JANUARY/FEBRUARY 1997

FAA Aviation news

AVIATION SAFETY FROM COVER TO COVER

Exclusive Interview With FAA's Hinson

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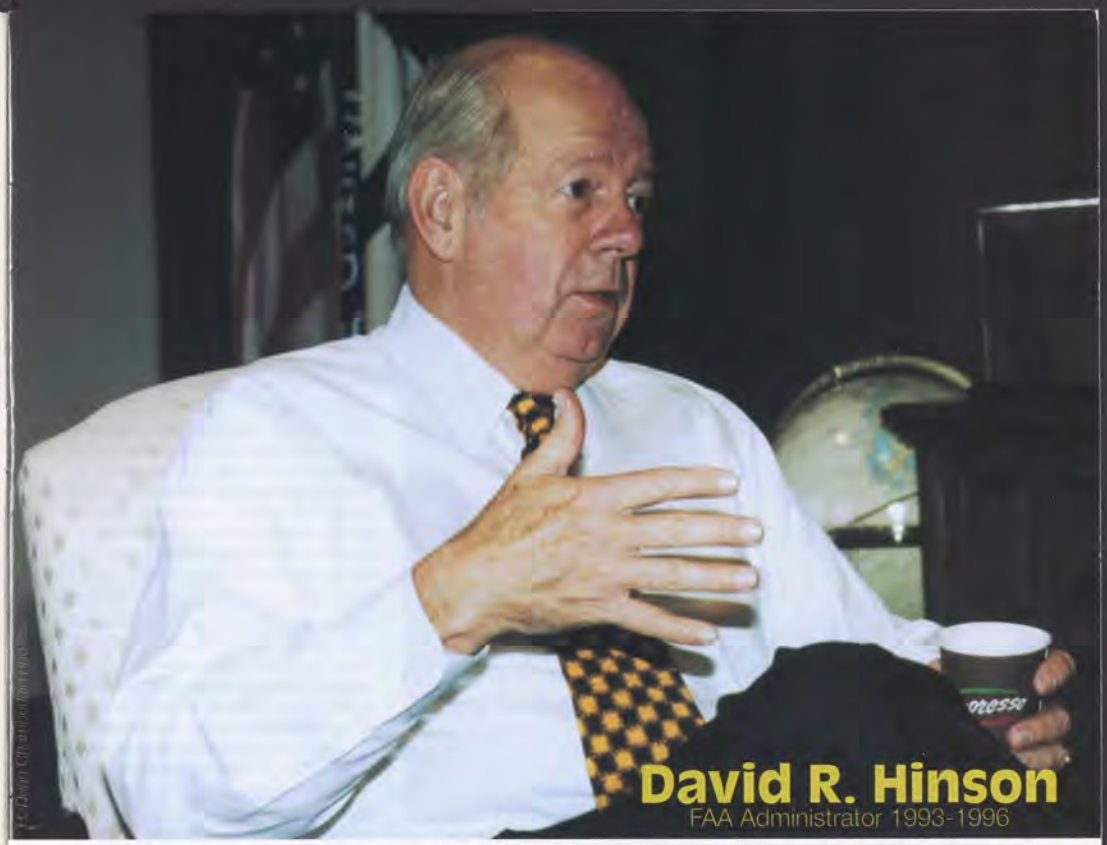


An Interview with FAA Administrator David R. Hinson

by Phyllis Anne Duncan

"Call me David."

No, this is not a tribute to the most famous opening line of a novel in American literature. This phrase embodies the personality of outgoing FAA Administrator David R. Hinson. Whenever anyone—an FAA employee, a pilot, a reporter—would preface something with "Mr. Hinson," the Administrator would invariably reply, "Call me David." Indeed, he has been one of the most approachable FAA Administrators in many years.

One of the first events where I covered Administrator Hinson for *FAA Aviation News* was an Aircraft Owners and Pilots Association's national convention in Orlando, FL. Hinson entered the general session meeting room, filled with a couple thousand AOPA members, without entourage and began chatting with pilots, hangar flying, asking what airplane each owned or flew. Many people were surprised that the congenial fellow who had just been chatting airplanes was the keynote speaker and FAA Administrator.

What I will remember most is his uncanny ability to speak so effectively "off the cuff." FAA speechwriters would spend long hours perfecting the words, and Hinson would set the prepared speech aside and speak from his heart about what mattered to him in aviation. As a result he sounded just like what he purported to be—a pilot not a bureaucrat. Watching him before television cameras or on Capitol Hill made me turn to a public relations expert on my staff and say, "Wouldn't you just die to be his PR person?" There was total agreement.

I remember, too, leaving one Friday

afternoon after a big snowstorm in the area and riding down in the garage elevator with David, who was dressed for the weather in jeans and flannel shirt and mud boots. Quite a contrast to his usual, dapper appearance, but somehow totally believable that he would have no problem dressing practically for the conditions.

And whenever you would encounter him in the elevator or in the cafeteria, he always had a warm smile, and his asking how things were evinced a genuine concern. I think FAA employees in headquarters particularly will miss that quick smile and affable manner. I, for one, will miss the feeling of pride I got when he would say to me, "Magazine's looking great!" (We've had Administrators who didn't even know there WAS an *FAA Aviation News*.)

Before departing FAA on November 8, 1996, Administrator Hinson was able to spend some time with me and talk about the FAA, his legacy here, and the future. I hope you will enjoy reading it as much as I enjoyed conducting the interview.

DUNCAN: What were your expectations when you arrived here? Did you have any preconceived notions of what the FAA would be like?

HINSON: Well, I'd been a customer of the FAA since 1954 when I started flying for the Navy, so I already knew that the FAA was a very professional organization. I am somewhat smarter and more scarred than when I got here, but I really wouldn't trade it for the world. It's been a wonderful experience. I came here expecting a high level of performance and found it.

DUNCAN: What did you hope to accomplish?

HINSON: It's very hard to come into a job like this with an agenda—when you haven't really been in the organization and you don't understand. I came to an agency that had had sporadic leadership—through no fault of my predecessors—but mostly because of political circumstances. For the first year I was here, I pretty much had the senior staff work with me to implement a number of changes that they had recommended. The lines of business for example. Then, after I was in the job for a while, I began a major lobbying campaign with Congress for the streamlined personnel and acquisition system, so that our managers can really manage in a contemporary fashion. And we were able to get Congress to do it, which, I think, is very significant.

Also, the agenda was set by the President to cut government by about 12%, and the FAA accomplished that very well, and we've been able to do that without RIF's [layoffs], and that's very important. We are now at the bottom of that and will be able to hire again.

DUNCAN: What do you consider the most significant accomplishment during your tenure? If there was something you wanted to be known for, what is it?

HINSON: Yes, actually, there is. The inception of the GAIN concept—Global Analysis Information Network. This is a theoretical system of gathering aviation safety information from all over the world and analyzing it. This would be for everybody to use, not just the FAA but any user, any government. If that concept can be developed fully, I'd consider that my legacy.

DUNCAN: What do you consider the highest point of your time here and the lowest point?

HINSON: Well, there are no highs and lows. There is just day to day. I look forward to coming to work everyday, and I think a number of the changes we've made together—the redirection of the Advanced Automation System, one level of safety, international safety assessments, the implementation of GPS—those are the larger issues. On the other hand, there are things that are important but different. The Model Workplace Concept [the establishment of a plan for managers and supervisors to create a positive and hospitable workforce that mirrors the nation's diversity], I'm very proud of. The FAA is a family, and there's room for everybody in it.

DUNCAN: For your future plans, I heard rumors of trout fishing.

HINSON: (Laughing) Well, I've fished as a hobby for many years. But I don't have any plans other than to take a leisurely trip home to Idaho with my wife. Our children and grandchildren will be there for the holidays. So, about January I'll start thinking about what I'm going to do.

DUNCAN: Are you going to buy another airplane?

HINSON: That is a given! I sold my Beech *Baron* when I came to the FAA, and Ursula [Mrs. Hinson] and I are having this debate about what to buy first—a dog or an airplane. I think the airplane will win.

DUNCAN: If you could say one thing to pilots and mechanics to guide them into the future, what would it be?

HINSON: One thing for pilots and mechanics? Boy, that's...I just assume that all of our pilot and mechanics do a great job. They have the skills, and they've obviously demonstrated that by virtue of their licenses. I have great confidence in all of our pilots and mechanics. I never met a pilot or a mechanic or a manufacturer that wanted to be in an accident—ever.

But I think if you look at the future and the way the industry is evolving and the technology is changing, I would say clearly that everybody—pilots and mechanics—is going to have to become computer literate. The technology of processing information is the biggest change confronting everybody, including pilots.

DUNCAN: One of the first things you signed as Administrator was a policy statement on general aviation. Even though we've had the General Aviation Revitalization Act, there are people who say general aviation is still dying. Do you believe that?

HINSON: No, no! It depends on what statistics you look at. The FAA did a number of very important things to help general aviation. We have produced a complete, new, simplified certification process which allows people to certify airplanes much less expensively, much faster, and much more efficiently. And a whole host of new, small airplanes have been certified in this category. That's just one initiative, and another is when the President signed the statute of repose on liability—and Cessna began building airplanes again.

But the marketplace has a way of dealing with this situation. What happens is the older, established manufacturers—Cessna, Beechcraft, Piper, Mooney, Commander—their airplanes all come in at a certain price level, relatively expensive. There is an enormous elasticity in the market, and now what we have coming in at the lower price range are all of these new composite aircraft—Lancair, Cirrus, and so forth. There's a whole new market, a whole new business being developed in this $70,000 to $150,000 range. There are very few voids left in the market, or vacuums, and this group of airplanes is beginning to fill that in very nicely. In fact, the only thing that concerns me is that new pilot starts have been down now for several years.

Probably this is the result of alternative investment opportunities, and because of the fact that everybody flies today. Flying has sort of lost its magic for people. It's just a way of doing business now. You know, my children, your children, grandchildren are growing up on the airplane. To them it's like taking the bus, and so the lure of flying may not be quite as powerful as it once was. The industry is responding to that with various learn-to-fly, get-people-started programs, so I'm confident we'll see the bottoming out of this decline in pilot starts. That's the one significant concern I have.

DUNCAN: *FAA Aviation News* also goes to all FAA employees, what is the message you would like to leave them?

HINSON: Thank you.

DUNCAN: Again, for our international readers—and you touched on this a little bit with the International Assessment Program—would you encapsulate what you believe our international achievements have been while you were here?

