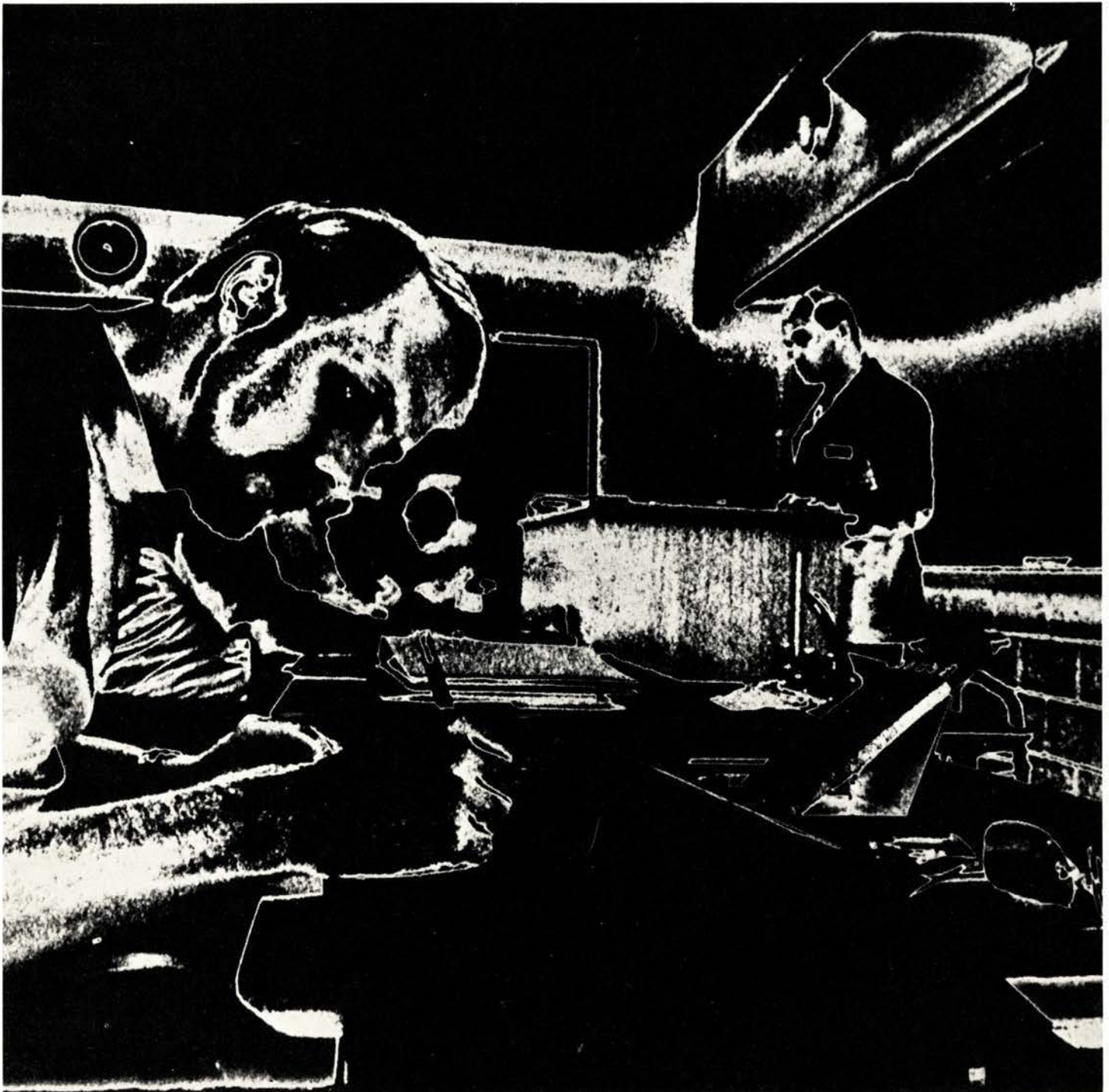


FAA WORLD

Service to Man in Flight

VOLUME 1 NUMBER 10

OCTOBER 1971



A SCHOOL SECOND TO NONE



The cover: An unusual shot of John M. Hughes from the Southern Region following a schematic diagram as Carl E. Calhoun lectures on the ASR-4 radar at the FAA Academy in Oklahoma City. For details on this photo, see page 6.

—Photo by Al Grigaitis

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The Necessary Pilgrimage

As technology and FAA facilities and equipment have burgeoned, FAA maintenance technicians have taken long strides to keep pace, thanks to the indispensable training provided by the Air Navigation Facilities Branch of the FAA Academy in Oklahoma City.

This month's cover story looks at the technical men who make the pilgrimages to Oklahoma. Most of them have been there before, and most will go again. They return to keep up with the state of the art and to acquire new specialties, because the steady influx of new types of equipment into the FAA inventory requires constant renewal of skills and knowledge. Before and after their high-quality formal training at the Academy, the technicians pursue essential on-the-job training at their facilities and take Academy correspondence courses. The integrated training sequence results in certification of the technicians for full maintenance responsibility for the equipment in which they specialize.

FAA maintenance practices differ from those of most private industries. The field technician cannot depend on a centralized repair shop, nor can he permit extended shut-downs of equipment until replacement units are available. There is no such thing as a spare ASR-7 radar system, or an extra console for an IBM 9020 computer complex, or a stockpile of VORs. There are, however, nearly 9,000 FAA electronics technicians, 630 general facilities and equipment technicians and 120 general maintenance mechanics who bring their talents to the equipment—whether in the desert, on a mountaintop or in the middle of a city. They go to the Academy because the safety of U.S. air travel and the reliability of FAA services depend on their ability to diagnose and repair equipment of every stripe in five basic categories: communications, radar, navigational aids, electro-mechanical and data processing.

