, A. T.	2	Orlando, Fla.	Schmidt, W. A.	2	SanAntonio, Tex
Drews, K. E.	4	Los Angeles, Ca.	Wade, R. F.	3	Omaha, Nebr.
Haydell, W. C.	2	Longview, Tex.			

TMC CLASS 3 CONVENED AUGUST 8, 1960, TO SEPTEMBER 2, 1960

Balding, R. E.	2	Ft. Worth, Tex.	Morgan, M. C.	3	SiouxCity, Ia.
Bass, A. M.	2	Augusta, Ga.	Musmanno, J. H.	2	Houston, Tex.
Cloud, H. D.	3	TerreHaute, Ind.	Old, T. J.	2	Texarkana, Ark.
Coffey, A. H.	1	Gordonsville, Va.	Oliver, T. K.	2	Alpine, Tex.
Combs, E. L.	4	Las Vegas, Nev.	Ormond, O. P.	3	Evansville, Ind.
Corley, O. L., Jr.	3	KansasCity, Mo.	Presson, R. B.	2	Meridian, Miss.
Erman, R. J.	3	Joplin, Mo.	Shuler, C. E.	2	Okla. City, Okla.
Feller, L. R.	3	Waterloo, Ia.	Smith, Paul	2	Ft. Smith, Ark.
Glaese, D. O.	3	Springfield, Mo.	Spencer, C. F.	2	SanAntonio, Tex
Gross, C., Jr.	4	Reno, Nev.	Stapf, W. C.	3	Indianapolis, Ind
Hunt, G. G.	3	St. Louis, Mo.	Stein, M.	1	IdelwildAirport
Klahn, L. H.	4	Casper, Wyo.	Weeks, L. B.	3	Dickinson, ND
Landers, T. J., Jr.	2	Ft. Worth, Tex.	Woodridge, G. H.	2	Austin, Tex.
Morehouse, W. A.	1	Glens Falls, N. Y.	Wyers, W. W.	2	Mobile, Ala.

TMC CLASS 4 CONVENED AUGUST 22, 1960 TO SEPTEMBER 16, 1960

Anderson, E. V.	2	Waco, Tex.	Muir, W. J.	2	Wichita Falls, T
Belk, F. J.	2	Charlotte, N. C.	Myers, D. H.	3	NorthPlatte, N.
Clayton, L. L.	3	Butler, Mo.	Nicol, F. A.	3	Sioux Falls, Ia.
Coleman, C. D.	2	Anderson, S. C.	Perkins, N. H.	2	Brownsville, T
Elkins, J. A.	2	Ft. Worth, Tex.	Perry, R. W.	4	Dubois, Idaho
Essley, B. D., Jr.	2	Raleigh, N. C.	Pillans, B. P.	2	Abilene, Tex.
Evans, J. L.	2	Ft. Worth, Tex.	Proto, M. J.	2	El Paso, Tex.
Forerster, A. C.	3	Fargo, N. D.	Rhodes, R. C.	4	Reno, Nev.
Ford, R. B.	3	Wichita, Kans.	Robertson, C. T.	2	Columbus, Ga.
Hembd, L. D.	3	Indianapolis, Ind.	Scott, B. B.	2	Lubbock, Tex.
Johnston, E. L.	4	Casper, Wyo.	Stansbury, R. D.	3	GardenCity, Kan
Jordan, C. W.	2	Ft. Worth, Tex.	Stewart, J. M.	2	BatonRouge, La
Jogan, J. B.	3	KansasCity, Mo.	Stokes, A. K.	1	FrontRoyal, La.
Martin, D. C.	4	SaltLakeCity, Ut.	Tabaka, L. J.	3	StLouis, Mo.
Mayo, D. C., Jr.	2	Tulsa, Okla.	Turner, R. H.	4	Denver, Colo.
McCleskey, J. H.	3	Topeka, Kans	Wann, R. M.	2	LittleRock, Ark.