HINSON: I was very active with our international organization, and I traveled pretty much every place to meet with my counterparts. Aviation is truly now a global business. We can no longer just think about it in terms of the United States. Fifty percent of the world's commercial flying has been in the United States, but that's now decreasing only because flying has increased in other countries and more and more countries want to fly into the United States. Our bilateral agreements are expanding rapidly. We're building airplanes, parts, engines, avionics all over the world.

The FAA has been and continues to be the reference—underline the "the"—for everybody else in civil aviation, and I've encouraged our international group to continue to play that role. It's important not only for us but for the rest of the world—and not just in safety but in air traffic control and airport development and security.

Our International Safety Assessment Oversight Program was criticized very severely—not by people here, of course, but by people who are not U.S. citizens. How could the U.S. have the temerity to go out and say to another country, "You're not living up to your ICAO pledge on safety oversight, so you can't fly into the U.S. until you fix it." It's amazing what happened after the accident in the Dominican Republic when a Turkish airplane full of German tourists crashed. And that airline was forbidden to fly to the United States because they did not meet ICAO standards.

I should also mention, by the way, that during my tenure here, we added the seventh line of business—commercial space. I want everybody in the FAA to get used to the idea that we are in commercial space. Commercial space for the first time last year had more commercial launches than military, and that trend will continue—a higher proportion of launches will be civil. And this is a real need and a

business opportunity for the FAA.

DUNCAN: We've been accused—the FAA, that is—of being a vacuum-tube culture, but we've had personnel/procurement reform, Challenge 2000, Mrs. Daschle's 90-day safety review. It looks like we're headed for the 21st Century. Do you think there are any surprises in store for aviation in the 21st Century?

HINSON: There are always surprises. I mean, 15 to 20 years ago, nobody would have dreamed that GPS would show up and that ground-based navigation would be essentially obsolete. That won't disappear tomorrow, of course, but this new science [satellite navigation] is astounding. But out there someplace is something that will just take us by surprise. Maybe it's an innovation in propulsion. Perhaps it will be a revolution in communications. Perhaps it will be some other developing technology that nobody really understands now. But they'll be positive surprises, because technology sort of grows by the square, geometrically, and there's a whole lot of research going on now.

This ties right into something that Linda [Deputy Administrator Daschle] and I have been working very hard on, and that's to sort of have a cultural change at the FAA so that all of us in the FAA understand that change has to be our friend, that we live in a time of rapid change, that everyday when we come to work at the FAA there's going to be a new technology and a new challenge. And it's not enough to say the regulations are on the books and we don't need to adjust. That's behind us.

There is no end-state to technology for air traffic, for communications. It's going to be constant change. Psychologically, the agency accepts that—What's new today and how are we going to take advantage of that? Once everyone embraces that, they'll come to work with a smile on their faces.

In the future, though, every increment of safety improvement will be very difficult to come by, but we must do it, and I'll tell you why. I flew back in 1960. I was an airline pilot, and I thought it was safe. And so did everyone else around me. Now, if we took the accident rate per 100,000 departures in 1960 and applied it to 1995, for example, we would have experienced 240+ major air carrier accidents, at least 33 fatal accidents, one every 10 days. Back then we all thought it was safe, but if we had that rate today, it would be totally unacceptable, totally unacceptable.

A lot has happened between 1960 and today to make that the case. In 1960 if we'd said by 1996 airlines would be carrying 550 million passengers, no one would have believed us because then we were only carrying 48 million or something like that. In 20 years we'll have 1.2 billion passengers, and over 15,000 new transport category airplanes will have to be built in the next 20 years to deal with that. And the challenge will be achieving that increment of improvement in safety so that the accident rate will be essentially zero. Can we do it?

Let me give you an example of an area where the rate is essentially zero now. An airline pilot who starts flying today for a large airline any place in the world will fly his or her entire career and never have an engine failure. Never. I mean, if you think about that, that's extraordinary. The probability of any airline pilot today having an engine failure is almost zero. That's how reliable powerplants are. But for us to get from .034 accidents per 100,000 departures to zero, we're going to not only have to invest an inordinate amount of time, we're going to have to do some things differently, because what got us to where we are today will not get us to where we have to go in 20 years. It will not.

DUNCAN: Then, do you believe the FAA is establishing itself to deal with the 21st Century and to "do what we have to do" to reduce the accident rate?

HINSON: Absolutely, I do, and it's interesting to note that the largest revolution in the history of the United States—which we're in the middle of now, which has been around us for the last 25 years—this revolution is information processing, and we process information, especially in air traffic. If there was ever a revolution that was made to order for the FAA, it's this one. We need to make that connection, and I think we're working hard to do that. If there was ever leverage available to the FAA to improve safety, it's in this revolution.

DUNCAN: In the past couple of years the industry has experienced several tragedies that—with all due respect to the human toll—have emphasized and evidenced the lack of the public's understanding of and support for the FAA. How much more is left for us to do to ensure that we receive due credit for our accomplishments?

HINSON: Well, let me just say that I firmly believe the way the FAA does its business should be without regard to whatever publicity may occur or not occur, whether positive or negative. The Press is free to do as it chooses and has a responsibility—which, by the way, it exercises quite well. The FAA always needs to take the high road. We need to do our science in a positive, constructive way. If the public, through the Press, points out an area where the FAA needs to improve, we have to be willing to say, "You're right. We'll improve." On the other hand, where there are obvious errors of fact, omissions, we need to point them out in a professional way.

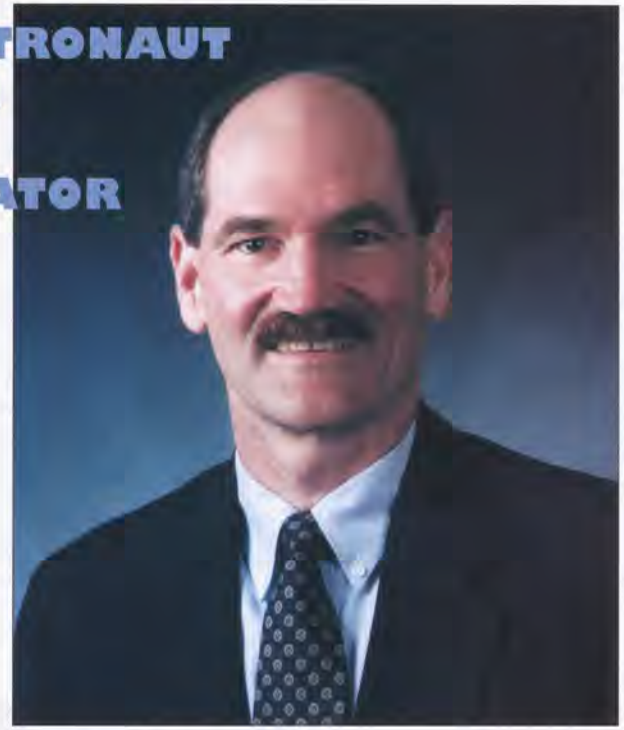
My own belief is that most of the people in the United States believe the FAA is an attribute to safety. We can cite a long list, years of accomplishments. I don't think the men and women of the FAA should get overly concerned about an occasional adverse article. There isn't any organization in the world that performs a public service that doesn't get criticized. On the other hand, the preponderance of evidence is for an agency that does its job well, and we all should take pride in that. We are doing our job, and we have been.

DUNCAN: Any parting words?

HINSON: Well, I'm very flattered and privileged to have been the Administrator. I want to wish everybody—in the FAA and the industry—the very, very best. I hope our paths cross many times.

DUNCAN: I hope so, too.

FORMER ASTRONAUT NAMED FAA ASSOCIATE ADMINISTRATOR



by Phyllis Anne Duncan

The FAA's top career safety position—Associate Administrator for Regulation and Certification—has been filled by Mr. Guy Gardner, who was previously the Director of the FAA's William J. Hughes Technical Center in Atlantic City, NJ. FAA Administrator David Hinson selected Gardner after a nationwide search for an individual to replace former Associate Administrator Anthony J. Broderick after his retirement. (See the September 1996 issue of *FAA Aviation News*.)

As Associate Administrator for Regulation and Certification, Gardner will oversee the certification, production approval, and continued airworthiness of aircraft; certification of pilots, mechanics, and others in safety-related positions; certification of all operational and maintenance enterprises in domestic civil aviation; development of regulations; civil flight operations; and the certification and safety oversight of some 7,300 U.S. commercial airlines and air operators. His workforce consists of nearly 4,300 employees in FAA headquarters and in 125 field offices. According to Gardner, he is "excited about the opportunity to serve the FAA and our nation in the role of Associate Adminstrator for Regulation and Certification. It's a great organization of highly professional people who are dedicated to the safety of aviation throughout the world in an era of tremendous technological change. I'm proud to be a part of it!"

Gardner joined the FAA in 1995 as Director of the FAA's Tech Center, which is the agency's national test center for FAA research and development programs. He had been selected by the National Aeronautics and Space Administration (NASA) as an astronaut in 1980 and served 11 years in development and support of the Space Shuttle and the Space Station. His first flight into space was in 1988 aboard the Orbiter Atlantis. In 1990 he piloted the Orbiter Columbia into space.

Gardner left NASA in 1991 and served as the commandant of the U.S.A.F. Test Pilot School at Edwards Air Force Base in California. He retired from the Air Force in 1992 and returned to NASA to direct the joint U.S. and Russian Shuttle-Mir Program. In 1994 he became the director of the Quality Assurance Division at the Office of Safety and Mission Assurance at NASA.

Gardner received a bachelor of science degree in astronautics, mathematics, and engineering sciences from the U.S. Air Force Academy in 1969 and a masters in aeronautics and astronautics from Purdue in 1970. Trained as a U.S.A.F. pilot in the F-4, Gardner flew 177 combat missions in Southeast Asia and was then an F-4 instructor and operational pilot. After completing test pilot school at the same facility he was to head, he served as a test pilot at Edwards AFB.

Gardner is the recipient of the Air Force Legion of Merit, Defense Superior Service Medals, Defense Distinguished Service Medal, Air Force Distinguished Flying Crosses, 14 Air Medals, and a National Intelligence Medal of Achievement.

Upon Gardner's selection and acceptance, Administrator Hinson remarked, "Guy Gardner's leadership at the Technical Center has been invaluable to the agency. His continued quest for quality and his outstanding management skills will benefit the aviation community and the flying public."

People in AVIATION

by Phyllis Anne Duncan

Franklin J. P. Augustus

Traditionally for Black History Month, we've emphasized the history, writing about the Tuskegee Airmen and Bessie Coleman. But there are African-Americans who today are making history in their own way; we do not now realize it as history, but anything that shapes a people eventually works its way into their history. The African-American we write about here is making his own contribution to his people and ultimately to all people.—Editor

Much has been said and written about the influence of television on children and whether that influence is good or bad. I'm not entering that debate here, but what I want to do is tell a story involving children and television that has resulted in a man taking that childhood influence from television and using it to help fight the current scourge of our young people—drugs.

