

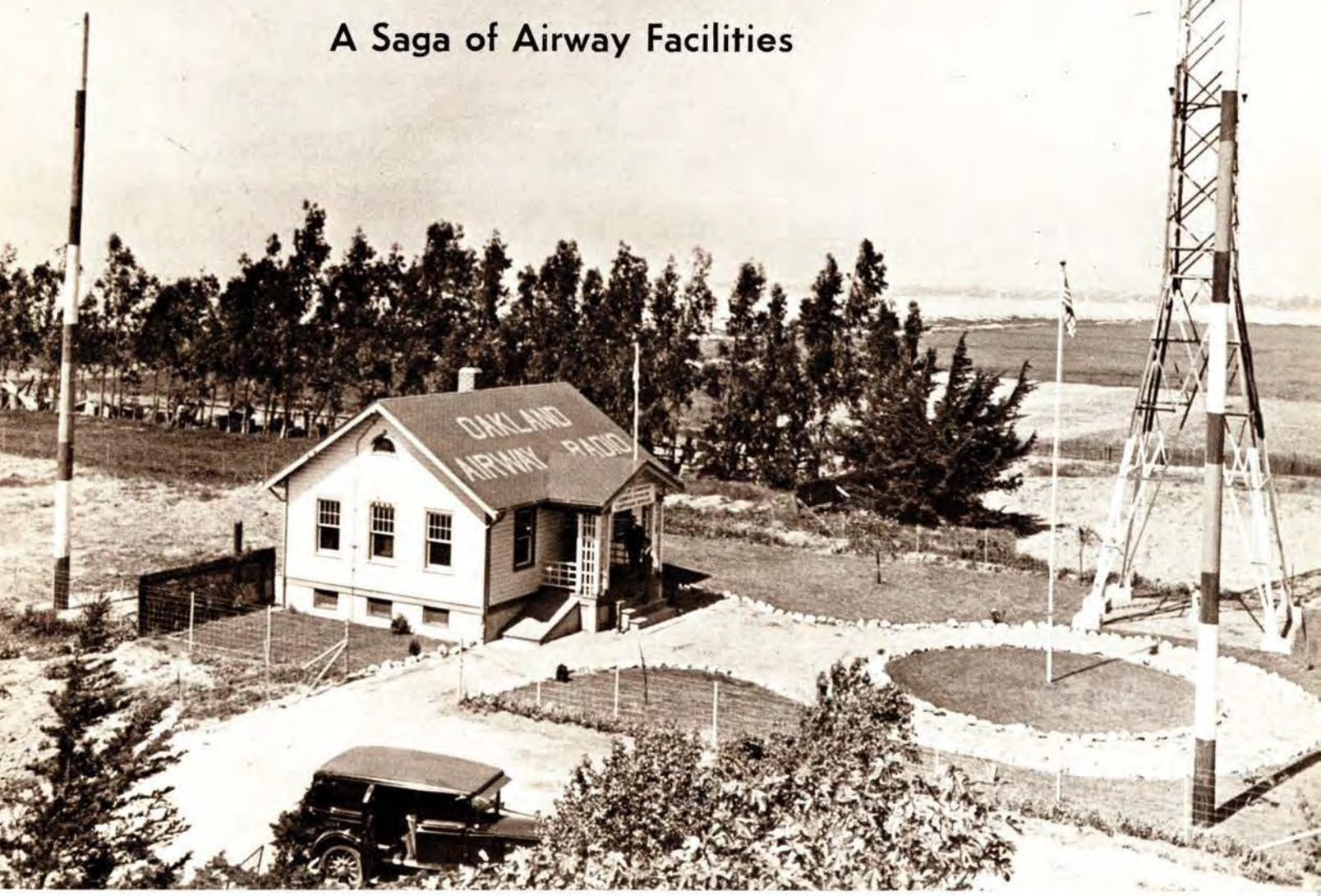
SEPTEMBER 1973

FAA WORLD

Service to Man in Flight

THE LIFE AND TIMES OF A TECHNICIAN

A Saga of Airway Facilities



FAA WORLD

SEPTEMBER, 1973 VOL. 3, NO. 9

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Secretary of Transportation,
Claude S. Brinegar
Administrator, Alexander P. Butterfield
Director of Public Affairs,
Louis J. Churchville
Act. Dir., Employee Communications Staff,
Theodore Maher
Editor, Leonard Samuels
Contributing Editor, Thom Hook
Editorial Assistant, Don Braun
Art Director, Osceola W. Madden

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Mark Weaver	Aeronautical Center
George Fay	Alaskan Region
Joseph Frels	Central Region
Robert Fulton	Eastern Region
Neal Callahan	Great Lakes Region
Edwin Shoop, Jr.	NAFEC
David Myers	New England Region
Clifford Cernick	Northwest Region
George Miyachi	Pacific Region
David Olds	Rocky Mountain Region
Jack Barker	Southern Region
K. K. Jones	Southwest Region
Eugene Kropf	Western Region

The cover: This was the Oakland, Calif., airway radio station in 1929, when radio operators were their own technicians and the station itself was a mail-order building. Airway facilities have come a long way.



Changes for the Better

We've seen a number of organizational changes recently. For the most part, these will have minimum effect on the field. Rather, they represent improvements in the headquarters structure.

Manpower functions have been transferred to the Office of Administration; Headquarters Operations' functions have been attached to the appropriate offices; Flight Standards has become an integral part of the new Office of Aviation Safety; International Aviation Affairs has become a separate office; Public Affairs has been given the responsibility for all public and internal communications activities; Accounting and Audit is a separate office; and appraisal will become the individual responsibility of the respective Associate and Assistant Administrators.

These changes were necessary to streamline agency operations, and I wanted them accomplished early so we might all get on with our primary job of providing the best and safest aviation system in the world.

While accomplishing that mission, however, we are committed to conserving our resources as we meet the ever-increasing demands for our services. We cannot continue to add personnel and increase our budget, yet we cannot let the quality and quantity of our services slip. Through better utilization of equipment and supplies and better management of our workforce's talents, we can achieve the efficiency that will keep us apace of our responsibilities.

The effect of this restructuring, then, is to provide centralized direction for related activities and clearer lines of responsibility, while avoiding duplication of effort. I might add that we have taken steps to minimize the impact of such actions on the personnel involved, for our prime resource is, and always will be, the people in our organization.