VOR CLASS 185-A CONVENED AUGUST 8, 1960 TO SEPTEMBER 2, 1960

NAME	REG	STATION	NAME	REG	STATION
Bowman, Harold	4	Los Angeles, Cal.	Hunter, P. J. A.	OIC	Vancouver, BC
Briggs, D. P.	4	Sherman Oaks, C.	Kirschner, D. J.	4	Lakewood, Cal.
Cooke, J. D.	WO	Alexandria, Va.	Nester, Lee N.	4	Bakersfield, C.
Evans, J.	2	New Orleans, La.	Noblett, W. L.	3	Sergeant Bluff, Ia
Fryer, M. B.	4	Ogden, Utah	Prather, C. H.	2	Memphis, Tenn.
Glines, H. R.	1	Norfolk, Va.	Robbins, L. H.	3	Dickinson, ND
Greenfield, J. C.	1	Baltimore, Md.	Smith, L. E.	AC	Okla. City, Okla.
Hancock, C.	2	Ferguson, Ky.	Stephens, C. E.	1	Newport News, V
Havens, S. R.	5	Fairbanks, Alas.	Taylor, J. H.	2	Baker, La.
Holdeman, W. C.	3	St. Joe, Mo.	Wines, W. G.	AC	Okla. City, Okla.

VOR CLASS 185-B CONVENED AUGUST 8, 1960 TO SEPTEMBER 2, 1960

Adams, R. V.	2	Tulsa, Okla.	Nezat, J. W.	2	Houston, Tex.
Bray, J. A.	3	Brownstown, Ill.	Phillippi, L. T.	3	Goodland, Kans.
Crubaker, P.	1	Elizabethtown, Pa	Scott, D. W.	2	Chattanooga, Te
Cripe, R. E.	4	Missoula, Mont.	Stephenson, C. O.	AC	Bethany, Okla.
Davis, L. H.	4	Livingston, Mont.	Theroux, C. A.	1	West Chester, Pa
Devereaux, G. P.	1	Jamaica, NY	Tynan, W. B.	4	Las Vegas, NM
Harris, L. H.	2	Crossville, Ten.	Vollmer, C. B., Sr.	1	Monclown, Ohio
Jackson, A. L.	1	Boston, Mass.	Watkins, Z. C.	1	Washington, DC
Kosel, E. A.	4	San Francisco	Way, J. D.	4	Ft. Jones, Cal.
Lee, J. C.	2	Jacksonville, Fla.			

VOR CLASS 186-A CONVENED AUGUST 22, 1960 TO SEPTEMBER 16, 1960

Cook, R. J.	4	Lakewood, Cal.	McDonald, J. J.	1	Jamestown, NY
Costello, R. T.	1	New Cumberland	Moehle, L. A.	1	Cleveland, Ohio
Drummond, L. E.	4	San Jose, Cal.	Mohr, A. E.	2	College Sta, Tex.
French, R. F.	3	St. Louis, Mo.	Murray, C. R.	1	Jamaica, N. Y.
Harmon, P. B.	1	Philadelphia, Pa.	Nielsen, C. F.	5	Gustavus, Alas.
Hawkins, P. C.	1	Vienna, Ohio	Vance, E. H.	2	Hurst, Texas
Holmer, H. L.	4	Seattle, Wash.	Washington, A. D.	1	Zanesville, Oh.
Landiak, R.	2	San Antonio, Tex.	Weiske, H. L.	3	Cedar Rapids, Ia
Lewis, C. G.	3	Russell, Kans.	Whitworth, G. R.	2	Austin, Tex.

VOR CLASS 186-B CONVENED AUGUST 22, 1960 TO SEPTEMBER 16, 1960

Barina, P. J.	4	Las Vegas, Nev.	Kepner, A. C.	3	Gr. Forks, ND
Burns, A. A.	1	Bedford, Mass.	Koppel, W. M., Jr.	1	Foxboro, Mass.
Chun, H. W. M.	6	Honolulu	Laborde, C. J.	2	Jacksonville, Fl
Clodfelter, J. H.	1	Washington, DC	Mahoney, D. C.	2	Salt Flat, Tex.
Dotson, D. L.	4	Dillon, Mont.	McKinney, G. B.	4	San Jose, Cal.
Ervin, H. H.	5	Delta Junction, Alas.	Roxbury, F. G.	4	Needles, Cal.
Estabrook, B. R., Jr.	1	Bangor, Me.	Santucci, L. J.	1	Albany, N. Y.
Hejna, J., Jr.	4	Rock Springs, Wyo	Soulias, N. P.	1	Baltimore, Md.
Humphrey, R. E.	4	Oakland, Cal.	Thompson, J. O.	3	Cedar Falls, Ia.
Jaakola, R. E.	3	Warsaw, Wisc.			