I can relate to Franklin J.P. Augustus'—or as he bills himself, "The World's Only African-American Professional Aerobatic Stunt Pilot"—television hero, for it was one of mine also. Though we were born only two years apart, we were born into two very different worlds: I, into a middle class family in rural Virginia; he into the urban ghetto of New Orleans, LA. Some in this country still find it difficult to believe that a white southern woman and a black southern man can have a common frame of reference, but we do. And it's Superman.

Superman? The "faster than a speeding bullet, more powerful than a locomotive, able to leap tall buildings in a single bound" guy?

Yep, the very one.

Hundreds of miles apart, Franklin and I both rushed home from school each afternoon to catch the adventures of Superman. I pinned a bath towel to my shirt and ran around the neighborhood leaping over stones and cattle guards, my arms thrust out in front of me. Franklin used his mother's table cloth, much to her consternation, and leapt from first the dining room table, then the stairs, then the front porch.

Why this attraction to Superman? He fought the bad guys, and he always beat them, and, well, Superman could fly. That's what we and thousands of other kids in the 1950's and 1960's did when we pinned towels on or tied table cloths around our necks. We were flying.

Of course, flying the way Superman does eluded Franklin and me, so we had to do the next best thing—learn to fly airplanes.

Where Franklin grew up is an ambition killer, but with a strong and solid upbringing from his parents, grandmother, and his community ("It does take a community to raise a child," he proclaims.), Franklin stayed in school and was determined to be somebody—the message he now gives to hundreds of young people he encounters. A Delta Airlines pilot came to his high school for career day the year Franklin was a senior, and his speech evoked Franklin's memory of trying to emulate Superman. Franklin decided he was going to learn to fly. Describing his first solo, Franklin exhibits the enthusiasm that you quickly learn he infuses in everything:

"One day after flying at Simmons Army Air Field, NC, my instructor got out of the airplane at the air traffic control tower. You see, this is where we were going to eat lunch, but he turned to me and said, 'Give me three touch and go's and a full stop.' It seemed that all of my aeronautical knowledge flew out the window! Suddenly, everything clicked, and it was fun!"

Franklin received his private pilot certificate in 1977, his commercial certificate a year later, and his flight instructor certificate a year after that. Then, the aerobatic bug bit him.

Yet, flying is but one part of this active man's life. Franklin attended North Carolina State University and was a sergeant in the U.S. Army, where he was an MP and narcotics agent. He continued his law enforcement career after leaving the Army, working with various sheriff's departments in Louisiana and operating his own detective agency in New Orleans. As a Reserve Deputy for Civil Sheriff Paul R. Valteau, Jr., (State of Louisiana Parish of Orleans) Franklin developed a school talk program for the department. He was also the chief pilot at the Georgia Institute of Technology in Atlanta, and he is currently President of Atlanta Air Shows and Stunts International. Franklin has been performing in air shows around the country for 11 years professionally, and quite accurately and proudly bills himself as the world's only African-American stunt pilot.

His trademark performance was a comedy act with the premise of a non-flying passenger going aloft in a remotely controlled airplane, manipulated by the show's announcer. The conversation between the announcer and the "passenger" is heard by the crowd, and the "passenger" does just fine until the remote control transmitter breaks! The plane is out of control! The announcer tries to talk the "passenger" down but succeeds only in getting the "passenger" to perform loops and rolls and other aerobatic maneuvers. Finally, the plane lands safely, and out pops Franklin J.P. Augustus—aerobatic pilot, martial artist, scuba diver, movie stuntman, and the alter ego of The Drug Fighter.

Oops! I've just given away The Drug Fighter's secret identity.

The Drug Fighter is quite simply that, and like many comic book superheroes, he was created out of adversity. In fact, the reasons Franklin became The Drug Fighter are the only thing he is circumspect about. "A good friend," he said, "succumbed to drugs and violence in the mid-1980's, but I saw so many others headed the same way—toward a dead end and ultimately death."

And so he created The Drug Fighter. His promotional flyer explains it:

"The Drug Fighter is a young black man who emerges from the ghetto after witnessing firsthand the pain, tragedy, and destruction that drugs bring into the lives of young people. The Drug Fighter has dedicated his life to fighting drugs...The Drug Fighter always appears wearing his trademark mask, which keeps his identity from those evil-doers whose wickedness he is dedicated to destroy."

This may sound a little hokey to some of our more jaded readers, but I watched some kids surround Franklin in his superhero costume—red and black with yellow "DF" emblazoned on his chest, his mask covering half his face. They were enthralled, and they were listening to him, and if you can get them to listen, and if you can make a positive impression on them early, maybe just maybe they'll be able to make the right decision when some sleazy drug dealer preys on their youth. "Besides," Franklin says, "I can't wait for the other guy to do this."

I met and interviewed Franklin during the Confederate Air Force Air Show at Frederick, MD on August 23. Just a few days before, the Federal Bureau of Investigation had released statistics showing that drug use by teenagers—starting as young as 12 and 13—had skyrocketed since 1992. When young people were interviewed for this survey, they indicated that adults—their parents or any other adults—telling them not to do drugs had little effect on them. "Just Say No" they scoffed at, claiming that no one can understand their lives, the pressures they live with, and the choices they must make. (Suffice it to say when you're that age you tend to forget that adults were that age once, too.) However, they did listen to their peers concerning drugs, and they identified with comic book or cartoon heroes with a message.

That is what the Police Department's Youth Program and Mayor James S. Grimes had in mind when a special appearance by the Drug Fighter was arranged for the City of Frederick school kids. They not only saw the Drug Fighter and heard his message, but they also saw other local kids having an active part in aviation. Frederick's Air Explorer Post 1825, under the leadership of John R. Shimer, Jr., acted as Franklin's ground crew and security at the air show.

The Drug Fighter concept, then, is perhaps not so far-fetched. "We need

more like him," says Mike Donovan of Control Aero FBO, based at Frederick and one of Franklin's sponsors. "Franklin has an important message, and kids listen to him." Franklin also feels that when he can tell kids that he made it out of the ghetto with hard work and without drugs that it might make a difference to them, hearing it from someone who has faced the reality of the streets.

Franklin appears as The Drug Fighter without his Pitts Special at schools across the country, and he delivers the same message that Delta pilot gave him so long ago: Aviation holds opportunities for anyone willing to work hard and be somebody. He also sees aviation as the bridge "between the airport and the community. Aviation has a host of great jobs to work toward."

Franklin is careful about who sponsors him, so dedicated is he to the anti-drug message. As my car-racing brother knows, the sponsors with the biggest money and the most willingness to get their logos in front of your face are beer, liquor, and cigarette companies. "I don't care whether they're legal or not," Franklin says, "A drug is a drug. I can't say to a kid 'Don't do drugs,' and display a beer company's name on my plane. Kids can spot a hypocrite a lot easier than an adult can."

Franklin is also aware of and careful with his position as a role model for especially African-American youth. He tells them about Bessie Coleman, Gen. Benjamin O. Davis, and the Tuskegee Airmen. He is a member of Black Wings Youth Association, the roving correspondent and alternate-board member of the Lake Charles (LA) Chapter of the Tuskegee Airmen, a member of Negro Airmen International and participant in its annual summer flight academy for youth at Tuskegee, and a member of the Organization of Black Airline Pilots. He is also an active CFI whose aerobatic students include John Amos (better known as JJ's dad in the TV show "Good Times"), an FAA Aviation Safety Program Counselor, and last September was designated an Aerobatic Certification Evaluator (ACE) through the Dulles (VA) FSDO. As an ACE he now tests and recommends other aerobatic pilots to be civilian aerobatic performers. His dream is to someday form the first African-American Precision Flight Team and crew involving kids from the innercity.

Franklin emphasizes dedication and professionalism in all one's endeavors. "Everyone has dignity and pride inside," he says, "and drugs take that from you. Don't let anyone take your dignity and pride." He tells kids, "In the loop and tumble world of air show aerobatics, there is no room for artificial barriers, only real challenges and work, work, work!" Franklin reaches out to all youth, but he knows he has a responsibility to African-American youth to emphasize education and show them alternatives to sports heroes. "Midnight basketball is okay," he says, "but kids need more. They need to see that you can be successful and respected in all professions, not just sports. I mean, with hard work and application, anybody can be a pilot. There's only one Michael Jordan."

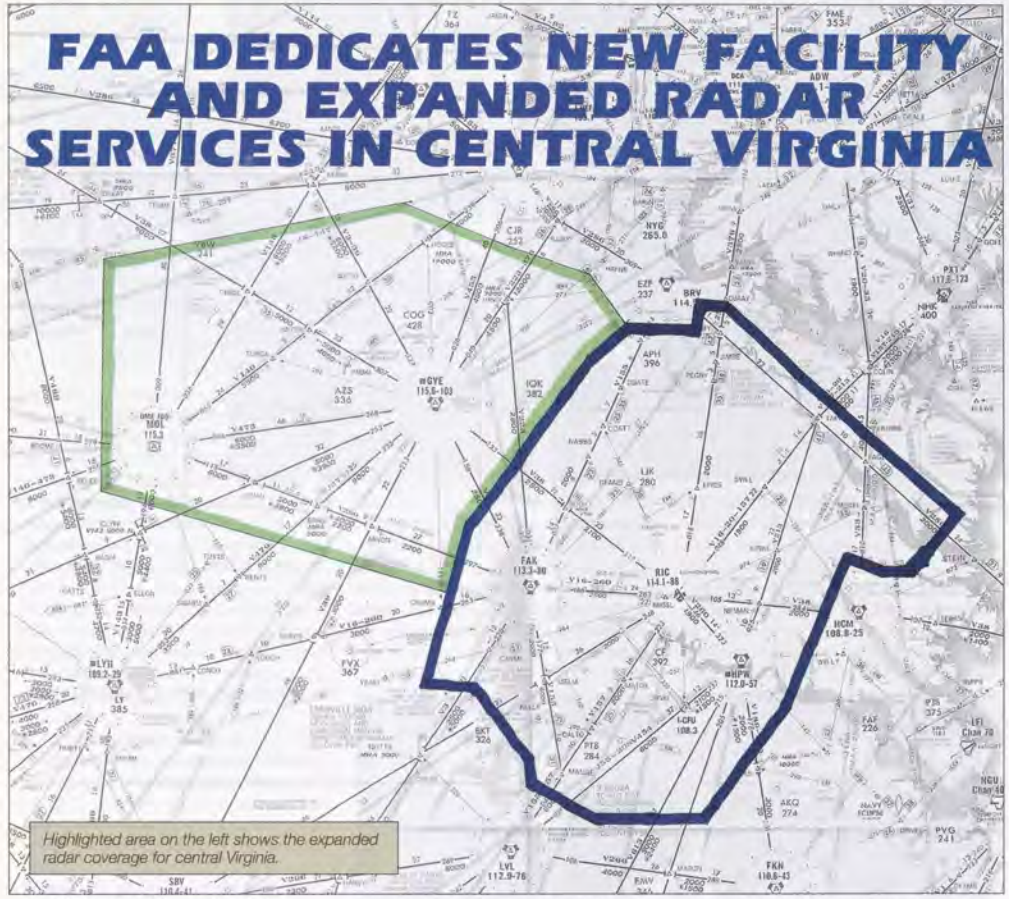
In his superhero costume, Franklin stands out in an air show crowd, but with good reason—you can't hear the message unless he gets your attention. Adults may look askance, but the kids look on with enthusiasm, and Franklin is tender with and solicitous of them. That is important to a child, and that attention paid to them by someone larger than life who pushes a high-performance aircraft around the skies is something they'll remember always.