Today there are nearly 800 maintenance technicians in training at the Academy. Last year, more than 6,000 attended. Since the FAA's establishment in 1958, almost 60,000 student enrollments in maintenance have occurred. The average course has increased to seven weeks, and in the computer maintenance field some courses are as long as 36 weeks. A number of technicians take more than one course back-to-back to build up their expertise in theory and practice.

As this month's story relates, the training is no picnic. But its value in raising the skills and rewards of the people who take it is known to thousands of FAA professional technicians.

John H. Shaffer
JOHN H. SHAFFER
 Administrator

FAA technicians train
to stay current in

A SCHOOL SECOND TO NONE

Studying alphanumeric alignment of the ARTS III radar is student Guy J. Zeller from Houston.

—Photo by Al Grigaitis

"This is a dynamic agency, working in a dynamic field and offering training second to none in the world." This is how a mixed group of electronics technicians interviewed at the FAA Academy recently characterized the training offered there.

But then I asked:

- Is the school a pleasant change, offering the technician a respite from the daily routine?
- Is returning to Oklahoma City, sometimes as often as once each year, always a blessing?

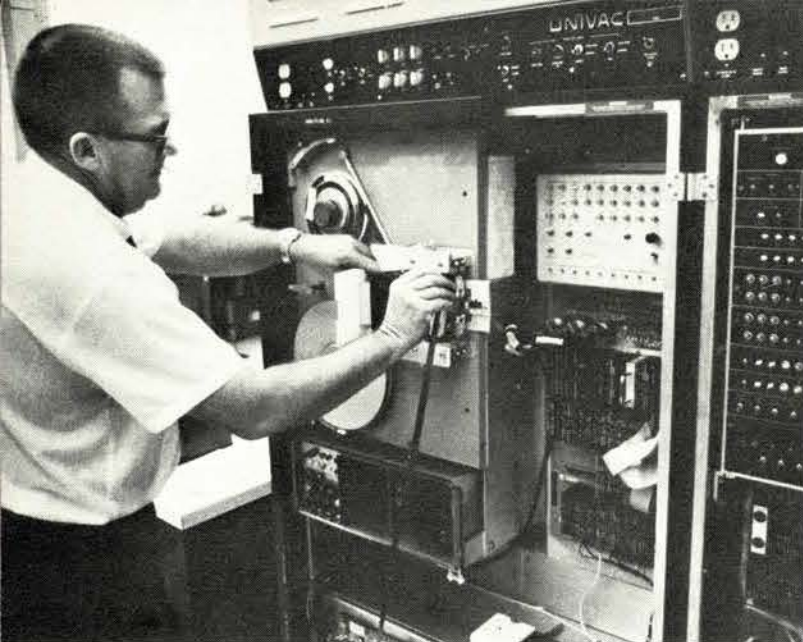
"No," was the consensus on both questions.

To get a better understanding of these answers and a better look at this critical aspect of the agency's

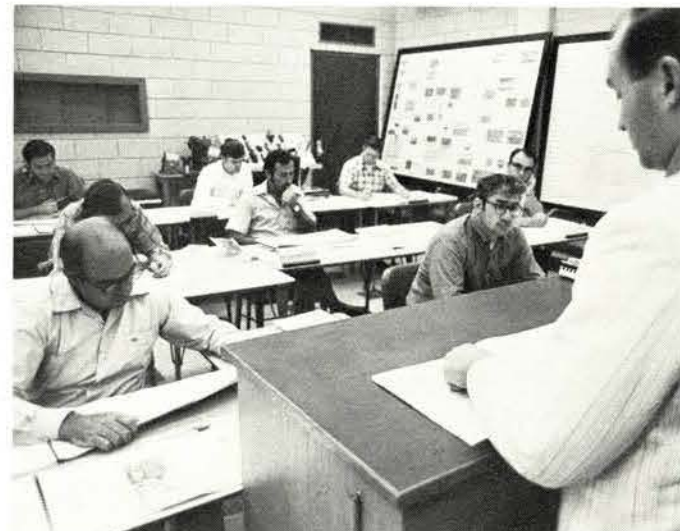
overall operations, we spent a couple of days with three typical technicians studying at the Academy.

For anyone who admires unselfconscious competence, they are very easy people to like. They may be technically oriented, but if you are looking for the mechanical wizard who can fix a radar set with a hairpin but has trouble stammering out his name, forget it. These are thinking, articulate, easy-to-talk-to people.

I found Laurence Meisner of the Abilene, Tex., Airway Facilities Sector in a classroom, talking to his instructor, Jack G. Parker. I waited while the two of them examined a wiring diagram, which I was told



Loading the program tape on an ARTS III radar computer is instructor Doyle Herrington.



An instructor in the Air Navigation Facility, Carl E. Calhoun lectures in an equipment course on airport surveillance radar.



FAA instructor Jack G. Parker clarifies a point for technician Laurence Meisner of the Abilene, Tex., subsector.

somehow helped explain the mysteries of a transistor.

When they were finished, Larry and I had a chance to talk. I asked him why he was at the Academy, exactly what he was doing and how all this helped or didn't help his career.

He sat on the edge of a desk and took a deep breath before he started answering that one. He told me he was at the Academy for the first time, that he had only recently joined the agency after spending 10 years in industry in electronics before joining the agency. "I felt I had gone as far as I could go, and it was quite natural to look toward FAA," he said. He told me that among people in the field, FAA is considered a good place to be.