TELETYPEWRITER CLASS 7 CONVENED AUGUST 8, 1960 TO SEPT. 2, 1960

NAME	REG	STATION	NAME	REG	STATION
Anderegg, V. E.	3	Springfield, Mo.	Pleshe, G. A.	3	Detroit, Mich.
Baker, K. D.	3	Emporia, Kans.	Preston, V. L.	2	Jacksonville
Baldwin, W. F.	4	Spokane, Wash.	Reaves, G. O.	3	Springfield, Mo
Bentley, B. O.	4	Denver, Colo.	Roll, H. H.	4	Gorman, Calif.
Charkosky, F. M.	1	Cleveland, Ohio	Rowe, D. E.	3	Wausau, Wisc.
Edwards, M. T.	4	Yuma, Ariz.	Sanford, R. L.	2	Brownsville
Eldred, S. C.	3	Springfield, Ill.	Santana, A.	2	San Juan, P. R.
Holderbaum, H. G.	6	Honolulu	Skavland, R. S.	4	Mullan, Idaho
Johnson, D. E.	4	Seattle, Wash.	Spreaser, C. E.	3	Topeka, Kans.
Jones, H. A.	3	Hutchinson, Kans	Stenshorn, E. W.	2	Jacksonville
McNerney, J. M.	4	San Rafael, Cal.	Stiger, H. L., Jr.	2	Wichita Falls
Moriarty, B. M.	4	Eugene, Ore.	Taylor, D. E.	2	San Juan, P. R.
Neuvonen, C. W.	4	Missoula, Mont.	Thrasher, B. A.	2	Midland, Tex.
Nghi, D. T.	CIC	Saigon	Tucker, C.	2	El Paso, Tex.
Phong, E. J.	CIC	Saigon	Williams, G.	4	Cedar City, Ut.
Phillips, E. J.	2	Wichita Falls, Tex.			

TELETYPEWRITER CLASS 8 CONVENED AUGUST 22, 1960 TO SEPT. 16, 1960

Barclay, R. H.	2	Robbins AFB, Ga.	Kurt, R. B.	3	Indianapolis
Booker, B. V.	2	Winston Salem	Lomas, Miguel	2	Jackson, Miss.
Boulette, D. A.	1	Glens Falls, NY	McCormack, J. E., Jr.	4	Ct. Falls, Mont
Clark, M. E.	3	Indianapolis, Ind.	Marion, A. R.	5	Anchorage
Cole, H. E.	4	Monticello, Ut.	Meyers, A. F.	4	Phoenix, Ariz.
Crumbley, R. T.	2	Macon, Ga.	Montgomery, M. C.	4	Albuquerque
Decker, W.	2	Nashville, Tenn.	Moreno, R. S.	2	San Juan, P. R.
Gaines, C. A.	4	Los Angeles, Cal.	Morris, B. R.	2	Miami, Fla.
Garner, L. E.	2	Charleston, SC.	Myer, R. C.	4	Pendleton, Ore
Haggart, W. L.	4	Eagle, Colo.	Nalley, E. O.	2	Jackson, Miss.
Harold, C. M.	2	Raleigh, N. C.	Puckett, V. D.	3	Pawnee City, N.
Holdren, W. A.	4	Bakersfield, Cal.	Sears, R. L.	3	Terre Haute, In
Horn, R. E.	3	Lone Rock, Wisc.	Terlecky, H. L.	2	Miami, Fla.
Ingertson, J. L.	3	Des Moines, Ia.	Trent, B. L.	3	Dodge City, Kar
Jones, M. L.	3	Emporia, Kans.	White, H. E.	2	Spartanburg.
Kam, G. A. C.	6	Honolulu			

ELECTRO-MECHANIC CLASS 18 CONVENED AUGUST 8, 1960 TO OCT. 28, 1960

NAME	REG	STATION	NAME	REG	STATION
DeStephanis, J. M.	3	Terre Haute, Ind.	Krumins, V. I.	1	Cleveland, O.
Druckman, M.	1	White Plains, NY	McKinley, F. P.	3	Joliet, Ill.
Hall, G. B.	2	Nashville, Tenn.	O'Leary, J. H.	1	Utica, N. Y.
Kawasaki, C. H.	6	Wake Island	Thompson, W. C.	5	Cordova, Alas.
Young, D. V.	2	Little Rock, Ark.			