And, when Franklin performs as "The World's Only African-American Professional Aerobatic Stunt Pilot" in his red, white, and blue Pitts S-2B, he is faster than a speeding bullet, more powerful than a locomotive, and able to leap tall buildings with a single bound.

The bad guys better look out.

Our thanks to Mike Donovan (Chief Pilot and Director of Charter Operations) and Malcolm VanKirk (President) both of Control Aero at Frederick Airport and Bob Flint of the Confederate Air Force for their help in preparing this article. Franklin can be contacted through Atlanta Air Shows and Stunts International, Inc., P.O. Box 16603,Atlanta, GA 30321, phone 404-264-6214, FAX 404-355-5410.

FAA DEDICATES NEW FACILITY AND EXPANDED RADAR SERVICES IN CENTRAL VIRGINIA



Highlighted area on the left shows the expanded radar coverage for central Virginia.

by H. Dean Chamberlain

Richmond Flight Standards District Office's (FSDO) new office and Richmond's Terminal Radar Approach Control (TRACON) expanded radar coverage of the Charlottesville, VA, area were formally dedicated at the Richmond (VA) International Airport on August 15.

James D. Barton, Manager of the Richmond FSDO; Warren J. Meehan, Manager of the Richmond Air Traffic Control Tower; and Gary L. Davidson, Manager, Richmond Airways Facilities System Support Center, hosted the joint 11:00 A.M. ceremony at the new Richmond FSDO facility.

Dozens of guests attended the ceremony including members of the Richmond, Charlottesville, and the southeast Virginia's Tidewater aviation communities; Richmond and Charlottesville airport officials; current, former, and retired FAA employees; FAA officials; and FAA friends.

Following the ceremony, the Richmond TRACON, located in the airport's main terminal building, held an open house so guests could see first hand the expanded radar coverage area as radar controllers worked traffic throughout their expanded service area.

NEW FSDO LOCATION

Richmond FSDO's new address is 5707 Huntsman Road. Located beside the Virginia Aviation Museum on the north side of the airport, pilots can land at the airport and taxi to the FSDO. For those persons driving to the FSDO, Richmond's interstate highway system passing near the airport makes it an easy drive to the new office which is near the entrance to the airport's main terminal access road.

Manny Weiss, Special Assistant to the FAA's Eastern Region Administrator, addresses guests and FAA employees in the common entrance to the new building shared by Richmond FSDO at Richmond International Airport. (H. Dean Chamberlain photos)

For those not familiar with the area, the easiest way to find the FSDO is by following the signs to the Museum.

The new FSDO facility is part of the Flight Standards Service's ongoing efforts to provide the aviation community with the best possible service by upgrading its facilities and public access nationwide. The new Richmond FSDO facility does just that by providing its aviation "customers" easier access to its Flight Standards services while providing easier access to more customer parking. The office's new, private meeting rooms and conference areas also provide much needed privacy for airmen discussing aviation matters with the office's aviation safety inspectors.

Guests and FAA employees enjoy refreshments after the dedication ceremony for the new Richmond FSDO facility and expanded TRACON area.

The new facility also provides the FSDO's 24 FAA employees better working conditions and more space to do their jobs.

In talking about the new office, Skip Watson, the FSDO's Safety Program Manager, said, "The office manager, 'JD' Barton, worked closely with all FSDO employees in the design and layout of the new office to provide for everyone's needs.

"JD worked hard to correct the problems of the old FSDO while considering the desires and needs of FAA employees at the new office. Efficient work flow and providing for customer needs were important factors considered in laying out the workspaces," Watson said.

Customer needs are important since Richmond FSDO serves 7,479 pilots within its area, 3,328 maintenance technicians, 30 FBO's, 48 FAR Part 135 operators, one FAR Part 121 air carrier in precertification status, 28 FAR 121 air carrier operators for geographic surveillance, 29 repair stations, and 40 other operators, air agencies or schools.

Richmond FSDO is lucky. Its new office is still located on the Richmond airport and pilots can taxi to the FSDO. This convenience is not true at all FSDO's. Because of the rising cost of office space at many airports, some upgraded FSDO's have been forced to move away from their respective airports' operating areas to keep office costs within budget. Some FSDO's have moved across the street. Others have moved even further away.

A SPECIAL THANK YOU

During the ceremony, a special thanks was given to Virginia's Aviation Historical Society for loaning old aviation photographs and artwork to the FSDO for display in its new office spaces. The old photographs and artwork add a unique historical aeronautical flavor to the office that balances the office's modern modular workspaces. The contrast between the old historical aviation artwork and the office's modern computerized workstations and contemporary artwork provided by some FAA employees shows the tremendous progress made in aviation and technology from the beginnings of powered flight through the present.

The entrance and parking area for the new building that the Richmond FSDO shares with other tenants. The FSDO is located on the left side of the building.

EXPANDED RADAR SERVICES

That progress is exemplified by the radar coverage provided by the new ASR-9 radar site at Piney Mountain near Charlottesville that allows the Richmond TRACON to provide radar services in that area. According to Meehan, the expanded Richmond Terminal Radar Approach Control area now provides pilots radar services northwest of Richmond out to the Charlottesville area up to 9,000 feet MSL. Washington Center controls the airspace above 9,000 feet MSL over the TRACON's area.

The TRACON works closely with both its neighboring TRACON's and Washington Center to coordinate low-level traffic flow through the mid-Atlantic area.

"We can see an area of 170 miles northwest to southeast and 100 miles wide across central Virginia from west of Charlottesville to the Atlantic Ocean at Virginia Beach," Meehan said. "We only own a footprint inside that area from the surface up to 9,000 feet. Washington Center controls the airspace above us, he said."

"We currently have 33 controllers on board with 27 of those at the full performance level. We have three or four people in a training status which is a combination training status since we perform duties both in the tower and radar room. All of the trainees have completed their training in the tower option and are in some stage of the radar training program."

When asked how many aircraft the Richmond TRACON handles during a normal day, Meehan said, "In the past we would handle approximately 725 arrivals and departures at Richmond and other local airports as well as en route operations transiting the area per 24 hour day. In June we averaged 1,041 operations per day for our busiest 15 days that month, and we averaged 1,043 operations per day for our busiest 15 days in July. We have worked as many as 1,245 operations per day since we commissioned the Charlottesville airspace and as many as 118 operations in an hour. With our expanded coverage area, we now average about 1,040 operations per 24 hour period.

"We expect that the Richmond Air Traffic Control Tower will be reclassified from a Level 3 to a Level 4 facility after November 1996 because of our estimated 17,000 or more instrument operations per year."

To prepare for this expanded service, the Charlottesville radar site was commissioned March 13. The expanded radar service was commissioned on May 24, 1996.

The greatest change the new radar service has brought to the Charlottesville and Shenandoah Valley areas has been in efficiency. According to Meehan, "Although safe is safe, the new ASR-9 radar gives approach control now more flexibility to move more traffic much faster. As a result of the new radar, the overall efficiency in the new airspace has increased tremendously," he said.

DEDICATION PARTICIPANTS

Participating in the dedication ceremony were Manny Weiss, Special Assistant to the FAA's Eastern Region Administrator, who spoke on behalf of the Regional Administrator Arlene B. Feldman; David A. Kaechele, Chairman, (Virginia) Capital Region Airport Commission; David L. Blackshear, Executive Director, Capital Region Airport Commission; and Bryan O. Elliott, Director of Aviation, Charlottesville-Albemarle Airport Authority.

Each recognized the work and effort that went into obtaining the new FSDO facility and that which went into gaining the approval for and the equipment needed to expanded the TRACON's service area. Both efforts took months and years of hard work by many people at the local, state, and federal levels to make the dedication ceremony possible.

90-Day Study Proposes Changes For FAA

by Phyllis-Anne Duncan

Last spring former FAA Administrator David Hinson tasked Deputy Administrator Linda Hall Daschle to conduct a 90-day safety review in part because of concerns arising from the May 11 ValuJet 592 accident. The issues included concerns over the effectiveness of the process by which FAA certificates air carriers; concern over so-called "start-up" carrier oversight, particularly contracting out of maintenance and training and rapid growth; and concerns about the level of FAA inspector staffing and training.

Hinson asked Daschle to form a working group of FAA management and labor to examine existing federal aviation and other regulations relating to aviation, FAA's oversight of commercial airlines who substantially contract for certain services, and flexibility in the deployment of FAA inspector resources. The group reviewed FAR Parts 121, 145, 142, and 119, all inspector guidance material, and initial certification requirements (Task Force 1). It also examined FAA resource allocation and certificate management (Task Force 2). Their efforts were overseen by an Executive Steering Committee headed by Daschle and comprised of a former NTSB chairman and FAA and OST executives.

Both Task Forces met almost continually over the 90-day period and developed recommendations which were validated and included in a final report issued on September 16, 1996. Following are the recommendations adopted by the steering committee and some discussion and/or explanation of significant changes in FAA processes.

1. **Rigorously enforce DOT and FAA application procedures.**

- Require complete information from applicants
- Use the "gate" concept; i.e., a process where certain conditions have to met before proceeding to the next step
- Create a National Certification Team
- Impose application fees to assure that only the most serious applicants receive FAA resources

The National Certification Team (NCT) would ensure standardization of the certification process for all applicants nationally, eliminating so-called "certificate shopping;" it would encourage and disseminate "best practices," assist and train principal inspectors on the certification process, assist in coordination with OST, develop five-year surveillance plans for new carriers, and conduct all of FAA's in-depth inspections of carriers.