Alexander P. Butterfield

ALEXANDER P. BUTTERFIELD
Administrator

The Life and Times of a Technician

A Saga of Airway Facilities

Charlie Alpha was thankful the snow hadn't started to freeze on the ladder as he climbed to the top of the beacon tower. Already the cold metal rungs were slippery and wet, but at least they weren't caked with ice.

For once the weather report was right, he thought as he climbed. The snow had started falling in the early afternoon and he knew it would keep falling off and on for the next four months. And during that time in the cold and in the teeth of the winter winds—his fingers alabaster with frostbite—he would continue to maintain the beacon airways.

A strange place to be, he thought as he screwed the new bulb into the big airway light. He was an ex-Navy man who had joined the Lighthouse Bureau of the Department of Commerce following his service, and here he was clinging to a tower north of Omaha, Neb., over a thousand miles from the nearest ocean.

Despite this, Charlie had decided to stick with the Airways Division. He was working on the most modern airway system in the world. Someday the beacon airways would reach to every corner of the country. Already, in the fall of 1927, there were almost 5,000 miles of airways marked by nearly 900 beacons.

As a matter of fact, Charlie remembered, the exact number of facilities passed to the Lighthouse Bureau from the Post Office Department on June 30 that year had been 719 beacons marking the 4,121



For half a century, agency technicians have been maintaining airway facilities from desert to frigid mountain-top, via burro, truck, snowplow and airplane.

miles of skyways. There were also 17 radio communications stations and 124 lighted landing fields.

Still, Charlie realized he was a pioneer in this aviation field. He was one of only 31 Airways Mechanicians, and he knew he was destined for big things.

He was right; things started happening for Charlie right away. Because of his Navy experience as a radio operator, he could send and receive Morse Code, and in the spring of 1928, he was assigned to one of the 18 radio broadcast stations on an intermediate field. It was called an "Airway Keeper" station—later called an Interstate Airway Communication Station (INSACS) and now familiar as a Flight Service Station.

As an operator, he maintained his own arc transmitter and using his own money, built a tube transmitter. But this was a cinch for Charlie, who had been tinkering with radios since he joined the Navy back in '17.

CHANGE OF ADDRESS: FAA employees should send their changes of mailing address for FAA WORLD to the control point in the region or center where they are employed: AAC-44.3; AAL-52.1; ACE-20; AEA-20; AGL-13; ANA-11; ANE-14; ANW-14.7; APC-42; ARM-5; ASO-67.1; ASW-67.23; AWE-15; and Headquarters employees, AHQ-431. You should not send change-of-address information to Washington. If you move from one region or center to another, you should submit your change of address to the region or center to which you move.

It was a lonely life, even for a recently married man. Also, he was the kind of man who felt more comfortable when he was on the move. So, in 1929, when he received a message sent to all operators which said that anyone who considered himself qualified to become a radio electrician could apply for the job, he volunteered.

So specialization—something Charlie would see more and more of—began for those pioneer maintenance men. The equipment was getting complex. Operators were no longer required to make repairs since special training was required.

Those selected as electricians not only maintained the system but also established new facilities, such as the new low-frequency, four-course ranges like the one constructed in Bellefont, Pa. These "miracle" ranges enabled pilots to fly blind—to fly a direct line between terminal airports when visibility was restricted or non-existent.

Charlie was helping to hook up one of these ranges when he heard about the new Teletype School. Because of the static and other interference, station-to-station radio communication was not always possible. So when teletype became available, this equipment was leased for communications between airway facilities, using lines provided by the telephone company.

At first, the equipment was maintained by telephone technicians. This arrangement looked good on paper, but, in fact, the repairmen often arrived with no more knowledge than what they found by thumbing through their not-always-"trustworthy handbooks." This usually meant that the operator, who was not a repairman, had to fix the equipment himself. The situation was corrected when the Airways Division of the Bureau elected to purchase the teletype equipment and train their own maintenance men.

So in 1930, Charlie was among the handful of



In the early 30s, the technician took care of teletype and radio equipment at stations like this in Burley, Ida.

technicians selected to attend the Teletype Corp. training course in Chicago. Like the many electronic technician courses to succeed it, this course was a tough one. In order to graduate, the neophyte technicians had to dismantle the teletype and put it back together . . . blindfolded.

For the next decade Charlie traveled his ever-shrinking territory—as new facilities were added, the geographical area he covered got smaller and smaller.

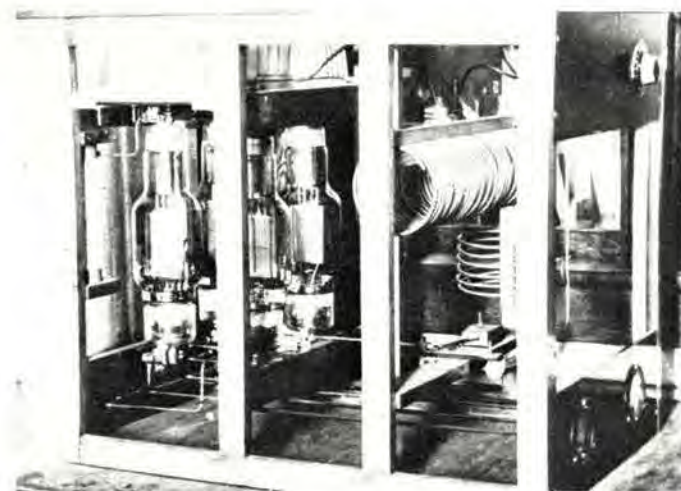
Even in the early 40s, a one-man maintenance sector, encompassing all facilities within 100 to 150 miles, was the rule rather than the exception. Only the busiest hubs had big sectors composed of two or three technicians.

Charlie was home-based at a major airport. From there, he made a circuit of his facilities about once every month. He took care of teletypes, low-frequency ranges, fan markers and voice broadcast radio transmitters and receivers. He traveled in a panel truck and carried his equipment with him. (For some technicians this included snowshoes in the winter.)

In his tool box were an assortment of wrenches, screwdrivers and a soldering iron. Cabinets in the truck housed a simple oscilloscope, voltmeter, RF signal generator and other electronic equipment.

While Charlie was pioneering in the mastering of the electronic technician's art, other airway technicians were still building the beacon airways. It was a tough job and a temporary expedient, but for more than two decades, it was these beacons almost exclusively that showed airmail and other airline pilots the way through the dark of night.

To keep regular spacing between the beacons, and map a fairly straight airway, it was necessary to erect beacons over all types of terrain. Facilities were set atop precipitous mountains as well as in the middle of sand wastes and on swampy islands.