"Don't get me wrong," he said. "I was doing okay in industry." He explained that he had a good job repairing equipment and training maintenance people, but, he said, "I didn't see a future there. I saw a future with

the FAA largely because of the training opportunities available.

"Take a look at this," he said, opening his notebook. I took a look, but it was Greek to me. "I'm taking the basic course in solid-state devices," he explained. "We're not using much equipment with tubes anymore. The stuff I'll be working on is built around transistors. I'm going to have to know how these work—backward and forward. I have to know when a transistor is bad and I have to know quick. This is going to be essential to me as soon as I get back to the sector." He shrugged. "What I'm getting here is the practical know-how to do the job."

When I asked him how the course was going, he thought for a moment before he answered. "It's no cinch," he said. He told me he put in eight hours a day in class and spent another three hours on homework.

"Don't get the idea that this is some kind of picnic;

it's not. This place is tough. It's good, but it's tough."

This is how Lonnie Willoughby, who is at the Academy for the seventh time in his eight-year career progression with the agency, summed up his feelings. I talked to him in the TACAN lab where he, with other students, was examining partially dismantled equipment.

Lonnie, who lives and works in Panama City, Fla., had scored a 94 in a final exam that day. His marks were consistently outstanding, but he insisted that the pace was fast, sometimes too fast. "We don't come here for a vacation," he said. "All of us have to scramble to keep up. I have more free time at home than I do here."

"But," he said, "I guess going to school periodically is part of the job. This equipment," he pointed with a screwdriver to a maze of exposed wires, "is what we must understand to do our job. This is it. This is what I'll be working on. For all intents and purposes,



The newest equipment is used in the laboratories at the Academy. Here student Robert Floch (kneeling) of the Western Region and George Wheeler, Technical Services Branch of the Depot, study the guts of an ARTS III.

the equipment I'll be working on in the sector is exactly like this."

"O.K.," slim, dark-haired Lonnie said. "We need the training and retraining in order to function. It's necessary as traveling is necessary for the traveling salesman, but this doesn't mean that we have to like it all the time."

"Almost every year I have to move my family to Oklahoma City or spend long periods of time away from them. This gets to be a drag."

Lonnie, who was just finishing a six-week course the day I talked to him and was scheduled to return six weeks later for another six-week course, said that in spite of the inconvenience and trouble, he wouldn't think of missing an opportunity to attend the Academy.

"I'm coming back to take the instrument-landing-system course. Of course, I wouldn't miss it. Fixing that equipment is part of the job. I can't fix it without learning about it. It's as simple as that."

Picking up a delicate-looking screwdriver, he added, "This trip, my wife is with me, and she'll be back with



A veteran of 23 years with the agency, Robert Floch (right), Chief of the Automation Engineering Section in the Airway Facilities Division of the Western Region, is still going to school. Here he stays sharp by checking a computer run.



Students James Geeslin (left) and Lonnie Willoughby check out an equipment drawer in the TACAN lab with an oscilloscope and a probe.



Working out a laboratory problem on transistors at the Aeronautical Center are students Russell M. Swiński (left) from the Eastern Region and Bobby G. Gray from the Southern Region.

me in six weeks. She's a teacher and by coming back she'll lose a full semester's salary." He glanced at me and shrugged.

I watched him work for a moment as he picked through a maze of wires. "Do you really know what all those wires are for?" I asked him.

"I've got to. Somebody's life depends on it."

Robert Floch glanced away from the ARTS III terminal radar display, "FAA does out-produce other outfits; that's not just a lot of pap for recruits," he said.

Bob, who is Chief of the Automation Engineering Section in the Western Region, has been coming back to school since 1949. He remembers when all the buildings were dilapidated wooden barracks and the "Old Green Fly" cafeteria was the only place to eat.

He has been both a student and an instructor at the Academy. Like the newer men we talked to, he says, "It's tough. And it's not getting any easier."

"Take a look at this ARTS III," he said, pushing a button that caused writing to appear on the screen in front of him. "This is just another example of the kind of new equipment we're getting on the line."

He pointed to an open console containing a jungle of wheels and wires and shelves of mysterious looking transistors. "That's the guts of it right there," he said. "You can see why we have to spend some time figuring out what makes this thing tick."

"So that's why I'm here, and that's why these other guys are here."

"On the practical level, we are learning how to maintain this equipment. We are also keeping up with the state of the art in an ever-changing field."

Warming to his subject, Bob added, "The FAA is a dynamic, day after day, operating outfit. This is the kind of outfit I want to be a part of, and I am."

—By Theodore Maher

Direct Line

Q. I am a Supervisory Air Traffic Control Specialist and considered a "key" employee for purposes of participation in the Air Force Reserve. Currently I am a major in the Non-Affiliated Reserve Section (NARS), assigned to the USAF-CAP-LO in New Jersey for the purpose of instructing CAP cadets in a particular squadron. I have tried unsuccessfully to get a "Certificate of Availability" for participation in the program directly as a "ready" rather than a "standby" reservist. I now have more than eighteen "good years" for retirement purposes from the AF Reserve. It is my understanding that a Federal employee with eighteen or more good years is automatically entitled to a Certificate of Availability. However, I have recently been informed that this is no longer true. Could you square me away on eligibility requirements for the Certificate of Availability and tell me the number of the applicable FAA regulation?

A. Prior to 1965, the Agency Order covering the Screening of the Ready Reserve contained a provision allowing those reservists with 18 good years, and less than 20 good years of eligibility toward reserve retirement, to remain in the ready reserve until 20 good years had been completed. In May 1965, Agency Order 3300.4 dropped the provision on the basis that those reservists previously accommodated would have completed their 20 good years. Current agency policy regarding participation in the ready reserve, key positions and issuing of Certificates of Availability is contained in Agency Order 3300.4A, dated 15 January 1970. Appendix 1 to the order lists those positions which have been designated as "key" by the agency. Incumbents of those positions should not be issued a Certificate of Availability.