2. **Improve surveillance and follow-up activities to mitigate safety risks. Ensure that safety information reaches the right people at the right time, and improve data quality.**

Surveillance and enforcement would be targeted to the carriers needing it most, and there would be a specific plan for each carrier; all available data from previous inspections would be used, and inspectors would have specialized assignments; carriers would be targeted based on data collected from previous inspections which show possibly unsafe trends; carrier internal audit information and industry "best practices" would also be considered.

- Safety data collection and implementation would be in a cooperative partnership
- The management of that data would be centralized and a data quality assurance program established
- Funding and deployment of the On-line Aviation Safety Inspection System (OASIS) would be expedited. (OASIS is a system that would put more complete inspection information on all airlines at any inspector's desktop computer, and there would be the ability for the inspector to generate "ad hoc" reports on specific carriers for analysis.)

3. **Ensure that newly certificated air carriers have adequate resources and infrastructure to support stable and safe operations and growth.**

Air carriers have always undergone a significant and in-depth certification process wherein all pilots, aircraft, and facilities are inspected and determined to be in compliance with the appropriate FAR. In some cases this is a "paperwork" inspection; in others it is an actual physical inspection or a practical test.

Carriers must also have an adequate management structure and a means for training and maintenance. Much like the supports of a bridge or the foundation of a building, this is called the carrier's "infrastructure." Rapid growth, financial problems, high management turnover can undermine that infrastructure, and safety can be diminished as a result. Currently, there is no standard to indicate that a carrier is growing beyond its means to manage that growth, and there is no FAA differentiation between an "established" carrier and a newly certificated carrier in its surveillance work program. Also, the only economic review of a carrier is conducted by the Department of Transportation before certification occurs but not after.

As a result, the Commission included under recommendation 3 the following:

- Heighten the level of surveillance of newly certificated air carriers for at least the first five years of the company's operation. FAA will establish procedures to assess risks of new carriers and then concentrate FAA resources on those areas of concern. Areas of risk will be determined from the data collected and reviewed as per Recommendation 2. FAA would then increase surveillance of the carrier and work with the carrier to help implement industry best practices.
- Initiate periodic, coordinated DOT and FAA reviews of newly certificated air carriers that assess management, financial, and operational capabilities. FAA will begin requiring new carriers to submit "progress reports" every year detailing the carrier's fleet, future operating plans, updated financial statements, and information on any changes in ownership or management. DOT would also review financial reports, and DOT and FAA together would determine if a more in-depth review were required, e.g., if there had been substantial management changes or frequent or unusual compliance problems. Copies of reports on the carrier will be provided to the president or CEO to keep top-level management aware of any inspection findings.
- Manage safe growth of newly certificated air carriers through FAA use of operations specifications that specify approved numbers of aircraft and aircraft types and scope of operations and, where appropriate, through DOT's increased use of conditional approvals. FAA will develop a "growth model" for inspectors that will define a carrier's safety needs when operating a small or mixed fleet of aircraft and what will be needed as the carrier grows. The model will cover personnel, equipment, facility, training, and maintenance needs. The model will include "triggers" that would indicate if, when a new carrier wants to expand, the carrier has sufficient quality control and staff (including training and experience) as well as contractor oversight to accommodate the expansion.

4. **Ensure that all air carriers have adequate resources and infrastructure to support outsourcing and operation of a varied fleet mix. Require specific information related to outsourcing and fleet mix in the DOT and FAA applications. Increase DOT and FAA scrutiny of these factors in determining an air carrier's initial and continuing qualifications to operate.**

The latest non-word invented by the media is "outsourcing," and this term was heard a lot in connection with not only ValuJet but other so-called discount carriers. (I guess contracting was too dull a word, so someone came up with "outsourcing.")

As used currently, "outsourcing" means the contracting out for services, i.e., contracting. Some air carriers have large, in-house departments to conduct maintenance or training. For example, American Airlines has numerous maintenance bases across the country, and the mechanics working on AA aircraft are AA employees; United

Airlines has a huge training center in Denver where it trains its pilots in the most modern aircraft simulators. This, of course, requires a great deal of capital, and a start-up carrier may not be able to acquire that amount. Consequently, they contract with companies that can perform these services for them; e.g., FlightSafety International may train the pilots, and SabreTech may perform the maintenance. The instructors and mechanics are not employees of the air carrier but rather employees of the company providing the services. Typically, services can be contracted for less than the costs of establishing a similar, in-company department.

Up to the time of the 90-day review, applicants had only to indicate on their applications which services would be contracted out and to whom; there was no requirement to show the FAA how the carrier planned to conduct quality control and oversight of the contractor. The situation can become even more complex when a contractor employs subcontractors and so on; this can occur without the carrier or the FAA being aware. Consequently, part of Recommendation 4 will be:

- Require more information in the application on "outsourcing" and operation of a varied fleet mix, including: the percentage and type of in-house vs. contract maintenance and training; what corporate position will oversee contract maintenance and training; identity of the individual designated to serve in the position and that person's qualifications; and the adequacy of the applicant's maintenance and training budgets.
- Require that specific items on "outsourcing" be included in the air carrier's manual and incorporated by reference in the carrier's operations specifications: percentage and type of in-house vs. contract maintenance and training; identity of the corporate position overseeing contract maintenance and training and whether the position is full-time or part-time; and how the corporate structure will integrate into its safety programs the diverse services provided by its various maintenance and training contractors.
- Encourage the air carrier industry to develop a model for "outsourcing". Encourage inspectors to evaluate "outsourcing" routinely and use the model as an additional evaluation tool.

The model contract would address areas of concern, i.e., oversight and audit, access by FAA to a contractor's facility, adequacy of staffing levels and what kind of facilities and equipment would be needed to support a varied fleet mix, and adequacy of record-keeping and exchange of information with the contractor. FAA already would have access to a contractor's facility because in order to provide the service contracted for, the contractor would have to have been certificated by the FAA as well. However, when conducting surveillance or inspections of repair stations, for example, the FAA would not necessarily look at the repair station in the context of supplying services to a specific air carrier. The model contract would be used by the inspector to remind him or her to examine the contractor not just for overall compliance but also how well it is performing the required work for the specific carrier.

Furthermore, the FAA would have to:

- Develop guidance and training to give inspectors a broader perspective on air carrier operations and to help them recognize and identify systemic deficiencies.
- Establish policy and guidance requiring a new air carrier to adhere to the manufacturer's maintenance program, time intervals, and maintenance procedures.
- Develop policy that provides for air carriers to maintain a current Statement of Compliance.

(A Statement of Compliance is required at the initial application process and a plan whereby the carrier explains how it will stay in compliance with the FAR. There currently is no requirement for it to be updated.)

- Develop common policies and procedures applicable to "parent" and "satellite" repair station certification and surveillance.

(Some large repair stations have a main base and several satellite offices that could be certificated and surveyed by different FAA offices.)

The remaining two objectives affect the FAA inspector workforce and are designed to improve the quality of its guidance and to ensure that there are enough inspectors hired and placed to conduct inspection and surveillance of an industry which is growing rapidly. As such, we will simply list them here, rather than explain them at length. The effect of these recommendations on the industry will be a more consistent application of guidance to all operators. FAA has already been approved to hire additional inspectors in 1997 over what had already been authorized. The review determined that FAA's staffing needs were short by 528 inspectors and that the FAA needed inspectors not only to do the job today but to meet future workload. These additional inspectors will be placed across the country where staffing models indicate additional resources are needed. Training of inspectors will also be reviewed to ensure that all inspectors (experienced and newly hired) will have the resources and experience to deal with current and future industry growth. Automation will be a big part of that picture.

5. **Ensure consistency, timeliness, usefulness, and accessibility of guidance material provided to inspectors and air carriers.**

6. **Ensure that Flight Standards resources and training are adequate to meet safety requirements.**

Copies of the entire report of the 90-day review may be downloaded from the FAA home page http://www.faa.gov/apa/ publicat.htm ; click on "90-Day Report on Airline Safety and Security" and follow the instructions.

Of Mice and Men, and don't let the Dog get out!

by H. Dean Chamberlain

Sometimes we read something that after a moment's thought we say, "No," that couldn't really happen. Someone just made that up. But in the dynamic world of aviation, the truth is often stranger than fiction.

Oh, My Aching Head

For example, during August 1996, the media reported about an 80 year old man whose airplane crashed in California. What made this story unique was the man survived a day and a half in three digit temperatures at the crash site. At the time, California was making the news by having a series of 100 plus degree Fahrenheit days. According to the pilot, his small airplane could not develop enough power to clear some trees. In his hospital bed interview, the man said he almost made it until his one wheel hit the top of a tree and his plane landed up upside down on the ground.

Next, the man discovered one of the most basic laws of Nature: Gravity. When you are upside down in an aircraft and you release your seatbelt, the chances are very good that you are going to land on your head. In describing what happened when he released his seatbelt, he confirmed that it hurts when you fall and land on your head. Gravity wins again.

Although he suffered a broken back in the crash, the man survived his day and a half ordeal in amazingly good shape with what appeared on TV as only minor visible cuts and bruises. The feisty octogenarian's main concern during the interview was when was he going to get out of the hospital.

He was one tough pilot.

Although we have not seen the accident report on this accident, we suspect density altitude may have had something to do with the crash.

The Dog Who Would Fly

The next stranger than fiction story comes from the FAA's Flight Standard's Alaskan Flyer safety pamphlet. According to its August/September 1996 issue, "A wheel-equipped Champion 7AC sustained substantial damage during an aborted takeoff from an off-airport site about 20 miles west of Clear. The pilot and his dog were not injured. The pilot reported he had placed his dog in the back seat and had just lifted off when the cabin door popped open. The pilot said his dog immediately tried to get out the door and was partially through the door when the pilot began to abort the takeoff. The pilot said he was trying to

close the door, restrain the dog, and abort the takeoff all at the same time. The airplane touched down and continued to roll off the end of the usable surface into a small depression and bog where it nosed over. The pilot was uncertain if the door opened because of the uneven terrain or because his dog moved the door latch."

This is a takeoff on the old adage about if a dog bites a man, that is not news, but if a man bites a dog, that is news. It is seldom that a dog is involved in an aircraft accident while trying to get out of the aircraft.

But if you fly with your dog, cat, or some other pet in your aircraft without some type of restraint or container for the animal, this stranger than fiction type of accident could happen to you.

The Mice Who Landed An Airplane

Our final story is about two mice that landed an airplane. No, they were not pilots. And, yes, we are discussing them in the past tense. Technically, we should have said the two "late" mice.