When this sort of radio-telegraph transmitting equipment was in vogue in the late 20s, the operator maintained—and sometimes even built—his own set.



In 1955, a military radar (light-colored cabinets) was installed at the New York ARTCC, but controllers did not rely on the long-range radars until the ASR-1 program got underway.

For instance, a beacon site 10 miles from Mobile, Ala., presented unique problems to the construction crew. The only available site was on a swampy island at the confluence of the Tensaw and Blakely Rivers. Material and equipment for use in construction had to be transported by boat from Mobile down the ship channel into the Tensaw. From there the boats passed over a shallow area and finally to the swampy island. . . .

During the construction of the radio-communication station and beacon light on top of Sexton Mountain in Oregon, burros were used to transport the equipment to the summit of the mountain. All materials, including the lumber for the building, the rotating beacon and its tower, and the radio equipment for the station were freighted in sections to the top on the backs of the burros.

Although much of this establishment work was done by contractors, it was up to the pioneering agency technicians to maintain and repair the facilities in these remote locations.

When the second World War came along, Charlie,

who had already served in one war, stayed on the job and just worked a little harder.

There was more and more equipment to maintain as the number of enroute centers grew and CAA took over airport towers complete with two-way radios and other electronic devices.

In 1942, Charlie began to learn about the Instrument Landing Systems being installed at Atlanta, Washington, LaGuardia, Cleveland and Kansas City and scheduled for about 100 other locations. By the time the ILS was installed in his territory, Charlie had mastered the system. In fact, he had helped install it. At the same time, he realized that he could use some formal schooling in the new system.

He knew about the Airways Maintenance Technician School that had opened up in Fort Worth in June of 1943, but the ILS course was not offered there in time to help technicians maintaining those first ILSs. The first courses offered at the school were in radio fundamentals, related mathematics and standardized techniques. Later courses in the ILS, low-frequency ranges and visual-aural ranges

were added, but only shortly before the facility was closed and CAA training consolidated in Oklahoma City.

Thinking about it, he realized that soon he would have to go to school if he was to keep up with new developments. Already there was talk of using radar in air-traffic control, and already the low-frequency ranges with their four prescribed courses were becoming obsolete.

He had been hearing about the very-high-frequency Omni Ranges, which radiated signals all around the compass, since 1938 when a contract for development of this system was let to the Washington Technical Institute. Now, in 1944, this system—partially shelved during the early years of the war—had been delivered to the Technical Development Center in Indianapolis for further development.

In 1946, the first of the VORs to be installed on a Federal airway were set up experimentally between Chicago and New York. A system was also constructed in Falls Church, Va., in 1946. This was used as a training device, and technicians and engineers from the regions came to learn. Subsequently, they returned to their regions and taught others how to install the complicated VORs.

The training continued when the first systems were ready for final checks and tune-up. Technicians and engineers from adjoining regions would gather around to observe and sometimes kibitz. So it was that the first VORs were commissioned in 1947 principally on the New York/Chicago Airway.

At this time, Charlie Alpha had served the Federal government for over 30 years. He stepped down just as Charlie Jr. joined CAA and was soon sent to that new-fangled school in Oklahoma City.

He expected to be enrolled in the VOR course, which, in June 1948, became a major field of study

for electronic technicians, but he arrived just in time—and he had the prerequisites in mathematics and electronics—to be one of the first students in the new Airport Surveillance Radar and Precision Approach Radar courses.

"They boggle the mind" is how Charlie Jr. put it after hearing the first lecture on the technical characteristics of radar. But he stuck with it and found that if he started at the beginning and concentrated on one thing at a time, he could master the system.

And he did master the Airport Surveillance Radar-1 and Precision Approach Radar-1. When he left Oklahoma City, it was with mixed feelings. He hadn't enjoyed being away from his bride and hoped that soon provisions would be made for families to accompany students while in training. He had worked a lot harder than he had expected to, and he was darn glad it was over, but he was profoundly grateful for the priceless, incomparable education he got. (Twenty-five years later, Charlie Alpha III would leave the FAA Academy feeling just about the same way.)

When radars were installed at Los Angeles, Washington, LaGuardia, Cleveland, Chicago, St. Louis, Atlanta and Boston, he was ready to go to work on the single-channel systems built by Gilfillan. When he got to Washington National, the old military MPN-1 GCA radars were being replaced with the ASR-1, which was the first to incorporate the moving-target indicators.

Charlie knew his business, and it was a good feeling. These early radars needed help. For one thing they "ran hot." Sometimes it was easy to see what was wrong. All you had to do was follow the smoke or pull the charred capacitor, resistor or dead tube.

Of course, sometimes Charlie and his fellow technicians had to diagnose the malady with the synroscope, the volt meter or the S-band signal generator. And likely as not, he would go to work with his soldering iron to replace a burned out component.

Charlie worked on the ASR-1 until an ASR-2 was installed at the Atlanta airport. That was the first in that part of the country, and he was lucky enough to be there and help with the installation.

And just when he started to get proficient on repairing the radars, a new wrinkle was added. Beacons came into service. While a radar sends out a pulse—one every .8 billionth of a second—that bounces back and indicates that there is a target out there, beacons work a little differently. The beacon is collocated with the radar, but the beacon sends out a pulse that interrogates a transmitter in the plane. This transmitter sends back a message indicating the plane's presence and, under most circumstances, the aircraft's identity and altitude.

Although Distance Measuring Equipment and TACAN (DME) followed the VORs into commission



It takes lots of antennas to make a system. Shown here are the radar antenna, the beacon antenna (the bar atop the oblong radar antenna) and the microwave-link and communications antennas (the tall towers).

and courses in these new systems were set up at the Academy, Charlie Jr. stuck with radar. In 1955, he returned to Oke City for courses in the new long-range radars.

The Airport Surveillance Radars were solving many of the ATC problems at the terminals. By this time, the ASR-3s, with improved moving-target indicators, were being installed at major airports across the country. But the enroute centers were still essentially blind.

The next giant step forward was to be in the field of enroute air traffic control. Beginning with military joint-use radars, the long-range-radar program was implemented. Finally, the enroute centers had "eyes."

But once they had "eyes," they required a voice to tell the planes what they saw. So the Remote Communications Air/Ground (RCAG) program was rushed ahead hand in glove with the long-range radar program. This was a vastly complicated undertaking. The centers were connected to great spherical radar antennas and remote communications antennas by radio relays operating in the microwave frequency band and leased communications circuits.