MAINTENANCE SUPERVISION CLASS 37 CONVENED JUNE 27, 1960 TO JULY 1, 1960

Cornwell, W., Jr.	3	Brazil, Ind.	Hilscher, L.	4	Hayward, Calif.
Fraley, B. J.	3	Vichy, Mo.	Manthey, F. E.	4	Spokane, Wash.
Elkins, E. M.	2	Virgin Islands	Phillips, R. L.	3	Scottsbluff, Nebr.
Goode, W. R.	2	San Antonio, Tex.	Sabella, C.	1	Brooklyn, N. Y.
Grenlie, L. K.	3	Green Bay, Wisc.	Terry, C. F.	3	Springfield, Ill.
Haines, C. D.	1	Pittsburgh, Pa.	Williams, R. E.	2	Okla. City, Okla.
Heffern, W. J., Jr.	1	Brownfield, Pa.			

AUGUST GRADUATES IN DIRECTED STUDY COURSE 90

NAME	REG	STATION	NAME	REG	STATION
Adams, L. L.	3	Lakeville, Minn.	Matheny, R. L.	1	Charleston, WV
Akers, R. G.	3	Ypsilanti, Mich.	Nelson, N. A.	3	Romulus, Mich.
Allen, John	1	Atlantic City, NJ	Niemann, J. E.	6	Honolulu, T. H.
Armstrong, C. A.	3	Freeland, Mich.	Orton, H. L.	FS	Los Angeles Cal
Arnold, J. C.	PT	Norman, Okla.	Patterson, P.	2	Shreveport, La.
Averett, B. A.	4	Ontario, Calif.	Patterson, W. C.	PT	Bethany, Okla.
Blackard, R. M.	1	Jewel City, Conn.	Pawlowski, A. T.	3	Milwaukee, Wis.
Bowles, J. E.	2	Charleston, S. C.	Ryan, L. W.	3	Olathe, Kan.
Brewer, H. J.	2	East Point, Ga.	Ryden, G. J.	2	Wilmington, N. C.
Brower, C. S.	FS	Jamaica, N. Y.	Salzman, R. A.	5	Anchorage, Ala.
Bryan, B. F.	2	Monroe, La.	Sauerwin, E. R.	2	Shreveport, La.
Calhoun, J. Y., Jr.	2	Shreveport, La.	Scott, Henry	2	Memphis, Tenn.
Carnahan, C. B.	4	Malad City, Idaho	Sexton, William	2	Birmingham, Ala.
Caviness, George	2	Montgomery, Ala.	Shay, K. J.	PT	Okla. City, Okla.
Clymer, T. W.	PT	Okla. City, Okla.	Sherwood, J. M., Jr.	2	Cary, N. C.
Condon, M. J.	2	Okla. City, Okla.	Shultz, O. W.	2	El Paso, Tex.
Coyle, R. F., Jr.	1	Norfolk, Va.	Sigmund, L. G.	1	Allentown, Pa.
Daneau, J. A.	NAFEC	Atlantic City, NJ	Simmons, M. J.	3	Omaha, Nebr.
Doering, H. R.	PT	Okla. City, Okla.	Skinner, D. L.	EST-2	Ft. Worth, Tex.
Fellows, B. J.	2	Ft. Worth, Tex.	Smith, B. W.	1	Harrisburg, Pa.
Garner, L. E.	2	Florence, S. C.	Smith, L. J., Jr.	1	Syracuse, NY
Guy, E. P.	WB	Springfield, Ohio	Stiver, S. S.	3	Goshen, Ind.
Henneke, C. G.	3	Minneapolis, Minn.	Strentansky, A. J.	3	Inkster, Mich.
Hightower, W. C.	4	Ukiah, Calif.	Terry, J. M.	4	Tucson, Ariz.
Hildreth, R. H.	2	Pennsacola, Fla.	Tipton, F. W.	2	Abilene, Tex.
Holliday, G. S.	PT	Okla. City, Okla.	Torres, G.	FM	Okla. City, Okla.
Horton, W. V. R.	3	Kansas City, Mo.	Turner, B. S.	2	Shreveport, La.
Howell, Lawrence	2	Pennsacola, Fla.	Ulbricht, Robert	4	San Diego, Cal.
Hymes, G. D.	3	Raytown, Mo.	Waggoner, E. M.	3	Joplin, Mo.
Johnson, A. D.	3	Peoria, Ill.	Waggoner, W. L.	1	London, Ohio
Jones, Charles R.	PT	Okla. City, Okla.	Walker, E. W.	2	Shreveport, La.
Jones, Harry A.	3	Hutchinson, Kan.	Walter, A. E.	FM	Okla. City, Okla.
Jones, Marion L.	3	Emporia, Kan.	Warner, Robert	2	Miami, Fla.
Kaeuffer, E. A.	1	Richmond, Va.	Webber, N. W.	3	Muskegon, Mich.
Karpins, C. A.	4	Burley, Idaho	Wertman, V. E.	4	Casper, Wyo.
Kettlewell, D. V.	4	Ukiah, Calif.	Wilson, Brooks W.	3	Hazelwood, Mo.
Kish, V. L.	1	Point Marion, Pa.	Winczewski, P. R.	3	Minnea., Minn.
Kramer, R. R.	1	Norfolk, Va.	Wing, L. D.	2	Tyler, Tex.
London, J. L.	EST-1	Jamaica, N. Y.	Wortham, W. G.	2	Okla. City, Okla.
Lutz, A. A.	2	Myrtle Beach, SC	Wratchford, C. W., Jr.	1	Mt. Rainier, Md.
McNichols, L. M.	4	Julian, Calif.	Young, B. J.	2	Ft. Worth, Tex.
Manring, M. L.	5	Anchorage, Alaska			