Q. Several of us working in the same area are interested in knowing why the Whitten Amendment is used as a "hammer over the Wage Grade Employee"? Every time we try to advance ourselves by bidding on a General Schedule job, our bids are always "bounced back" because of the Whitten Amendment.

A. In February 1969, Whitten Amendment time-in-grade requirements, which had applied primarily to GS positions, were extended by the U.S. Civil Service Commission to include movements from Wage Grade to General Schedule positions. This modification was to prevent abuses of the competitive examination system such as the following example: An eligible in the Senior Level Examination could not be reached for competitive appointment as a GS-13. This individual then competed for a custodial job (Wage System) and obtained a career-conditional appointment. Three months later the individual was promoted to the GS-13 for which he originally was not within reach. CSC's modified time-in-grade requirements require establishing a GS equivalent of the WG position when a person is moved. This does not prevent a WG employee from advancing to a GS position for which he is qualified, but it restricts the GS grade level to which he may initially be assigned. There are many problems associated with the pay-rate-comparison method of determining WG and GS equivalent grades. As a result, FAA is seeking some method other than pay-rate comparison to be used; however, time-in-grade requirements *per se* do not prevent the movement of WG employees to GS positions—it only affects the grade level for which they are eligible.

Q. Order EA 6970.1 lists the criteria for air conditioning at some locations. One of these requirements is that personnel be present at the site for 40 or more hours a week. One VORTAC in my sector was air conditioned recently using this criteria; another VORTAC in the sector was not. The second VORTAC is assigned to a unit that has been understaffed for years. Personnel in this unit must not only spread their time thinner, but are further penalized by working in hot facilities. Handbook 1380.9A lists the amount of time each facility requires for proper maintenance. Could not this time along with area temperature be used as criteria for air conditioning? It seems to me this would be fairer and a little more humane.

A. Maintenance hours listed in Handbook 1380.9A are averages of the hours reported for all similar facilities across the agency and for all causes. They do not necessarily represent total hours expected to be spent in or at the facility and are, therefore, not considered appropriate as air conditioning criteria for individual facilities. Order EA 6970.1 also refers to other criteria contained in agency Order 6970.1 (now 6970.1A). It is suggested that you refer to that Order to see if the second VORTAC would qualify for air conditioning under other criteria.



The striking photos on this month's cover, on page three and the one above represent the artistry of Al Grigaitis, an airport lighting engineer in the Airports Division of the Great Lakes Region.

Al produced these effects in the darkroom through a process called "solarization"—flashing the prints with light part-way through development. He treats photography as a medium of self-expression and a means of stressing his individuality. His solarized, reticulated, abstract and straightforward prints, often employing unique composition and selection of subject matter, have graced seven one-man exhibits.

FACES AND PLACES



MUSIC MAN—The second man from the left in this portrait of "The Mutual Funs" barbershop quartet, Bert Volker, spends his days as General Aviation Maintenance Unit Chief in St. Louis. The quartet was selected by the Municipal Opera for a production of "Music Man" in the role filled by the "Buffalo Bills" in the movie version. Volker also landed a speaking part.

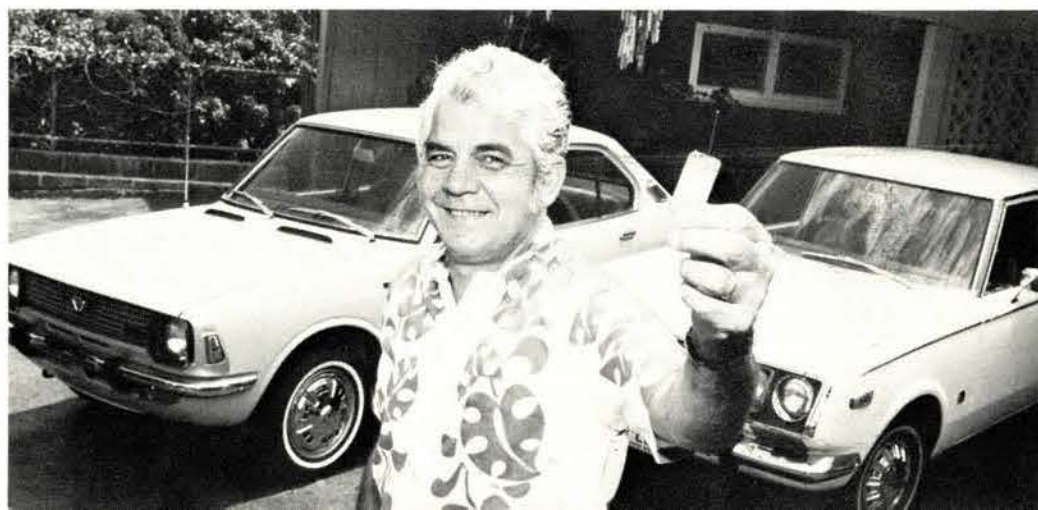


TOP AIDES—Aeronautical Center Director A. L. Coulter presents certificate to outstanding male summer aide, 19-year-old Michael Carrethers. At right is 17-year-old Juanita Vasquez, the top female summer aide from among 91 who participated.



UNSCHEDULED STOP—Mira Slovak, racer and aerobatic pilot, famed for his daring escape from Czechoslovakia in 1953 with a commandeered airliner, paid an unplanned visit to the Otumwa FSS (Iowa) when grounded by weather. Here, Slovak (left) checks reports with specialists Ernie Pyles and Terry Miers.