At the centers, the amount of electronic equipment grew like Topsy, and, of course, the number of electronic technicians needed grew correspondingly. Technicians were also needed to maintain the equipment at the remote radar sites. In all, the numbers of radar technicians doubled in the late 50s and early 60s.

Too, the amount of job specialization increased as computers were incorporated into the very heart of the ATC system. For instance, not only was Alphabetic equipment delivered into the towers and centers, but also digitizing equipment was installed in remote long-range-radar antenna sites.

This is the equipment that converts the raw radar data coming down from the sky into a code which can be reconstructed by the computer at the far end of the relay system. The alphanumeric equipment translates the message and prints out the plane's identification and other flight information on the radar screen. And, of course, all this new, sensitive, sophisticated equipment required new, sensitive, sophisticated and highly trained technicians to take care of it.

These days Charlie Jr. is taking care of the third-generation long-range surveillance-radar equipment and the related alphanumeric computer display channel equipment. This gives the controller a plane's identification and altitude without his having to ask—all written out for him on the radar screen.

And Charlie no longer hunts down burned out tubes, capacitors or resistors. Now his complex diagnostic equipment leads him through an intricate array of wiring and solid-state circuitry to where the trouble is centered. Then, when he has the trouble located, he replaces a whole circuit board.

His fellow technicians are working on the ARTS III terminal alphanumeric equipment and on the other new radar and nav aids. For all of these people, the equipment is much more complicated than it used to be, and they spend a lot more time in school than they used to. As a matter of fact, last spring, Charlie Alpha III was sent to the FAA Academy, where courses are now offered in 106 different technical fields, including radar bright displays, transistor electronics, visual nav aids, digital logic, data processing, environmental-support systems and advanced radar-traffic systems.

While biding his time before going to the Academy he worked with the Cascade, Ida., Airway Facilities Subsector, and he still shivers when he remembers the first snowfall of the year.

He was surprised to find that the weather report was right, and the blowing snow cut visibility to less than 50 feet, even before he reached the lonely radar site atop of Cascade Peak.

He remembered thinking that this could be a cold winter.

—By Theodore Maher

This radio station at Bellefonte, Pa., was one of the nation's first, a critical stop on the New York to Cleveland run. A housing development now sits on the pioneer site.





David C. Earley (seated, left), assistant chief of Western Region's AF Division, accepts the transfer of the ASR-1 antenna from ITT Gilfillan's vice president of marketing. Looking on are (left to right) Frank Follis, William J. Hunter and Don Graham of Gilfillan.

Like-new is the condition of this ASR-1 antenna after the FAA Depot got through with it. George A. (Pete) Simms (left), machine hand tool technician, and Robert Goggin, Jr., electronic engineer, reconditioned the vintage piece before it was sent to the museum.

A BOW TO HISTORY

It all began with a phone call from Bill Dougherty, Airway Facilities program analyst for terminal radar, asking the Smithsonian Institution if they would like to have an ASR-1. The nation's last unit of its first civilian airport surveillance radar was to be decommissioned at Charleston, W. Va., in December 1972.

Smithsonian's answer was an unqualified "yes", as it was starting to gear up for an air-traffic exhibit that would eventually be on display in the National Air and Space Museum. Charleston had a complete but hybrid system. This spring, FAA arranged for the transfer of the entire system—power supplies, transmitter, receiver, displays—less the antenna, which was from a later model. Getting an ASR-1 antenna was another story.

The agency couldn't find one at any of its facilities and enlisted the help of ITT Gilfillan, the manufacturer. After a considerable search, the company located a worse-for-wear antenna in the yard of one of its suppliers in southern California. Gilfillan purchased it and donated it to FAA. FAA, in turn, sent it to the Depot in Oklahoma City where it was refurbished and shipped to the Smithsonian to join the ASR-1 system from Charleston. The exhibit will consist of the equipment on static display and the antenna rotating on its pedestal.

The very first ASR-1—that is, serial No. 1—was installed at Chicago Midway Airport in 1948. When the next model came along, this radar moved to

Colorado Springs, Colo., where it remained through several modifications.

An "old-timer" recalls that this first airport radar had a number of starting-up problems. At first, the display couldn't be read—the picture would continually break up. A power company technician, Frank Marzec—now chief of the Airway Facilities Configuration Control Branch, was called in to check out the power supply. Tests showed cyclical power drops, and a long survey turned up the fact that the welding operation of a manufacturing facility a mile away was on the same line and causing the trouble. The power company ran a separate line to Midway, and the radar picture became readable. Marzec's success with this and his radar background in the Navy led to a suggestion to join CAA.

The display was now readable, but it was reading out the wrong thing. The maintenance crew faced the embarrassing situation of the radar being unable to pick up aircraft coming in, while the local auto traffic came in just great. Lowering the height of the antenna from 72 to 17 feet altered the signal paths and got ASR-1, No. 1, operating as it was intended. Of the eight-man maintenance crew for that first civilian radar, only two remain active—Marzec and Clem Hendricks, who is AF Sector chief and still at Midway.

Now, a quarter of a century and many sophisticated radars later, the ASR-1 survives for posterity in the Smithsonian Institution.



Left: Fred Morris

Center: Bobby G. Ridigin

Right: Ray J. Mitchell

HOW TO BECOME AN ENGINEER

Fred Morris, Bobby Ridigin and Ray Mitchell have launched themselves on new careers this fall; they've headed back to college but are still working for FAA.

The three Airway Facilities technicians have returned to the campus to become professional engineers under the Cooperative Engineer Development Program (CEDP). To be selected for the program, the FAAers had to have at least two years of a college engineering curriculum or the equivalent, indicate a real desire for self-improvement and be in a division that sponsors a position in CEDP.

The program was initiated by the Airway Facilities Service in 1968 primarily because the government needed engineers but could not compete successfully with industry to obtain them. Engineers are no longer so hard to find, but the program is still needed for other reasons. "It shortens the time frame for training a qualified engineer and gives us one who already knows the ins and outs of FAA and has a stake in its future," explained Dave Potts, program coordinator for Airway Facilities. This year, Airway Facilities sponsored the only three positions offered; however, any service in need of engineers can utilize the program if it is willing to budget manpower and finances for it.

Under CEDP, the candidates take two years of advanced engineering courses at an FAA-designated college. At the same time, each will receive part-time on-the-job engineering training while drawing full salary.

The program requires a substantial investment from both employee and agency, Potts pointed out. The employee must maintain a satisfactory performance in school and be willing to transfer to a designated FAA location near the specified campus. In return, he or she receives a free advanced-engineering education, thus enhancing career potential. The agency pays the student's full tuition, books, travel and salary.