AUGUST GRADUATES IN DIRECTED STUDY COURSE 100

NAME	REG	STATION	NAME	REG	STATION
Adams, R. V.	2	Tulsa, Okla.	Kifer, F. L.	3	Scottsbluff, Neb.
Andrie, D. F.	2	Houston, Tex.	Kinsey, J. W.	4	Daggett, Calif.
Baxley, C. D.	2	Texarkana, Ark.	Kosel, E. A.	4	San Francisco
Bockover, A. G.	2	Centerville, Tenn.	Loveless, K.	2	Atlanta, Ga.
Bridges, H.	PT	Moore, Okla.	McDow, A. R.	PT	Waco, Tex.
Brown, P.	2	Houston, Tex.	Mask, V. R.	2	Abilene, Tex.
Bryan, W. R.	2	College Park, Ga.	Moore, F. C.	4	Medford, Ore.
Buchanan, H. R.	2	Columbus, Ga.	Orme, D. W.	2	Huntsville, Okla.
Cheever, S. C.	4	Phoenix, Ariz.	Painter, J. R.	PT	Okla. City, Okla.
Corbett, C. T.	2	Norman, Okla.	Pare, L. A.	4	Albuquerque NM
Corderman, R. R.	2	Okla. City, Okla.	Peacock, G. R.	PT	ANF-Rm. 238
Costello, J. E.	2	Cayce, S. C.	Purifoy, F. D.	2	Ft. Worth, Tex.
Cox, R. T.	4	Norwalk, Calif.	Pyron, W. M.	2	Hobart, Okla.
Davidson, W. M.	4	San Lorenzo, Calif.	Quiram, L. L.	2	Dallas, Tex.
Drummond, L.	4	San Jose, Calif.	Ramsey, P. H.	2	Abilene, Tex.
Duffey, A. P.	2	Texarkana, Ark.	Roberson, G. K.	2	Marietta, Ga.
Dukes, W. L.	2	Columbus, Ga.	Testerman, W.	PT	Okla. City, Okla.
Ernst, C. J.	FM	Okla. City, Okla.	Thines, E. E.	1	Findlay, Ohio
Fox, D. O.	4	Denver, Colo.	Verran, R. V.	2	Dallas, Tex.
George, B. G.	2	Austin, Tex.	Vilmaire, J. P.	6	Honolulu, T. H.
Hamby, T. A.	5	Anchorage, Alas.	Walkup, A. M.	4	Denver, Colo.
Hamilton, R. A.	2	Miami, Fla.	Ware, L. F.	2	Texarkana, Ark.
Haydell, R.	2	Ft. Worth, Tex.	Webb, Rex	2	Montgomery Ala
Hill, G. R.	2	Miami, Fla.	Weber, D. C.	2	Jacksonville Fla
Holland, W. G.	PT	Hq. Bldg. - 354	Weiss, Erich	IC	Okla. City, Okla.
Janway, W. A.	2	San Antonio, Tex.	Wilbur, L. D.	3	Imperial, Neb.
Jenke, W. M.	2	Okla. City, Okla.	Willard, B. G.	2	Memphis, Tenn.
Joe, Robert	2	Atlanta, Ga.	Wong, R. G. C.	6	Agana, Guam
Kessler, E. H.	1	Findlay, Ohio			

AUGUST GRADUATES IN DIRECTED STUDY COURSE 1

NAME	REG	STATION	NAME	REG	STATION
Hall, R. L.	3	Dickinson, N. D.	Price, F. F.	WB	Seattle, Wash.