TAKE A CHANCE—Henry H. Puu did and came out on top twice. A radar controller at the Honolulu Center, his free ticket at a carnival drew a 1970 Toyota Corolla, which he promptly lost to his daughter, Margaret. A couple of weeks later, another ticket at the same carnival netted him a 1971 model, already spoken for by his son, John. Next year Henry hopes to win one for himself.



TRANSP0/72 poster-contest winners were presented with savings bonds by Chester C. Spurgeon, TRANSP0 managing director. First place winner was Phyllis Bauer, Publishing and Graphics Division, HQ. Patrick Cassidy (left), Office of Administrative Operations, placed third and Frank J. Griendling of NAFEC took second honors.



WE POINT WITH PRIDE—David F. Copper and Neil W. Hoffmier of the Bradford, N.Y., FSS, along with David C. Eaton of the Erie, Pa., Tower (not present), guided in a lost plane to a safe landing with five minutes of fuel left. Present at the award ceremony were (left to right) Carl Tutino, New York flight service specialist; Anthony Volpe, Bradford FSS chief (in rear); Copper; Hoffmier; Clay Hedges, New York Air Traffic Division chief, and Dan Bovey, assistant chief of the New York Operations Branch.



GOLDEN ACHIEVER—This year, Frank G. Smith, supervisory electronics technician at Fulton County Airport, Atlanta, passed his bar exam on the first try and got his Master's Degree a year after his LLB, accompanied by nine awards, including a gold trophy for highest average during the course, a trophy for highest senior-year average, seven other awards for highest average in each subject and was named commencement valedictorian.



SAFETY FIRST—One of the first women designated an Accident Prevention Counselor is Ruth Witt, Freedom Field, Medina, Ohio. H. Tavetian, Cleveland GADO chief, presents her with a certificate. Accident Prevention Specialist Tony De Silvio looks on.

NAFEC cut-and-tries
first step toward

FSS MODERNIZATION

In a clearing amid pine trees reached by a rutted road winding into a corner of the National Aviation Facilities Experimental Center's 5,000 acres sits a low, pre-fabricated building which houses what appears to be the most modern flight service station anywhere in the United States.

Inside a room in the building, two rows of consoles, no higher than a man's waist, extend across the carpeted floor. Set into the consoles are computer entry keyboards, TV-type display screens, small checkerboards of switches, clock-face dials and telephones. Against the acoustically paneled wall stand four teletype machines encased in soundproof cabinets with clear plastic lids. At one end of the room stands a pilots' self-briefing desk, which has the same kind of display screen and computer keyboard as the flight service specialists' consoles.

But the vari-colored switches, buttons, screens, dials

The way it is and the way it will be: Memos, notes, messages, teletypes and a thicket of switches, knobs and buttons—several of them non-functional—clutter the in-flight console position at one of today's flight service stations (left). In contrast, the in-flight console position in the mock-up is designed with people in mind, and the paper blizzard is largely replaced by video display screens. The left half of the console contains radio-frequency-selector switches, altimeter and meteorological dials. The right half has computer entry and telecommunications keyboards and flight-progress strips. The console is low enough for in-flight specialists to see out the window when they issue reports of airport traffic.



and consoles are made of plastic and wood, held together with glue and screws. This FSS isn't for real—it's just a mock-up.

It represents, however, a renewed commitment "to provide modern, efficient and comfortable facilities for FAA flight-service specialists, and to meet the needs of the flying public," in the words of Hugh Milligan, the mock-up project manager at NAFEC. Milligan, an air traffic control specialist and now in NAFEC's Test and Evaluation Division, designed the mock-up, which was built by Plant and Engineering Services Branches. The mock-up includes a pilots' pre-briefing lounge in another room.

Twenty flight-service specialists from the nine continental FAA regions were sent to NAFEC to decide for themselves—and indirectly, for their colleagues agencywide—what is and is not comfortable and efficient in a flight service station. Milligan ushered them



Flight service specialists evaluating the mock-up found to their delight that each briefing position has its own telephone within easy reach. Sitting at the clean-cut consoles in the preflight briefing positions are (from left) Arvid Hess, chief of the Denver FSS; Charles Walker, Washington, D.C., FSS; Floyd Lovejoy, Augusta, Me., FSS, and Gene Hosack, Boston FSS. In the background, trying out an in-flight position, is Loren Gibbons, Rapid City, S.D., FSS.

into the mock-up, divided them into two groups to get separate opinions and bade them look at it, touch it, sit in it and think about it for three days. They liked it.

"This is great," bubbled one. "I hope the agency transforms it into nuts and bolts reality."

"Service would improve tremendously," echoed Jerry Clarke of the Hill City, Kan., FSS.

Most flight services are preflight telephone briefings of weather and terrain information given to droves of private pilots. Time is of the essence. Said project officer William Carlton of the Air Traffic Service, "Flight-service specialists will be able to handle a greater number of calls by significantly reducing the time for each briefing through the equipment represented in the mock-up."

When a pilot calls a station for a preflight briefing, the flight-service specialist, using the console keyboard at his fingertips, will query a remote computer for the latest weather conditions, forecasts and constant aeronautical data, such as air routes and geography. The information will appear instantly on an electronic display screen in front of the specialist, who will relay it to the pilot.

Self-briefing desks will be installed in manned and unmanned stations and at many peripheral airports, allowing pilots to extract information directly from a computer system although they could still make direct telephone inquiries of the flight-service specialists.

Instead of listening to squawking bunches of loud-speakers piled atop old consoles and speaking into dangling microphones, in-flight-briefing specialists will be able to use headsets hooked into radio-frequency-selector switches on the new consoles.