Fred Morris and Bobby Ridigin, both from the Southern Region, are participating in CEDP at the Georgia Institute of Technology, while Ray Mitchell from the Southwest Region is studying at the Arlington campus of the University of Texas.

The three technicians began their academic careers this month when they sat down with their respective CEDP representative and college counselors to hammer out a special schedule of courses.

After completing the prescribed two-year curriculum, the students will have to satisfy state requirements, such as passing professional examinations, or satisfy Civil Service Commission alternate requirements before they can be reclassified.

An example of the success of some 40 other CEDP participants is Michael Forrester, one of Eastern Region's candidates in the 1970-71 program. He not only obtained engineering status but also is completing graduate study at the University of California's Institute of Traffic and Transportation. He is scheduled to complete his studies this summer and will serve as special assistant to the director of the Northwest Region.

Those of you interested in the program and qualified to apply should express your desires through appropriate channels to your division chief. Position vacancies are usually advertised by March and selections made by May. For further information, consult Order 3410.10.

—By Rich Welch

Getting a Line on WHAT'S WHERE

Air Traffic Control Towers are the subject of our third in a series of maps of FAA facilities and offices. The map overleaf is the center spread of the magazine to permit easy removal for those wishing to display it.

The July issue of FAA WORLD carried a map of the district offices in the Flight Standards Service. The August map featured the Air Route Traffic Control Centers. Completing the set of four maps will be one on Flight Service Stations that will appear in the October issue. Since Airway Facilities Sector Offices are usually co-located with towers, a separate map for those offices is unnecessary.

AIR TRAFFIC CONTROL TOWERS





Info on FINFO

The New Look in Flight Inspection

FINFO sounds like the name of a prehistoric whale—but it's not . . . a whale, that is. It's the Flight Inspection National Field Office, designed to bring flight inspection out of the dinosaur age of slow aircraft and into the jet age with an efficient, centralized operation.

Spawned in July in Oklahoma City, with Arthur R. Eno, Jr., at its head, FINFO will direct all flight-inspection activities in the continental U.S., the Caribbean, Central and South America and the North Atlantic area. It will get a big power assist from 20 light-twin jets that FAA will acquire over the next two years, replacing 43 DC-3 propeller planes that were already second-hand when the agency acquired them as long as 17 years ago.

The new jets will concentrate on flight inspections in terminal areas, while the agency's big twin-engine Convair 580 and four-jet C-135 will continue to be the backbone of the enroute flight-inspection program. Five Sabreliners are currently doing flight-inspection work—four of them overseas.

The twin-engine Sabreliners and Jet Commanders will be operated from seven Flight Inspection Field Offices (FIFOs), but will not be permanently based at any one of them. Under the direct control of FINFO headquarters, the FIFOs will be in Atlantic City, N.J.; Atlanta; Oklahoma City; Battle Creek, Mich.; Minneapolis; Los Angeles; and Seattle.



It's the introduction of jets into the FAA fleet that has enabled the agency to centralize its flight-inspection activity. Where the DC-3s poke along at 150 knots cruising speed, the jets rip across the skies at 450 knots, allowing them to get where they're going a lot sooner. In turn, the shorter travel time means that the jets and their crews can be called up quickly by FINFO to meet emergencies and heavy concentrations of work. With the seven FIFOs, the jets will be no more than an hour away from virtually any facility that needs priority inspection.

Since the DC-3s couldn't fly very far from home base (it would take too long), they operated mostly within regional boundaries, and the region offices scheduled their work. Now FINFO will do it.

The jets will finish the job of checking a radar or instrument-landing system in half the time of the DC-3s. They are equipped to fly in almost any kind of weather, and their powerful engines will enable them to check jet routes as fast as the big airliners can fly them. Furthermore, the speedy jets will relieve air traffic controllers of most of the special traffic adjustments and greater separation they have had to provide when the slow DC-3s were flying near jet airports. Space-age electronics on the jets will permit them to fly one pass instead of three to make accurate checks of each ground facility and

Flight inspection gear aboard the new jets will be highly automated. Here, technician Jon Brock tests some of the equipment before it goes into the aircraft.

This mockup shows a neat, well-organized look to the new Sabreliner's flight-inspection console.



The gleaming look of speed . . . FINFO Chief Arthur R. Eno, Jr. (left) and pilot Bernard Batchelder look over a Sabreliner at the Aeronautical Center, site of FINFO headquarters. Twenty of the planes, built by Rockwell International Corp., will be in the fleet by 1975.

will pinpoint for the crews the jets' airborne location with extreme precision. That all adds up to less time in the air near each airport.

The DC-3s could never match that kind of performance. If they were still in operation by 1975, it would take about 43,000 hours of flight time per year to get the job done. With the all-jet fleet in operation by 1975, inspection flight hours will be cut in half.

Before the deliveries of the jets to field offices, flight and ground crews will be selected and trained to fly the planes and use the new electronic gear. As the FIFOs take over, nine old Flight Inspection District Offices (FIDO's) will be closed. Secondary Aircraft Maintenance Bases at Fort Worth, Kansas City, Denver and Oakland will also be closed.

Obviously, 25 airplanes won't require as many pilots, technicians and mechanics as 43 planes do. About one-half of the total of 301 jobs being eliminated has already been accomplished through normal attrition and transfers. The manpower cut in flight-inspection activities was begun in July 1971 at a level of 867 positions. The goal is 566 positions by mid-1975.

To handle the transition to a smaller flight-inspection workforce, the agency has established a Manpower Adjustment Plan, published as agency Order 3330.00. Everyone now in flight-inspection



activities will be ranked on a master retention list, which will be updated periodically. The idea is to staff the FIFOs based on this list. Career and veteran status, length of service and qualifications in specialties—as pilots, technicians and mechanics—will be considered when selections are made. Pilots, navigators/flight engineers and airborne electronic technicians will also have to meet stiffer medical requirements for jet operation.

Questionnaires will be sent to all flight-inspection personnel asking for their preferences for geographic area and type of job, both in and out of flight inspection. Wherever possible, other jobs in the agency will be offered to those who aren't eligible for FINFO positions. Such offers would consider the individual's choice of location, particularly for those who want to stay where they are. Employees would also have the option of retiring with a discontinued-service annuity.

Manpower officials do not rule out the possibility of involuntary separation of surplus employees, but they say every effort will be made to avoid it. Nevertheless, they do not expect a surplus of flight-inspection employees at the end of the transition period in mid-1975.