AUGUST GRADUATES IN DIRECTED STUDY COURSE 2

NAME	REG	STATION	NAME	REG	STATION
Hard, L. G.	2	Elizabeth City, NC	Pollack, B. H.	2	Miami, Fla.
h, A. I.	FM	Jamaica, NY			

AUGUST GRADUATES IN DIRECTED STUDY COURSES -- 200 SERIES

NAME	REG	STATION	NAME	REG	STATION
Carnahan, C. B.	WB	Salem, Ore.	Cheever, S. C.	4	Phoenix, Ariz.
DuBois, D. H.	2	Brownsville, Tex	Hasper, V. G.	4	Oakland, Calif.
Johnson, E. S.	4	Seattle, Wash.	Samber, M.	1	Boston, Mass.
			Walkup, A. M.	4	Denver, Colo.
DS-202					
Cheever, S. C.	4	Phoenix, Ariz.	Loux, D. D.	4	Stockton, Cal.
Costello, J. E.	2	Cayce, S. C.	Martin, R. J.	4	Hobbs, N. M.
Feeley, W. J.	6	Oahu, Hawaii	McFarland, O. A.	1	Charleston, WV
Franklin, F. E.	4	Chico, Calif.	Melendez, Alfonso	4	Denver, Colo.
Johnson, L. R.	3	Pellston, Mich.	Murdock, L. D.	4	Marysville, Ca.
Leong, J. S. C.	6	Wake Island	Naff, W. G.	4	San Francisco
Ramey, W. J.	2	Fayetteville, Ark.	Wesolowsky, A.	2	Ft. Worth, Tex.
Wensch, D. B.	2	Jackson, Miss.			
DS-203					
Gault, W. C.	2	Austin, Texas	Harvey, J. T., Jr.	2	Okla. City, Okla
DS-204					
Emerich, G. A.	4	Novato, Cal.	Kangas, W. M.	4	Rawlins, Wyo.
Harvey, J. T., Jr.	2	Okla. City, Okla.	Thompson, E. C.	PT	Okla. City, Okla
DS-208					
Berry, H. C.	2	Atlanta, Ga.	Gordon, J. B.	PT	Moore, Okla.
Givens, H. D.	4	Oakland, Cal.	Hosier, A. C.	4	Gr. Junction, C

AUGUST GRADUATES IN DIRECTED STUDY COURSES IN 300 SERIES

DS-301					
Hunter, D. C.	2	Chattanooga, Tenn.	Taylor, D. A.	2	Okla. City, Okla.
Johnson, J. P.	4	San Carlos, Calif.	Toney, J. M.	2	Birmingham Ala.
Park, A. W.	6	Kapaa, Hawaii			
DS-302					
Dorony, G. J.	1	Cleveland, Ohio			
DS-303					
Blocker, A.	2	Shreveport, La.	Hendrix, G. B.	2	Forest Park, Ga.
Goo, H. W. C.	6	Honolulu, Hawaii	Morgan, A. C.	4	Hoquiam, Wash.
DS-304					
Aznoe, E.	5	Anchorage, Alas.	Park, A. W.	6	Okla. City, Okla.
Covert, O. A.	4	Ukiah, Calif.	Pickavet, G.	4	Santa Barbara, C.
Frazier, H. M.	4	Albuquerque, NM	Powell, J. V.	6	Waimanalo, T. H.
Naufus, C. W.	4	Riverside, Calif.	Skolnick, B.	EST-1	N. Y., N. Y.
Owens, R. A.	4	San Mateo, Calif.			
DS-305					
Bischoff, D. H.	3	Minnea., Minn.			
DS-311					
Gingoranelli, R. L.	4	Arbun, Wash.	Jenkins, J. F.	1	Arlington, Va.
Davidson, E. A.	2	Montgomery, Ala.	McMorrow, N. S.	FM	Alexandria, Va.
Deadrick, E. L.	3	Detroit, Mich.	Morris, R. L.	4	Bakersfield, Cal
Ernst, C. J.	FM	Okla. City, Okla.	Park, M. T. H.	6	Honolulu, Hawaii
Cogniat, M. M.	4	Reno, Nev.	Slate, C. J.	4	Arcata, Calif.
Gonzales, E. G.	4	Albuquerque, NM	Wetterer, E. W.	1	Charleston WV.