"Now, I have to jump up and thumb through teletype sheets to get the weather information I need—like most specialists elsewhere," said Timothy Curtis of the Redwood Falls, Minn., FSS. "It's also a squeeze for space whenever a student pilot comes in to take the test for his license. A flight service station similar to the mock-up would eliminate those problems."

"The sooner we can get rid of all the paper handling and hopping back and forth across the station, the better it will be," remarked Loren Gibbons of the Rapid City, S.D., FSS. "The equipment shown in the mock-up would bring all the data to the man sitting at his position at the console."

After Milligan and the Plant Services Branch



The pilot self-briefing desk features large video display screens and a keyboard (just to left of the screens) for the pilot to "punch up" information directly from a computer. Wesley Monroe of the Poughkeepsie, N.Y., FSS takes the role of a pilot requesting information by telephone from a specialist.

handcraft the mock-up to its final form, based on recommendations made by the visiting specialists, the agency will choose a contractor to build the equipment. "By mid 1973, an entire operational field-test flight service station with the new equipment will be built adjacent to an existing station," said sub-program manager Oscar Grann of the Systems Research and Development Service. "Specialists at the site will evaluate and 'de-bug' the new equipment by working part-time in their old station, part-time in the new."

By the end of 1973, the field-test model will serve as a prototype for the equipment and general layout to be incorporated in all new, rebuilt or relocated flight service stations.

The flight service specialists finished up their three-day visit sitting around a long table hashing over modifications of the mock-up with Hugh Milligan, who had given them critiques to fill out.

"I think the display screens should be exactly centered in front of the specialists."

"The radio-frequency-selector switches ought to be closer to the specialists."

"Sliding-drawer ashtrays would keep the place cleaner than the open-well trays."

The session finally ended, and the specialists warmly praised Milligan for the job he and NAFEC did on the mock-up. Meanwhile, in Washington, plans are proceeding apace to select a contractor by the end of this year to transform the wood and glue into steel and electronics.



A Picture Is Worth . . .

"Vidicom-2 was presented to the weekly team briefing for group 5 controllers of the Fort Worth ARTC Center on 11 July. The presentation was informative and interesting. The controllers were receptive to the program and to the idea of this type of communications channel. There are apparently many types of programs that could be presented in this manner, including public speeches by Mr. Shaffer. Lack of proper communications is a problem and concern of the FAA. Vidicom seems to be much preferred for its visual contact with management and the subjects it deals with over similar attempts with paper publications. We encourage you to keep this program going."

—Jesse A. Porter, ARTCC, Fort Worth, Tex.

We expect to distribute one Vidicom a month. At this writing, three more are in the works.—The Editor

Annuity Unsnagged

"On 17 April, I retired from FAA and was informed that I would receive information as to my annuity, including the 4.1 percent raise effective 1 June. Two-and-a-half months after retirement, I not only have not received an annuity check, but have received no information. One query to the CSC Bureau of Retirement brought a form reply. A second a month later again brought a form letter, this time with a notation that my Navy pay status was being checked. I would appreciate any aid and/or information you can obtain for me."—Irving M. Applebaum, Loma Linda, Calif.

There was some question about your military service but further query from this office led to the Navy clarifying the matter to the satisfaction of the Civil Service Commission. Mr. Applebaum has been getting his annuity since the beginning of August.—The Editor

Scholarships

"In a recent issue of FAA WORLD, I read of the distribution of scholarships for children of FAA personnel. Could you please give me any or all information as to where these scholarships can be obtained. Whom do we contact?"—Helen B. Moore, Cheyenne, Wyo.

12 "Please tell me where I might obtain further informa-

tion on the scholarship awards described in the article 'Getting a Helping Hand,' August FAA WORLD.

"We have a daughter, Cynthia, who will be a freshman at the University of Iowa this fall. Her first year's costs are pretty well assured, but it is questionable after that. She finished eleventh in a class of over 150!"—Bert A. Clayton, ACTS, Bethany Okla.

Formal announcements for the next awards will be made this fall by the chairman of the scholarship committee, James Mollenauer. All regions, centers and offices and services in the Washington headquarters will receive copies of the announcement, which will cover grants for the 1972-73 school term. You may obtain specific information after this announcement. Last year's announcement can be used as a general guide until the new one is issued. Remember: The awards are made solely on the basis of academic achievement and merit, so . . . get those grades up.

—The Editor

Classification Clash

"Ref: May Article in FAA World, 'Hail Columbia FSS.' I wish to take no glory away from the flight-service specialists; they do a great and necessary job, especially here in Alaska where we have so many remote sites. However, I believe that their being classed under the 2152 series is misleading since they in no way control air traffic.

"Such statements as that made by the Columbia FSS chief only add to a misunderstanding of what is an air-traffic controller. He stated that one of his specialists would soon be on duty in the Wichita tower. In essence, this may be true, but I think it should have been made clear that he would transfer to the tower as a trainee. One does not walk out of a FSS and into a control tower, ARTCC or RAPCON and take over as a controller. This was implied in your article.

"I for one would like the series code name changed to properly reflect the duties performed."—Joan I. Olowach, RAPCON, Anchorage, Alaska

The current (7/68) CSC Position Classification Standards state, in part, that Air Traffic Control Series 2152 will include those positions concerned with (a) the control of air traffic to ensure safe and expeditious movement along air routes and at airports, (b) the providing of preflight and in-flight assistance to aircraft and (c) the development, coordination and management of air-traffic-control programs.