By that time, the General Services Administration should be one of the country's foremost marketers of used DC-3s.

—By Don Braun

FACES and PLACES



COOLING IT—Students in a course in aircraft crash, fire fighting and rescue put out a blaze in Denver Stapleton Airport's training pit. Co-sponsored by FAA, the course was supported by Ed Tatum, Allan Butterworth and William Moore of Rocky Mountain's Airport Certification Staff.

THEY DON'T NEED IT ANY MORE—Accompanied by members of the national aviation press corps, Administrator Butterfield flew into Palmdale, Calif., to dedicate Phase II of the Los Angeles Center's automation program. Here, center employees (left to right) Jack Seegars and Harvey Neal present him with a shrimp-boat plaque symbolizing the end of an era in air-traffic control. AF Sector manager Fred Carpenter is in the background.



OUTSTANDING—Martin G. Brazier (left) is congratulated by Washington Gov. Dan Evans after he received the Seattle Federal Executive Board's 1972 Community Service Award. Brazier is Northwest's Assistant Civil Rights Officer.



OUTSTANDING — T. A. Hoffman, chief of Southwest's Audit Division, displays the Federal Government Accountants Assn.'s Robert W. King Memorial Gold Medal, which he received for 20 years of service to the association in advancing the profession of accountancy.



FACILITY OF THE YEAR—Center chief Don Latimer accepts the award presented to the Minneapolis Center. Attending the ceremony are (left to right) Ray Belanger, acting director of the Air Traffic Service; Ed Berg, area specialist; Bob Smith, DDS; Bob Guntzberger, team supervisor; Latimer; Mike Yaeger, the center's newest full-performance ATCS; Gordon Docken, most experienced ATCS; Don Duea, EPDS; and Lyle Brown, Great Lakes Region Director.

HIGH PRAISE—Forrest Smith, ATCS of the Terre Haute, Ind., FSS at Hulman Field, beams over his Certificate of Appreciation for his unpaid work as aviation editor and aviation columnist for the Terre Haute Tribune Star. Robert Ziegler (left), Great Lakes Deputy Director, made the presentation, as George Smith, deputy chief of the AT Division, and FSS chief Gene Printz (right) looked on.



PERMANENT COMMEMORATION—Inscribed pieces of granite were presented to NE Region Director Ferris Howland and Administrator Butterfield at the dedication and open house marking the completion of the modernization and expansion of the Boston Center on its tenth anniversary. Left to right are AF Sector manager Reuben Powell; Howland; the Administrator; Donald Turner, center chief; and William McCauliffe of Harvey Construction, the contractor.



GO-GETTER—A Special Achievement Award is presented to James Reed, Jr. (center), by former Eastern Region Director George Gary, as AF Division chief Robert Brown looks on. Reed was graduated from Columbia University with a degree in electrical engineering under FAA's Cooperative Engineer Development Program (CEDP). He has advanced from electronic technician to electrical engineer.

CHOPPER INVENTOR HONORED—Attending ceremonies that renamed Bridgeport Municipal Airport in Stratford, Conn., as Igor I. Sikorsky Memorial Airport are (left to right) Wesley Kurht, president of Sikorsky Aircraft; NE Region Director Ferris Howland; Nikolai Sikorsky, the inventor's son; Mrs. Igor I. Sikorsky; the Most Rev. Michael Jelenevsky, pastor of St. Nicholas Russian Orthodox Church; and Mayor N. A. Panuzio.



... Like it is!

SAVING ANNUAL LEAVE

A bill to liberalize annual leave benefits has cleared the House Civil Service Retirement and Employee Benefits Subcommittee. It would provide for payment of accrued annual leave in excess of the ceiling in the year of separation from the government and would permit employees to carry more than 30 days of annual leave into a new year if they lost leave through administrative error, sickness or "the exigencies of public business."

MOBILITY FOR PROMOTIONS

Civil Service has ruled that agencies have the legal right to require employees seeking promotions to middle and upper-level jobs to sign agreements to accept subsequent reassignments to jobs of equal rank. Refusal to accept a reassignment to another part of the country could be grounds for dismissal without severance pay.

DEFLATING INSURANCE COSTS

Another go-round for boosting government's share of health-insurance premiums is in the House, but chances for its passage are good this time. Rep. Jerome Waldie's bill would boost the Federal share to 55% on enactment and 5% per year to a maximum of 75%. The Administration opposes the bill because of taxpayer cost, but it's expected to be signed if it clears Congress. The California congressman argues it's a matter of equity since 98 of 136 private employers surveyed pay the whole tab. ■ The new postal workers contract is another argument for equity since it boosted the government's share of health premiums. It's also the basis for more benefits improvements, since it provides for the

Postal Service paying 100% of life insurance premiums next year as well. ■ Civil Service Commission is considering group auto, legal and dental insurance, which it may propose in the future. Group auto often produces a 15% savings with the employee paying the whole cost through payroll deductions. Legal insurance would cover legal fees in civil suits, other litigation, wills, divorce and separation actions, etc. The dental plan would likely be offered separate from regular health insurance plans.

SS SCOREBOARD

Additional members of the House of Representatives have joined in sponsoring the bill to provide optional Social Security benefits in addition to Civil Service annuity. Now, 65 reps have sponsored such legislation.

ANOTHER BOOST IN YOUR NET

Rep. Waldie has introduced a bill to reduce contributions to the Civil Service Retirement Fund from 7% of your base salary to 6.5%. Government and employees share the cost, which was 14% of payroll under a 1969 law. Since then, costs have been running under 13%.

MORE TRAINING

CSC is looking into more training for Federal managers in grade GS-12 and above by Fiscal 1975 to preclude employees moving into managerial slots without proper training or any idea of what a manager should do.

CITY INCOME TAX

CSC has begun a three-year experiment in Philadelphia, St. Louis and Louisville, Ky., in which Federal employees can opt to have city income taxes withheld.

TOPS IN THEIR CLASS

Three of the Facility of the Year Award Winners

Eight Facility of the Year Awards are made by Air Traffic, Flight Standards and Airway Facilities. Among those presented recently are those depicted here from AT and FS and one given to the Fort Worth AF Terminal Sector.

The European Region's Aircraft Certification Staff was selected for the 1972 National Flight Standards' award for the Outstanding Field Office in the Engineering and Manufacturing Category. In Europe for the Paris Air Show, Administrator Alexander Butterfield made the presentation of the award to Mark Baldwin, chief of the Aircraft Certification Staff, during a reception for the Administrator in Brussels.