Our story takes place in Vermont in January 1996. Why two mice would be flying in Vermont in January is beyond us. But our unlucky aviator (the real one) was flying along at 2,900 feet when he applied carburetor heat in his Cessna 172. When he did, the aircraft lost power. The pilot could not restore power and made an emergency landing at a snow-covered, unplowed private airstrip. During the landing, the aircraft nosed over with minor damage to the airframe.

The cause of the loss of power? Two mice were found wedged into the carburetor intake. One ended up jammed between the carburetor heat damper valve and its shaft. The other one ended up in the carburetor throat. Like carb ice, carb mice can cause an engine to lose power. Unfortunately, there is no way to remove carb mice in flight.

We learned of this story when the FAA inspector who investigated the incident submitted a suggestion that some type of screen over the inlet to the carb air box might have prevented the enplaned rodents from getting into the intake air system.

All joking aside, this story points out the fact that a careful preflight and runup is needed before every flight to help find uninvited aircraft passengers.

No one knows why the mice were not sucked into the carburetor during the pilot's engine runup, but that would have been the time to discover them. Finding them at 2,900 feet is not the time or the place to discover airborne stowaways.

Talk about finding suspected non-approved parts in flight. The mice probably did not even have an FAA-approved TSO or FAA Form 337.

Fortunately, no one was killed in this incident other than the mice.

Not A Laughing Matter

Although this story is not a laughing matter, because it could have had catastrophic consequences, it does point out the constant need for complete preflight checks and runups. No one is saying that the pilot could have seen or discovered the rodents inside the cowling and air intake before the flight. But we are saying that everyone, aircraft owners, pilots, mechanics, and anyone involved in the safe operation of an aircraft, must be aware of the threat that our furred and feathered friends pose to all aircraft.

In the past, we have discussed the dangers of animal and bird strikes. Now we need to discuss the more insidious threat of unwanted passengers.

Whether the creature flies, crawls, or walks, we know birds, snakes, and now mice have been discovered in aircraft. Add bees to the list, and you have some of the most attention diverting creatures that have ever caused a pilot to want to quit flying. At least for the moment.

So what can you do? One of the most effective ways to avoid such surprises is to conduct a careful preflight before every flight. This is especially important during mating season when birds can be especially adamant about building their nests in aircraft.

If you live in an area with snakes and other such creatures, you might want to inspect your baggage and cabin areas as part of your preflight. You might want to check under your seats and behind the panel before you expose your body to what ever might be lurking there.

Although the FAA is not mandating that aircraft manufacturers install protect screens in carburetor air boxes because of both technical and economic reasons, all pilots need to remember that in aviation, fact is often stranger than fiction.

The moral of this article is to remember to check density altitude, don't release your seatbelt when you are upside down, be tough, be safe, be prepared, and watch out for all creatures great and small. The accident or surprise you avoid might be your own.

LOOK OUT—THERE ARE NOW TWO FAA'S!

There are now two FAA's—the long-standing "Friendly" Aviation Administration here in the U.S. and its youngest sibling in the world arena of aviation authorities. Russia has renamed its Federal Aviation Service (FAS) to the Federal Aviation Authority.

Since the break-up of the Soviet Union and growth in regional airlines in the new Russian Federation, Russian aviation officials have been briefed and assisted by the U.S. FAA in establishing an oversight authority for aviation in Russia.

The Russian FAA is headed by G. Zaitsev and consists of several departments for air traffic control, modernization and maintenance, flight safety inspection and search and rescue, security, special communications and information protection, flight standards, repair and maintenance, and airports.

Although Russian FAA inspectors may be trained here in the U.S., there won't be any confusion for U.S. airmen when someone says, "I'm from the FAA, and I'm here to help."

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WEATHER

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FAA'S "TECH CENTER"

Story and photos by Richard D. Davis

Air traffic control has cleared you to conduct a GPS non-precision approach. You're two miles from the final approach fix, the approach ARM light is on, and the ACTV light is suddenly illuminated indicating RAIM is available. The CDI sensitivity goes from one mile to 3/10ths of a mile on the HSI. The weather on the ground is reported "at minimums"—one mile visibility, measured ceiling hovering at 600 feet, winds blowing at 10 knots, gusting to 15.

It's been a long day; your body is tired of being bounced around like a kernel in a popcorn popper. Four hours enroute flight—two in actual IFR—have taken their toll. A sore backside and a headache have left you slightly apprehensive about the approach. As a seasoned pilot, your instincts tell you to concentrate on flying the aircraft and not let a bad attitude affect your performance.

That important lesson beat into you by your flight instructor years ago comes to mind, "Believe the instruments, not the seat of your pants. The instruments don't lie." Your confidence is bolstered with the thought that your GPS system is a state of the art unit, designed and tested to get you home safe and sound. In fact, it's the best system out there.

During descent you concentrate on keeping the needle centered. Just before the missed approach point, the aircraft breaks out of the clouds and to your amazement and wonder, the airport is glaring right at you! Another successful GPS approach. Apprehension is instantly converted to exhilaration as you personally experience the accuracy, reliability, and success of this "new" navigation system.

We are often impressed with the new technologies available for today's aircraft. EFIS, LORAN, MLS, TCAS, and GPS are just a few that have come over the horizon in the past decade. As an end-user we don't often think about what it takes to get these systems and others operational and safe for our use in the U.S. airspace system. Obviously, it takes hours of testing and evaluation to work the bugs out of any new piece of equipment. Who are the folks who stick out their necks testing all this new gadgetry so we can have confidence and trust in the new technologies of tomorrow?

Recently, I had an opportunity to visit the William J. Hughes Technical Center operated by the FAA in Atlantic City, NJ. This facility was established in 1958 as the National Aviation Facilities Experimental Center (NAFEC) for the purpose of research and development. In the 1980's it became the FAA Technical Center—Tech Center, as we FAA'ers call it—and finally in 1996 it was renamed for the U.S. Congressman who was essential in getting it established in New Jersey.

The Center's numerous projects involve test and evaluation in air traffic control, communications, navigation, airports, aircraft safety, and security. Approximately 3,000 people are employed as test pilots, technicians, engineers, and numerous other supporting roles to facilitate this goal. System testing is accomplished on numerous aircraft, including the Beech *King Air*-BE 200, Boeing B-727, Sikorsky S-76, Aero Commander-AC-680, and Convair CV-580. It was here at the Tech Center that the FAA Boeing 720 fuel misting program was orchestrated. Remember when an aircraft was hand flown by joy stick and computer to a controlled crash in the Mojave desert in order to evaluate the flammability of an anti-misting agent in the fuel? That was the Tech Center.

During my visit I was fortunate to witness the final test of the "Concrete Foam Arrestor" program and participate in the GPS TERPS program as well.

Foam Arrestor

The final test of the foam arrestor consisted of a Boeing 727 simulating an aborted takeoff and overrunning the runway at 55 kias. The simulated runway overrun area was covered with an aerated concrete foam substance that is designed to provide controlled deceleration and stopping of the aircraft, hopefully preventing it from rolling off the end of the runway into rough terrain or water and catching fire. (See the picture above and on page 24.)

The goal was to stop the aircraft before it overshot the foam and not substantially damage the aircraft or cause serious injury to persons on board.

The foam pad measured out at 40 feet wide, 24 inches high, and 310 feet long. During the test, numerous parts of the aircraft were rigged with sensors to measure forces, stresses, and loads that would later be analyzed to determine the success or failure of the test. Preliminary results show that the test was a success; the aircraft did not overshoot the foam, none of the 12 persons on board were injured, and the aircraft sustained only minor damage to the nose landing gear. It was crystal clear that the foam arrestor system could save lives in the event of an overrun. This system is being installed at JFK by the fall of 1996.

Testing of this system continues.

GPS TERPS

The GPS TERPS program, sponsored by AFS-450, Standards Development Branch in Oklahoma City, is an on-going project that tests all facets of GPS use in our airspace system—enroute, approach, missed approach, and instrument departure. I participated in the missed approach and departure segments.

The goal is to collect performance data from several subject pilots with differing abilities, experience, and training as they fly specific routes. The test aircraft is simultaneously tracked by a modified Nike Radar during the entire flight. Data are recorded, plotted, and analyzed by computer software to determine the Navigation System Performance. After each approach and departure procedure the subject pilot is queried on his or her opinion regarding length of legs, navigation presentation, situation awareness, flyability, pilot workload, and overall safety aspects of the procedure flown. The data collected from each subject pilot is put in a data base by AFS-450 and used to develop terminal instrument procedures—TERPS. Data collected from early phases of this program resulted in criteria for creating more than 500 stand alone GPS approaches in service today.

During the first day of the tests, we were given a four-hour ground school on the equipment we were to use. In our case it was a Garman 155TSO GPS. We were instructed on just the necessary information required for us to fly the IFR approaches and departures into and out of Atlantic City International Airport. No time for instruction about fancy bells and whistles!

During the afternoon session we went on a familiarization flight to get comfortable with the GPS and the King Air 200 test aircraft. With training and familiarization out of the way, we were ready for data collection flights.

The aircraft under test would be tracked using a Nike Tracker system which is run by a couple of guys in an air-conditioned building located at the center of the airport. These two were fondly called the "Truth in Space Guys." The Nike Radar system is impressive. It is a variation of the old

Nike missile tracking system used in the military. The test aircraft is tracked via radar, video, and laser 100% of the time. The Nike operator has a clear video picture of the aircraft as it flies the test, takeoff through landing. At the conclusion of each approach segment the project safety pilot radios the Nike operators to stop tracking; the Nike computer then compiles all the data and prints out a color map showing the exact track the aircraft flew—mistakes and all!

A computer program subsequently analyzes this data and compares it with the actual course the subject pilot was asked to fly. The data show the pilot's "flight technical errors" and how well the pilot handled the leg lengths, transitions from waypoint to waypoint, and course angles of the approach or SID flown. There are no excuses allowed here, for the Nike's watchful eye sees and records everything!

The data collection flights began on the second day. Many different pilots were asked to participate in this program. Most pilots were out of industry, representing different companies, "alphabet groups," and manufacturers. Experience for subject pilots varied from a few hundred hours to thousands of hours on airliners. GPS knowledge varied from none to proficient.

The subject pilot was asked to fly eight different approaches complete with the missed approach procedure. Each of the approaches were almost identical except that they had different instructions, leg lengths, and course turn angles on the missed approach procedure. Typically each "miss" ended with a holding pattern. The subject pilot was definitely busy and pretty much exhausted after this session.

Data collection for SID's began on the third and final day. Our test subject flew six departure procedures with the Nike system watching. Again, each departure was different in regard to leg lengths, instructions, and turn angles. Our test subject did a great job on this series of departures, especially in light of just becoming proficient with the GPS unit and the aircraft in the preceding two days. For most test subjects the last series of SID's is nothing compared to the approach endurance test the day before.