Although an employee may be promoted or re-assigned to a position in another option within a particular classification series, it is neither intended nor implied that such action is possible without the candidate meeting certain criteria and/or receiving some type of specialized training. Additionally, the employee will enter that option at a grade level commensurate with his ability, experience and training as prescribed by CSC regulations.

—The Editor



The team that made a happy ending: At the Seattle Center were (top photo, left to right) Controller James R. Birnie, Crew Chief Georgia M. Smith, who retired that same month, and Controller Dee H. Lake. Above are the three from the Klamath Falls FSS who talked the pilot down—(from the foreground) William L. Hartman, Wilfred C. Trew and David R. Simons.

THE TEARS WOULDN'T STOP

Bob Chapman was on his way to Lakeview, Ore., from Redmond, Ore., with his wife and three children. It was late in the afternoon when he realized he was lost. How lost, he didn't realize.

In his first call for assistance, he noted that he was coming up on a lake—either Summer Lake or Goose Lake, he said. Except, he was actually over Upper Klamath Lake, about 75 miles to the west, and almost out of fuel. Lakeview radio alerted the Seattle ARTCC and the Klamath Falls RAPCON—this bird was too far away for them. Long-range radar and the Direction Finder Net established that Bob was 27 miles northwest of Klamath Falls' Kingsley Field.

With Seattle tracking the little single-engine and Klamath Falls FSS relaying headings, the attempt was made to steer him into nearby Chiloquin Airport. As time and fuel ticked away, Bob was unable to locate Chiloquin. So now he was vectored south toward Kingsley Field. With reluctance at being routed over the dark

Dear Sirs:

We as a family and each in turn, would like to express our very deep gratitude and thanks to you for grasping us in the final moments of a tragedy and granting us safety.

We are the family caught on May 2nd in the red and white Cessna 172 Skyhawk, completely lost, on our last ounces of fuel, in a terrible rain storm and skirting around Upper Klamath Lake, thinking it was Goose Lake, when you gave Bob directions and virtually coaxed us to your airport.

You were so right when you said we must have had some interesting conversation during the last few moments. My daughter, age 11, and I were on the verge of hysterics and as the tanks said "empty", we were screaming and begging Bob not to start out over the water and we knew it was all over when we did start over it. I felt stunned then and could only think of them dragging our family from the bottom of that cold, terrible lake. This being our first long trip, we probably acted much worse than someone who has flown many times. I honestly believe those pearly gates of Heaven won't fill us with the feeling that sighting the beacon of your airport did.

My husband remained tense but completely level-headed during the entire situation and I couldn't imagine even someone as calm and cool as he always is not being at least a little upset by the whole thing, and he held up until he stopped the plane and very slowly climbed out. Then when you fellows at the tower waved at him, the emotion overtook him too. I wanted to thank you then so badly, but the tears just wouldn't stop.

So with a lifetime of memories of perhaps the worst and greatest moment of our lives, thank you so much more than words could ever say, for knowing and doing your job so well, but most of all for being there to care.

Bob and Vanda Chapman

waters below, in rain and with fuel so low, Bob followed his advisories.

"Cessna 35 Golf: The highway should be off to your left. Stray over the water and follow the highway."

"You're still on radar 16 miles northwest of the airport. Stay over the water. If you have the highway, follow it."

The Seattle Center advised Kingsley that they had lost radar contact for the second time. Then it was back. Bob was advised that he was passing over the end of the lake, as RAPCON picked him up intermittently 13 miles out.

"Now you're 10½ miles from the airport. The city (Klamath Falls) should be off your left wing."

"You're 8½ miles out. The approach end of the runway should be at eleven o'clock."

But Bob still hadn't the city in sight.

Two-and-a-half minutes later, he had the city in sight . . . then the beacon . . . then the airport.

As a result of excellent coordination between these two ATC facilities and the prompt and professional actions of all the specialists, the Chapmans landed and were able to write this emotion-charged letter that eloquently attests to this professionalism.

EAA Educates at Oshkosh via HOW-TO WORKSHOPS

Seven largely sunny days beginning the first of August brought an aerial "happening" to mid-America that attracted more than half-a-million spectators, including FAAers from many points of the compass. It was the 19th annual sport aviation convention and exhibition of the Experimental Aircraft Association, at Wittman Field, Oshkosh, Wis.

Each day's packed program commenced at 8 a.m. with pilot briefings and ended with films close to midnight. Interspersed were forums galore on all aspects of building one's own plane from plans; precision flying demonstrations; recognition to achievers among EAA's 30,000 U.S. members from 350 chapters; and fly-bys of different homebuilt types so potential builders could see them in action as well as in the display area.

However, the really big news this year in this burgeoning grass-roots movement was the educational thrust seen in a comprehensive program of workshops operating all day, every day. For the first time, anyone attending the event could see, feel, discuss and join

An aluminum gasoline tank constructed by EAAer Lloyd Stoll (left) in daily demonstrations on welding is shown FAA visitors by EAA president Paul Poberezny. Welding a steel tube fuselage was also done at this workshop, with members given the opportunity to practice. Identifiable cap-wearing tour members are (from left): Dean Stromwall, General Aviation; D. D. Thomas, Flight Safety Foundation; Joseph Zacko, NTSB; Dawson Ransome, Ransome Airlines; Bob McKissick, Flight Standards; Joseph Solko, Gulfstream pilot, and Roger Boggs, Flight Standards.



in the work being done in six large open-sided sheds and adjoining tents to learn the latest skills and important facets of building aircraft from plans.

From Washington Headquarters, a score of executives who need to keep abreast of developments in sport aviation as part of their jobs with Flight Standards, General Aviation, Air Traffic and other services and offices, flew to Oshkosh for a day. All were impressed with the workshops, which fit into the agency's long-standing position of favoring education over regulation to achieve greater safety in private flying.