Baldwin's staff was cited for its contributions to aviation safety, improvement in service to the public and the major impact of its activities on the international balance-of-payments situation. The five-man staff normally manages 50 to 60 certification projects of all types of aircraft from various countries.

Also present for the ceremony was recently retired Walt Haldeman, who headed up Aircraft Certification during the period covered by the award.

The National Air Traffic Facility Award presented to the Tucson, Ariz., Flight Service Station drew Acting Director of the Air Traffic Service Ray Belanger (left) to do the honors. Present for the ceremony were (left to right) assistant chief Jimmie Haralson; ATCS Hideo Taniguchi; assistant chief Fred Kelly; Western Air Traffic Division chief Lynn Hink; chief Ken Seerist, secretary Rita Bradshaw; ATCS Luis Palacio; ATCS Tom Ratcliffe and ATCS Gene Murray. Other FSS personnel not in the picture include Jim Gould, John Hays, Wess Owens, Bill Pitzer, Carmen Simbari, Jesse Shern, Ray Staininger, Art West and Warren Wirges.



The Flight Standards E & M award was presented at a reception in Brussels. Left to right are Walt Haldeman, former chief of the Aircraft Certification Staff; Mark Baldwin, the present chief; Oscar Bakke, Assistant Administrator for the European Region; and Administrator Butterfield.



John Doster (right), chief of the Allentown, Pa., GADO, admires the National Flight Standards Field Office award for 1972 that went to his unit. Flight Standards Service Director James Rudolph made the presentation for the Allentown office's overall excellence during the year.



DIRECT LINE



Q. Does an EPDS at a Level II terminal facility have to be facility-rated and maintain currency on all positions of operation?

A. The present policy requires that all Evaluation and Proficiency Development Specialists who are assigned on a rotational basis be kept operationally and currently qualified, except when a waiver is approved by the Director of the Air Traffic Service.

Q. I am a GS-13 control tower chief. I am thinking about bidding on a GS-13 terminal instructor position at the FAA Academy. What am I entitled to in the way of return rights when my tour is up and is my region obliged to restore my supervisory status?

A. Under the provisions of Order 3330.6A, your region is obligated to accept your return as a GS-13, but not necessarily as a supervisor.

Q. In the flight service station where I work, there is only one man on duty for many hours of the week. When on duty by oneself, weather observing can constitute up to 25 percent of the workload. It requires going out in all kinds of weather, at least once an hour, and when the weather is marginal making many observations between the hourly reports. This duty takes priority over pre-flight briefings, broadcasts, and teletype duties. These stations receive no compensation whatsoever for performing this duty. It is not a factor in determining staffing. It is not included in the activity data for these stations, and it can't even be found on the position description. Why is a duty that requires so much of our time and up to six weeks of study to obtain a certificate completely ignored by the FAA?

A. The agency fully recognizes the importance of accurate weather observations and the people who perform this duty. While it is true that weather-observing is not a factor in determining grades and it is considered an integral part of station duties and takes priority over others, it is a factor in determining staffing. Staffing standards Order 1380.31 allows one man-year for uncommon supporting services for facilities that take observations 24 hours a day, 365 days a year. Part-time observing facilities are allowed a lesser

amount. As for your position description not describing these duties, Handbook 3510.8, Position Classification, dated Oct. 4, 1967, Chapter 1, Paragraphs 2A and 2B(4) outlines employee/supervisor responsibilities for ensuring accurate description. Paragraph 2A states that employees are responsible for reading and understanding their position descriptions and requesting their supervisors to update descriptions if necessary. Paragraph 2B(4) states that line supervisors are responsible for assuring that employees are working in accordance with their job descriptions or for redescribing the position to conform with the work assignments.

Q. I am at a Level II tower that has a complement of 21 GS-11 journeymen, four GS-13 assistant chiefs and one EPDS. No one is in training. The EPDS does nothing except administer semi-annual exams. One assistant chief does nothing except fill in for the other assistant chiefs when they take leave. Multiply this by Level II towers all over the country, and I wonder how FAA justifies this waste of money and manpower.

A. Your facility is staffed in accordance with Order 1100.126B, Standard Organization of Air Traffic Terminal Facilities. Since no deputy chief is authorized, the fourth assistant chief is used as acting facility chief, and he is required to provide relief for the other assistant chiefs. Aside from conducting proficiency training and the associated evaluation responsibilities, the EPDS has recently had reduced training activities. Courses at the Academy were canceled due to lack of training funds. Recruitments were extremely sparse. The agency is now returning to a recruiting and training posture and the EPDS will soon be fully occupied. Manpower requirements are carefully reviewed on a continuing basis, and you may be assured that imbalances between workload and staffing in our terminal facilities are strictly short-term occurrences.

Q. I have always been under the impression that when we can't get information locally, we can contact the region personnel office. We have done this from time to time and eventually our supervisor was told by personnel, "Tell so and so not to call our office; if they need help, they should talk to you or your local personnel officer." What are they up there for if we can't get any information from them by telephone or letters?

A. Generally, FAA wants an employee who has a personnel problem to go through his or her first-line supervisor for answers. First-line supervisors are supposed to go through whatever channels are established locally to the Manpower office. If the personnel problem relates to the employee's first-line supervisor, the employee may write directly to the servicing Manpower Division, but it would be less than honest to suggest that Manpower would try to solve the problem without being in touch with the supervisor. In sum, each employee should first talk to his or her supervisor when needing help. If the supervisor cannot help, ask the supervisor to try to get help from the Manpower Division. If that becomes a strike-out, the employee should write to the

Manpower Division, listing the efforts made to get a satisfactory solution.

Q. Who is supposed to recommend a controller for second-career training—his supervisor or the chief controller? Does the controller have to concur with this action?

A. Under Public Law 92-297, no one needs to recommend a controller for second-career training. A controller who is separated from active control duties under the provisions of this law is eligible to receive second-career training provided he has had at least five years of service as a controller (Order 3410.11, ATCS Second Career Program, Paragraphs 5d and 10c). The controller is notified of his eligibility to receive training at the same time he receives the written notice of termination to remove him from his career controller position. Since second-career training is an entitlement rather than a requirement, the controller is completely free to accept or refuse such training. Direct specific questions on this matter to the chief of your servicing Manpower Division.