Our participation in the GPS TERPS program not only helped to increase the available data upon which to base instrument procedure criteria nationwide but also taught us many valuable lessons important to any pilot flying GPS approaches and departures:

- Know the GPS unit you are using. They are not all alike. Understand how to recognize when something is not right and how to correct. Always remember what page or button push will take you back to common "safe" ground. In our case, the NAV-1 page was the one. All we had to do was push one button and turn one knob counterclockwise to get there.
- As with all electronic equipment, the old saying still stands: "Garbage in, garbage out." It is so easy to miss-hit a button or pass up a page. Always verify your inputted data before you use it.
- Use your checklist! There are often many steps in loading and setting up for an approach. Accuracy and speed will both increase with the use of a checklist or memory jogger.
- The simple stuff will get ya. It is very easy to forget the obvious. Remember, setting in the desired track on the HSI will do you no good unless you turn the aircraft to fly that course. Oftentimes on the missed approach, it's easy to begin the procedure early, before reaching the MAP. This may seem obvious, but the Nike doesn't lie!
- Fly the aircraft first! It's easy to get distracted and fixate on the GPS when things aren't going as expected. Forget the GPS, fly the aircraft, and use that checklist to figure things out. On VFR days, get your eyes outside the aircraft to check for traffic.
- Situation awareness is critical. Always know where you are in relation to your waypoint and other navigation aids. This will help you if your GPS fails enroute. When going from HOLD/OBS to LEG mode, some units will not automatically sequence to the next waypoint without your telling them to do so. If you are not aware of this situation, you may become confused when the unit keeps telling you to fly back to the previous waypoint.
- Finally, currency is not proficiency. Just because you are IFR current doesn't mean you are ready to tackle GPS approaches. Become knowledgeable and proficient before you go solid IFR. As smart as GPS is, it still won't make up for poor judgement on the part of the pilot. If you do fly approaches, be sure your system is "Approved and installed for IFR use." Use of a system without the proper annunciators and HSI interface will create confusion in a hurry.

The dedicated pilots and engineers at the William J. Hughes Technical Center are involved in a lot of interesting research and testing to help assure safety for the flying public. The GPS TERPS program and the Concrete Foam Arrestor program are just two examples of projects they are currently working on. It is their job to figure out if something works or why it doesn't and help design a fix. It is their job to fly different systems to their limits or even to failure to establish standards within the industry. It is they who question the integrity of the aircraft, systems, and procedures we rely on every day. Because of these folks, we can have confidence in the systems we fly today.

When things get rough and the weather's tough, we can tune up our GPS receiver and fly the approach, knowing there are those who have gone before us.

Mr. Davis is a principal avionics inspector at the Portland, OR Flight Standards District Office.

SAFETY ITEMS

by H. Dean Chamberlain

A recent copy of the British Civil Aviation Authority *General Aviation Safety Information Leaflet,* (GASIL) had several interesting items that have a universal safety message for everyone.

WHAT'S WRONG HERE!

This photograph falls under this category. These two men are sitting on top of the cabin of a foreign registered Cessna 150. In its caption about the photograph, *GASIL* said in part, "Every now and then, *GASIL* receives a photograph which is so astonishing that it causes one to gasp at the things fellow humans beings do.

"Setting aside the fact the top of a Cessna 150 cabin is not somewhere to sit, the windshield most definitely does not benefit from having shoes scraped across it and that if you lose your balance you slide down the windscreen and ***Forward....***

"...You then notice that the engine is running, and given that the photo has arrested the movements of the people but not arrested the movement of the propeller, it leads you to believe that the engine is running at quite high rpm. You then notice that there is nobody in the aircraft!"

As *GASIL* said, "Propellers are extremely dangerous and you must never take liberties with them. Whilst the photograph shows one of the most bizarre things we have ever seen anyone ever do with a moving propeller, the lesson is still there: **NEVER TAKE LIBERTIES WITH PROPELLERS."**

Like *GASIL, FAA Aviation News* can't believe what some people will do. Apparently these men failed to realize the unnecessary risk they took posing on the Cessna for the photograph.

PROPELLER DANGERS

As *FAA Aviation News* has reported over the years, propellers must always be considered one of the most dangerous areas around an aircraft equipped with them. On average, several people are killed or seriously injured each year when they either inadvertently walk into a rotating propeller, or they are handling or moving a propeller and the engine starts because of a broken ground wire on the magneto. The classic case of a "hot" mag engine start. In some cases, people are injured trying to hand-prop an aircraft and the engine unexpectedly starts, or they accidentally slip into the prop while pulling the prop through.

Passengers boarding or deplaning an aircraft with the prop or props rotating are particularly vulnerable to propeller strikes because they apparently fail to see the rotating prop and walk into its arc. Often with fatal results. The rule should be to always shut down your engine/s when boarding or deplaning passengers.

When escorting passengers on the ramp near any aircraft, pilots should educate them on the dangers of each type aircraft and how to remain clear of each aircraft's danger zones.

The gentlemen in this photo have not added insult to ignorance by being blindfolded; rather, GASIL blocked out their faces so they wouldn't be recognized. (Photo courtesy of GASIL)

DANGERS OF HAND PROPPING

As stated, pilots have been injured after slipping into a rotating propeller when hand propping an engine. Others have been injured when their aircraft lurched forward out of control after suddenly starting and injuring the pilot or damaging nearby objects because the aircraft was not properly secured. Pilots who hand prop an aircraft with no qualified person or with an inexperienced person at the controls of an unsecured aircraft are particularly at risk as well as being foolish. Hand propping accidents are easy to avoid. Find someone qualified to charge or replace the aircraft's battery rather than risk hand propping.

HAIR TODAY—GONE TOMORROW

In the second unusual incident,

GASIL reported that a pilot of a Robin DR400 taxied to the holding point for takeoff. He had pulled the forward sliding canopy nearly closed while he did his preflight checks. He then slid the canopy closed and took off. The flight was normal until the pilot tried to change his radio frequency. He couldn't reach the radio. The pilot had long hair which he had secured into a pony tail before the flight. When he had closed the canopy, his pony tail was caught by the canopy. Fortunately for the pilot he was able to return to his departure airfield and land safely.

The lesson is clear. Anyone operating any type of equipment must ensure that hair, jewelry, clothing, and any other type of loose objects don't pose a safety hazard to the safe operation of that equipment.

WRONG KIND OF SHOES

The above lesson was learned the hard way by another British pilot who had an accident during an annual check flight with an instructor in a Robinson R22 helicopter. The final maneuver was a simulated engine-out landing. Everything was normal until the pilot was about two feet off the ground with about 10 KTS. forward speed and no skid or drift. Then the helicopter yawed about 40 degrees to the left, inducing a right drift. The instructor could not stop the drift. The helicopter touched down in the drift and rolled over. According to the pilots, the problem was caused when a small ridge on the training shoes worn by the pilot being checked out became "jammed in the small gap between the tail rotor control pedals in the helicopter."

LESSONS LEARNED

Both of these examples show how important it is to be able to operate and control an aircraft from the moment it first starts until the aircraft is securely tied down after a flight. Check lists and common sense are a good starting point.

The March-April 1996 issue of the U.S. Navy's Naval Safety Center's Aviation Magazine *Approach-Mech* described a technique that can be summarized by saying a pilot should try to think of every thing that could happen on a flight; then determine probable outcomes for each event; and then assign a risk element to each outcome. The final task becomes one of risk management.

The article, "An ORM PRIMER," was written by Cdr. Kathy Ozimek. It broke down into five simple steps -- procedures that might have reduced or eliminated the incidents described in this article.

The steps listed by Cdr. Ozimek in the Operational Risk Management Process (ORM) are (slightly reformatted): 1. Identify hazards by listing the major steps of the operation then listing all of the potential losses, hazards, and causes you can think of. 2. Assess hazards and determine the level of risk associated with the hazards, based on severity and probability of the potential loss. 3. Make risk decisions by considering risk-control options, determining if risk outweighs benefit, and communicate with higher authority if required. 4. Implement controls, and 5. Supervise.

These steps provide a means of managing one of the various "Murphy's Laws" that say, if something can happen, it will.

The key is eliminating those things that can hurt us and minimizing those items that remain.

THE STEVE WITTMAN CRASH

The legendary aircraft designer and air racer Steve Wittman and his wife were killed in an inflight breakup of his Wittman O&O aircraft on April 27, 1995, over Stevenson, AL. Wittman and his wife were returning to their home in Oshkosh, WI, from Florida when the accident occurred. According to the National Transportation Safety Board's (NTSB) World Wide Web homepage on the Internet and as reported in detail in *GASIL*, the probable cause of the accident was "aileron-wing flutter induced by separation at the trailing edge of an unbonded portion of wing fabric at an aileron wing station. The debonding of the wing fabric was a result of improper installation."

As reported in *GASIL*, apparently when Wittman built the experimental aircraft in the early 1980's, he used the same fabric techniques he had been using since the 1920's, the same technique he successfully used to build his high speed racers of the 1930's.

The problem was those techniques that had worked for decades on his natural fabric covered airplanes eventually failed in flight on his synthetic fabric covered aircraft. His mistake went unnoticed from the time of the aircraft's first flight in 1985 until accident investigators discovered the probable cause of his accident nearly 10 years later.

He had used nitrate dope and clear butyrate dope on the aircraft's synthetic fabric instead of the manufacturer's recommended materials for installing such fabric. Because the wrong materials and technique were used in the aircraft's construction, the non-absorbing synthetic fabric failed to bond properly to the aircraft's plywood wing structures. Finally, the fabric separated from the structure in flight which caused the flutter which resulted in the inflight break up of the aircraft.

This accident, like the other examples of things that can happen to pilots, should serve as a reminder for others to always follow the recommended procedures for either flying or building aircraft. The fact that a legendary aircraft designer, builder, and pilot can make a fatal mistake means that everyone is vulnerable to such mistakes. His tragic death should remind others to take that extra step to ensure a job is done properly. If you are an aircraft builder, this means following the designer's plans using the current recommended construction techniques and seeking expert advice. If you are a mechanic working on an aircraft, this means having, using, and following the current recommended maintenance procedures when repairing an aircraft.

If you are a pilot, it means complying with all operating procedures for your aircraft.

Aviation can be a very unforgiving activity. +

MEDICAL Stuff

IT'S A REAL GAS! Trapped Gas, That is!

by Roger Storey

The Aviation Physiology course at the FAA's Civil Aeromedical Institute (CAMI) teaches pilots how pressure changes affect the middle ear, sinuses, gastrointestinal tract, and the teeth. These areas can withstand enormous changes in barometric pressure as long as the air pressures within these body cavities are equalized with the pressure surrounding them.