In one of the sheds they visited, woodworking demonstrations were given on laminating a spar for an Emeraude homebuilt. Ribs for the new EAA Acro Sport biplane also were under construction. In another shed, the lost art of oxygen-hydrogen welding of aluminum for constructing fuel tanks and components was revealed—a boon to homebuilders, to whom welding skill is vital.

Sparkling testimony to EAA's already well-earned reputation for superb craftsmanship were seen by the

Touring FAA group listens attentively as EAA President Paul Poberezny (in shirtsleeves) explains how engines are assembled and disassembled in daily demonstrations. Looking one over are (from left): Roger Boggs, Flight Standards; Lt. Col. Charles Aly, International Exposition; Dale Crawford, Bob McKissick and George Stathers, all from Flight Standards; James Greenwood, FAA Director of Public Affairs (in front of an unidentifiable homebuilder couple); Poberezny; William Crandall, General Counsel's Office, and James Pope, General Aviation.



Designed with simplicity in mind, the Evans Volksplane is one that "flies for a dollar an hour." This single-seater is of simple all-wood construction—no metal fittings or cloth covering—and can be built in six months' spare time, according to designer W. S. Evans. The Volksplane has detachable wings for towing and is powered by a modified Volkswagen engine.



One of the most remarkable vintage planes among the 138 displayed antiques—built before World War II—was this DeHavilland Rapide. This twin-engine link with the past was restored by EAA members John O'Brien and Robert Puryear, San Jose, Calif. Note distaff sport-aviation buff cooling off in the shade of the big biplane's lower wing.

visiting FAAers in the 828 beautiful aircraft on display on the ground as well as in the air. Show plane registrations were up 25% over last year. Classified in three categories, the planes when parked between fly-bys carried large signs giving vital information: engine horsepower, cost-to-build, cruise speed, etc. Homebuilts formed the largest group, with 338 planes; Classics (built 1946-1950) totaled 288; Antiques (30 or more years old) included 138 restored vintage aircraft, and Warbirds (WW II) and Specials numbered 65. The "specials" were sailplanes, gyrocopters, hot-air balloon, etc.

Normally unhurried Wittman Field (300 operations daily) turned into a beehive. On the busiest day, Oshkosh Tower Chief Lawrence W. Davis and his staff of 18 controllers—a dozen of them borrowed from other FAA facilities—handled 8,000 takeoffs and landings.

By the end of an officially accident-free week, a record-making 42,129 operations had been safely controlled—twice the total of a normal week at Chicago O'Hare. Area flight-service personnel gave hundreds of daily pilot briefings and processed flight plans throughout the gigantic fly-in, which had an additional load of from 800 to 1,000 itinerant aircraft daily.

On the evening and daily program were three FAAers who journeyed to Oshkosh to participate specially. They were: Assistant Administrator for General Aviation John L. Baker; Dr. Stanley R. Mohler, of the Office of Aviation Medicine; and Accident Prevention Counselor Jerald D. Mertens, from the Milwaukee GADO.

—Article and Photos by Thom Hook.



Six regular Oshkosh tower controllers and a dozen brought in from other facilities kept the air show accident-free. Red lights atop this mobile station flash to bring in homebuilders flying in the pattern. On busiest day, field tallied more than 8,000 operations—triple that of a normal day at O'Hare International.

Plans which home aircraft builders can buy to construct the sport aviation organization's new aerobatic biplane are examined by (from left): Bob Carnahan, General Aviation; James Greenwood, FAA Director of Public Affairs; Dale Crawford, Flight Standards, and Charles Dobson, General Aviation. At far right is former Deputy Administrator David D. Thomas, representing the Flight Safety Foundation.



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Margaret Mead practices opening the sea-going emergency kit aboard a life raft under the tutelage of CAMI's James Simpson, as Fran Bera watches. In the background is the front half of an aircraft fuselage from which the ladies deployed the raft.

Survival Training for Puddle-Jumpers

Margaret Mead and Fran Bera got all wet and James Simpson helped them.

Simpson usually shepherds FAA flight crews through similarly damp procedures in his job as Human Factors Technician for sea and arctic survival at the Civil Aeromedical Institute at the Aeronautical Center in Oklahoma City. The July trans-Atlantic air race from London, England, to Victoria, British Columbia, brought him a famous pair of aviators for a two-day survival course.

Mead and Bera were the first official entrants in this third 5,851-mile race, which highlighted British Columbia's centenary activities this year. Fran Bera is a seven-time winner of the Powder Puff Derby and Margaret Mead won it in 1968 and 1970.

Simpson, whose work includes R & D on sea and arctic survival equipment and aircraft-cabin and cockpit safety procedures, coached the duo on ditching, raft use and signaling procedures. He is an eight-year veteran of the U.S. Air Force School of Aerospace Medicine at San Antonio, Tex., a licensed pilot and a scuba

diver—equally at home on the ground, above it or swimming around it.

Shortly after Mead and Bera signed up for the race, they went to the Aeromedical Institute and spent an afternoon in a survival tank practicing ditching procedures. The women were required to escape from the front half of a C-131-type aircraft suspended over the tank, to deploy and inflate a life raft and to enter the water to practice boarding it.

Simpson instructed the women in attaining the critical aircraft attitude for ditching, checked them out in the full range of normal and emergency navigation and radio frequencies and explained the role of the Coast Guard during rescue missions. Shelter, food and clothing used after ditching or unscheduled landings were also demonstrated.

Thanks to the technical expertise of James Simpson and men like him, these ladies and the other flight crews competed secure in the knowledge gained in this thorough briefing in safety and emergency procedures.