Q. Why is it that FAA treats FSS people as though they were second-class citizens? It's understandable that some centers and towers are loaded to where their people deserve early retirement, but why a low-activity VFR tower? The only reason must be the Corson Report, which mentioned the strain from changing shifts and quick turn-arounds. The FSS specialist is human, too. What does he do when his health will no longer stand this kind of abuse? What other job does FSS training allow him to do? Since the FSS option is unimportant, when a station is short of people, why aren't hours and services cut, rather than requiring hours that are a physical strain on his well being? Why aren't regular hours scheduled and the shift put for bid, with specialists at each station with the most seniority given preference? Regular shifts would maintain a healthier environment.

A. The FAA has never believed that FSS specialists or any of its employees are second-class citizens. Each is equally vital to the accomplishment of the agency's mission. Age and its relationship to successful performance as an air traffic controller has been the subject of intensive study the last few years. The studies found that the ability of controllers to effectively control traffic begins to decline at a relatively early age (40-50) because of the loss as a consequence of age of those unique abilities required by the job. While there may be exceptions to the rule, the general trend was clear and required appropriate action. Public Law 92-297 was not proposed and approved on the basis of the Corson Committee report alone. Years of intensive investigation and study were completed prior to the proposal. Management realizes the difficulties placed upon employees who are required to work rotating shifts. Such shifts worked by many of our electronic technicians, communication duty officers, FSS specialists and others do sometimes inflict physical hardships, and these employees are compensated for this by night differential and premium pay. Civil Service and agency

regulations do not preclude the use of seniority in establishing watch schedules. The criteria is left up to the chief of each facility, except that (1) each schedule must always be designed so that the operational needs of the facility are met, and (2) fair and equitable treatment must be afforded all employees in establishing schedules. If all affected personnel in an FSS reach a general agreement about the use of a seniority factor in establishing watch schedules and the chief is satisfied that operational requirements can be met, we see no reason why this cannot be done.

Q. Will you give the official interpretation of the role of the PER second-level review officer based in the regional office when he reviews the PER for a field first-line supervisor? Can he return the 3430.1 and direct the rater to make changes under Part II? This is a routine PER—satisfactory with no award involved.

A. The second-level supervisor should make an independent evaluation of the employee's performance and, when his assessment differs from that of the employee's immediate supervisor, indicate those differences by adding his comments to the form. The employee must receive a copy of the comments. A second-level supervisor should not direct a rater to make any changes under Part II. This applies to all second-level supervisors, wherever located. However, a second-level supervisor may remand a PER to the rater if current instructions for its completion have not been followed.

faables



"I warned you, didn't I, Nastage! I told you never to stand in the doorway at quitting time!"



This free service is open to principals only. All property advertised must be available on a nondiscriminatory basis to persons regardless of race, color, religion, sex or national origin. Ads will appear approximately six weeks after submission. Send your ad with address and phone number, including the area code, to "Mobility Gulch," FAA WORLD, 800 Independence Ave. SW, Washington, D.C. 20591.

ARKANSAS

Lot for sale at Greer's Ferry Lake, Tannenbaum Resort, Heber Springs; approx ½ acre with water, sewer, electricity and frontage on road; access to stables, golf course, recreation area, fishing; \$4,500 and can be financed. Call 901-386-3001 or write J. Cosby, 6330 Brightwood Drive, Memphis, Tenn. 38134.

CALIFORNIA

Rent my 1973 Landau Motorhome; 25 feet long, sleeps six, air conditioned, self-contained; luxurious unit is available with everything furnished except groceries—even has golf clubs and fishing gear; fly or drive to San Diego and use this motel on wheels to explore southern California; \$200 per week plus 6 cents a mile. Call 714-488-7933 or write Bix Bremermann, 1547 Loring St., San Diego 92109.

COLORADO

Rent on yearly lease brick rancher on fenced ½-acre lot in Arvada, see lights of Denver and mountains of Boulder, easy commute via freeway to Broomfield and Denver; 3 bedrooms, large country kitchen, separate dining room, finished basement with party-size rec room and 2 additional bedrooms and large storage room, 2-car garage; \$350 a month plus deposit. Call 907-344-8788 or write Albert J. Crook, 8107 Lloyd Drive, Anchorage, Alaska 99502.

FLORIDA

Improved homesite for sale in General Development Corp. community of Port Malabar on the east coast; 80 x 125 feet; \$3,500. Call 313-946-5789 or write A.D. Slusarchuk, 15376 Vivian Ave., Taylor, Mich. 48180.

Corner lot, 1/3 acre, in ITT development near Daytona, Flager County, to be ready within 5 years; total cost \$5,000, small monthly payments. Call 212-345-0067.

KANSAS

Ranch house in Overland Park, 10 minutes from Olathe ARTCC, 25 minutes from regional office in Kansas City; 3 bedrooms, 2 baths, large living room, dinette area, big kitchen with electric range, dishwasher, disposal, family room with fireplace, central air conditioning, full basement, 2-car garage, fenced patio with gas grill, other extras; owner retiring, December occupancy; \$38,500. Call 913-888-3116, or write Andrew H. Speyerer, 9805 Bluejacket Drive, Overland Park 66214.

MARYLAND

Colonial house for rent in Belair development of Bowie, 40 minutes from headquarters; 3 bedrooms, 2½ baths, central air conditioned, w/w carpeting, fireplace, dishwasher, garage, patio, fenced yard; \$330 per month. Call 301-464-0653.

New Swiss chalet cottage for summer rental on the lake at Deep Creek Lake, Oakland; 4 bedrooms, 1½ baths, fireplace; available August and September; \$215 per week. Call G. Trainor, 703-461-7237 evenings.

OKLAHOMA

Beautiful, new Spanish-style home on ¾ acre, 15 minutes from Aero Center; 1,569 sq. ft. living area, 3 bedrooms, 1-3/4 baths, den, formal living area, fireplace, central air and heat, utility room, shag carpet throughout, but kitchen carpet in dining area and kitchen, 2-car garage; one of best school systems; \$29,500. Call 405-376-2748, or write to 15504 Aqua Clear Circle, Mustang 73064.

VIRGINIA

Brick rambler for rent in Alexandria, 20 minutes to downtown Washington; 3 bedrooms, 1½ baths, fireplace in living room, central air conditioned, carport, patio, nice shaded lot with fenced rear yard; \$275 per month. Call 703-971-2144.

Fully furnished rambler home for rent in North Arlington, 20 minutes from headquarters; 3 bedrooms, 1 bath, separate dining room, breakfast nook, carport, patio, air conditioned, nice back yard; rental by week or month, longer-term lease will be considered. Call 703-524-0011.