AUGUST GRADUATES IN DIRECTED STUDY COURSE 401

NAME	REG	STATION	NAME	REG	STATION
Lobnow, R. M.	4	M. Beach, Calif.	Martell, R. G.	3	Inkster, Mich.
McGill, R. J.	NAFEC	BLDG 19	Thompson, W. E.	FMD	Wheatland, Okla

AUGUST GRADUATES IN DIRECTED STUDY COURSE 441

NAME	REG	STATION	NAME	REG	STATION
Higbee, K. C.	FM	Okla. City, Okla.	Ketterling, E. R.	4	Yakima, Wash.
Rooney, P. R.	4	Pueblo, Colo.	Roseborough, R. W.	4	Medford, Ore.

AUGUST GRADUATES IN DIRECTED STUDY COURSE 901

NAME	REG	STATION	NAME	REG	STATION
Gollins, C. W.	3	Imperial, Nebr.	Dillard, J. G.	2	Ft. Worth, Tex.
Kitson, L. E.	PT	Hq. Bldg.	Mason, H. J., Jr.	FS	Okla. City, Okla.

FLIGHT INSPECTION TRAINING

Procedures Basic - FIP-6
Class Number - PB-61-1
August 1, 1960 - August 12, 1960

ANDERSON, Harold T.	Kansas City, Kansas
BELL, Garland E.	Orlando, Florida
BOWEN, John C.	Seattle, Washington
CHADWICK, J. P.	Salt Lake City, Utah
HALL, James W.	Santa Monica, California
HEADLEY, H. T.	Washington, D. C.
JESPERSEN, F. G.	Minneapolis, Minnesota
LeLACHEUR, A. J.	Bedford, Massachusetts
STRALEY, Paul L.	Columbus, Ohio
TUCKER, Joseph F., Jr.	Atlanta, Georgia

FLIGHT INSPECTION TRAINING

Procedures Basic - FIP-6
Class Number - PB-61-3
September 12, 1960 - September 23, 1960

ANDERSON, Clair M.	Oklahoma City, Oklahoma
BELL, Raymond K.	Fort Worth, Texas
COX, Richard	Oklahoma City, Oklahoma
GERELL, John D.	Fort Worth, Texas
HALL, Clarke S.	Kansas City, Kansas
JOHNSON, D. F.	Denver, Colorado
LUXTON, Robert A.	Spokane, Washington
MADSEN, William B.	Oklahoma City, Oklahoma
PERKINS, Jerry W.	Oklahoma City, Oklahoma
SIGALL, Edward	Bedford Hanscom, Massachusetts
SORANNO, Vito Joseph	New York, New York

FLIGHT INSPECTION TRAINING

Procedures Basic - FIP-6
Class Number - PB-61-2
August 22, 1960 - September 2, 1960

ANTWEILER, Charles W.	Scott AFB, Illinois
CONRAD, Warren P.	Fort Worth, Texas
FRANK, William J.	New York, New York
HALL, Calvin R.	Kansas City, Missouri
HEATH, Claude F.	Richmond, Virginia
HUGHES, Harry J.	Salt Lake City, Utah
KUEHNE, H. R.	Scott AFB, Illinois
MacMILLEN, James W.	S. St. Paul, Minnesota
NEUSCHWANDER, Emery A.	Fort Worth, Texas
SULLIVAN, Donald B.	Phoenix, Arizona

FLIGHT INSPECTION TRAINING

Procedures Basic - FIP-6
Class Number - PB-61-4
October 3, 1960 - October 14, 1960

ALLENSWORTH, Raymond M.	Oklahoma City, Oklahoma
BROWN, Guy L.	Santa Monica, California
COX, Noah A.	Richmond, Virginia
GIFFEN, Dick	San Antonio, Texas
MACY, Loran W.	Santa Monica, California
PEREZ, Alfonso C.	Buenos Aires, Argentina
ROWLEY, Clifford A.	New York, New York
STIEBER, Harold J.	Fort Worth, Texas
TAUBERT, Albert R., Jr.	Washington, D. C.
TURNER, William H.	Seattle, Washington
WINSTON, Edward B.	Santa Monica, California