The mechanical responses to changes in pressure are in accordance with Boyle's Law, which states that a volume of gas is inversely proportional to the pressure to which it is subjected, temperature remaining constant. When the gas in these cavities can't equalize with the ambient environment, the gas is considered to be "trapped."

The Middle Ear

Of the areas of trapped gas, the most commonly dealt with is that of the middle ear. In aviation, there is seldom any difficulty upon ascent; most often difficulty is experienced on descent in the form of an ear block (barotitis media). An ear block is usually preceded by a fullness in the ear, gradual loss of hearing, and pain. From my experiences in our altitude chamber, I have observed that most ear blocks are a result of not knowing how to equalize the pressure in the middle ear properly or of trying to fly with a cold.

Normally, there is little difficulty equalizing pressure during descent by occasionally yawning, swallowing, or tensing the muscles of the throat; this will allow the pressure to equalize. During sleep, the rate of swallowing slows down. For this reason, it is advisable to awaken sleeping passengers before descent for the purpose of permitting them to ventilate their ears. Infants should be given a bottle with water or a pacifier to aid in equalization. Small children can avoid difficulty by chewing gum.

If these actions fail to equalize the pressure, a Valsalva maneuver should be performed. The Valsalva maneuver is performed by closing the mouth, pinching the nostrils closed, and exerting pressure from the lungs up through the nasal cavities. This will force air up the Eustachian tubes and into the middle ear. This is not a dangerous procedure and should not be delayed until the pressure in the ears becomes painful, otherwise it may be extremely difficult to open the Eustachian tubes.

Painful ear blocks generally occur when the descent rate is too rapid. To relieve this pain, a level off and ascent to a higher altitude is recommended. This should be followed by a slower descent, if possible. During the second descent, close attention must be given to the prompt use of equalization techniques.

Along with the lack of proper equalization maneuvers, flying with a cold can be just as much of a problem, if not more so. Equalization of the middle ear can be impaired when the Eustachian tube or its opening becomes restricted as the result of inflammation, upper respiratory infection, sore throat, infection of the middle ear, or sinusitis. It may be possible to equalize the middle ear by a forceful Valsalva, but this may result in the infected material being carried into the Eustachian tube, along with the air, causing infection of the middle ear. Since the resulting infection may cause a longer grounding than the cold, it may be advisable not to fly if you suspect you have a cold.

After a flight in which you use 100% oxygen, the Valsalva procedures should be accomplished several times to ventilate the middle ear. This is recommended because the middle ear will be filled with pure oxygen, which is then gradually absorbed by the tissue of the middle ear. This, in turn, will cause a reduction of pressure, which may become painful later, if left unequalized.

Frontal and Maxillary Sinuses

Those who have experienced a sinus block (barosinusitis) know that it is not a pleasant experience. My personal experience occurred in an altitude chamber on a rapid descent (12,000 feet per minute) from 43,000 feet (unpressurized). At approximately 22,000 feet it felt as thought someone or something had softly touched me above my right eyebrow, and within seconds it felt as though a sharp object was being forced into the same area. We immediately leveled off and then ascended 2,000 feet at approximately 12,000 feet per minute. The pain immediately ceased, and [pain medication] was administered. We slowed the descent rate down, and I had no further complications.

The sinuses most often affected by pressure changes are the frontal and the maxillary sinuses. These air-filled, rigid, bony cavities lined with mucous membrane are connected with the nasal cavities by means of one or more openings. When these openings into the sinuses are normal, air passes through these cavities without difficulty and can accommodate any moderate rate of ascent or descent. If the openings of the sinuses are obstructed by the swelling of the mucous membrane lining, ready equalization of pressure becomes difficult and the possibility of a sinus block will increase. This is another example of what could happen

as a result of flying or diving with a cold. Keep in mind that most sinus blocks occur on descent and will give little or no warning.

When the maxillary sinuses are affected, the pain will probably be felt on either side of the nose, under the cheek bones. Maxillary sinusitis may produce pain to the teeth of the upper jaw and may be mistaken for a toothache.

When the frontal sinuses are affected, the pain will be located above the eyes and usually is severe. This type of sinus problem is the most common.

Equalization of pressure to relieve pain in the sinuses is best accomplished by use of the Valsalva procedure, previously mentioned in conjunction with ear blocks. Reversing the direction of pressure change as rapidly as possible may be necessary to clear severe sinus blocks.

Gastrointestinal Tract

As mentioned before, the middle ear is the most common generator of discomfort upon descent. The gastrointestinal tract, however, is the area most commonly associated with pain or discomfort upon ascent. This discomfort is caused by the expansion of gas within the digestive tract during ascent. Fortunately, the symptoms are not serious in most individuals, although in flights above 25,000 feet, enough distention may occur to produce severe pain.

The gastrointestinal tract normally contains variable amounts of gas with pressure approximately equivalent to that of the ambient atmosphere. The chief sources of this gas are swallowed air and, to a lesser extent, gas formed as a result of the digestive processes. As gasses in the stomach and intestines expand during ascent, extreme discomfort can occur unless there is relief, ordinarily obtained by belching or by passing flatus.

Gas pains of even moderate severity may result in lowered blood pressure. Shock will be the eventual result if relief from distention is not obtained. Immediate descent from altitude should be made to obtain relief.

It can be beneficial to you as a pilot, crewmember, or passenger to be aware of certain conditions before you fly. Watch what you eat before you fly. Staying away from foods you know cause you problems could help you avoid or lessen the discomfort or pain in the gastrointestinal tract. Some of the foods that more commonly disagree with individuals are onions, cabbage, raw apples, radishes, dried beans, cucumbers, melons, or any food that you know causes you problems.

It is probably wise to avoid carbonated beverages in large quantities, as well as anything else bubbly, immediately before flight. In our course, we stress that every individual is different and has different tolerances. Therefore, it is important to know what affects you, not what affects someone else.

Tooth Pain

Of all the areas of possible trapped gas problems, tooth pain (barondontalgia) is the least common. The pain may become more severe as altitude is increased, but descent almost invariably brings relief. The toothache often disappears at the same altitude at which it was first observed on ascent.

Common sources of this difficulty are abscesses, mechanically imperfect fillings (very rare in occurrence), inadequately filled root canals, and cavities. Anyone who experiences a toothache at altitude should see a dentist without delay for examination and treatment. As mentioned before, maxillary sinus discomfort may be misinterpreted as a toothache.

Be prepared. Your awareness of the physiological problems encountered in the aviation environment is necessary for the comfort and safety of everyone who flies.

Mr. Storey is a Physiological Training Instructor at CAMI's Airman Education Programs Branch. This article appeared in the Federal Air Surgeon's Medical Bulletin, which is distributed to aviation medical examiners.

PHYSIOLOGICAL TRAINING AT FAA CAMI

As a service to the civil aviation community, CAMI offers a one-day training program directed toward understanding and surviving various physiological problems encountered in the flight environment, including trapped gas problems.

Subjects covered include use of supplemental oxygen, pressurization, hyperventilation, hypoxia, and vertigo induced by certain flight conditions. The training concludes with an altitude chamber "flight," in which trainees experience individual symptoms of oxygen deficiency and changes in barometric pressure. The chamber flight demonstrates proper use of oxygen equipment, the recognition of oxygen deficiency symptoms in a safe environment, and the physical and physiological effects of rapid decompression.

The training is intended primarily for pilots but other interested parties—such as a spouse or significant other who flies frequently with you—could benefit as well. The training offered at CAMI is free of charge. It is also offered for a small fee at some military facilities through an FAA/USAF agreement. For more information contact:

FAA Civil Aeromedical Institute
Airman Education Programs Branch, AAM-420
P.O. Box 25082
Oklahoma City, OK 73125
(405) 954-4837

• It's Easy to Mistake Boston for DuPage(?)

I just read the October issue of *FAA Aviation News*. Nice job! I have one comment, though. The article on p. 19, "Look Before you Jump," is written by one of my Aviation Safety Counselors here at the Boston FSDO, Mr. Ted Stanley. The byline says that he is a counselor for the DuPage FSDO. Would you please print a correction?

Nancy Risso
SPM, Boston FSDO

Well, Boston and DuPage both have six letters; it's easy to get them confused! Actually, FAA Inspector Rich Mileham, who works in the DuPage FSDO and who is one of our airworthiness Regional Safety Program Managers, sent us Mr. Stanley's article. So, we assumed (and we all know what that makes out of you and me) that he was an Aviation Safety Counselor for the DuPage FSDO. Mr. Ted Stanley, an A&P with IA and an 8,000-hour air taxi pilot, is indeed a counselor for Ms. Risso at the Boston, MA FSDO.

We guess we won't win the geography bee.

• AMT Professionals

In regards to an article called "Grease Monkey" [Nov/Dec 1995] by Bill O'Brien, I was truly inspired. I have over 14 years as an aircraft mechanic on KC-135 and B-52's. I am an A&P mechanic with an Associates Degree in aircraft maintenance technology. Over the years I have shed skin from my knuckles on a number of aircraft and have occasionally run into a pilot such as was described in the article: self-centered and upwardly mobile. Despite them, I am truly in love with the marvel of technology that makes modern flight possible. At the moment those wheels leave our earthly bonds in defiance of gravity, my spirit soars also. Aviation mechanics really are silent professionals who love what they do. I chose my career and have never regretted it. I will continue to do what I do in all kinds of weather wherever I can as long as someone will let me. Thanks to Bill O'Brien, I have a renewed pride in my job.

Dave DelCastillo
TSG, USAF
Via Internet

Your comments say it all. We received many comments on this article—all positive and a tribute to Mr. O'Brien's ability to evoke such feelings. He speaks from vast and varied experience.

• Knobby Problem

Your October 1995 issue's "Lost Comm" article was excellent. It is certainly a serious situation to be in. Aside from all the things which can occur to cause lost comm which we have trouble getting a hand on, there is one item that annoys me the most. The volume control knob and the switch it is attached to! That rinky-dink little item has been the primary cause of the vast majority of my missed transmissions; that and the squelch setting. Operator error you say? Sure, everything (almost) can be attributed to the operator.

Blame me! I let go of the switch in minus 15 degree temperature and my gloves spun it so it was set too low. I didn't feel it turn. I didn't see it turn because there was no line or marking on the knob. And oh, don't they turn so freely. Then there is vibration which causes the switch to rotate counterclockwise which lowers the volume. Of course "good operator practice" says to check it now and then. Right. When?

Sure some radios and manufactures have added a detent feature. Some knobs have a notch or hashmark. Most of the equipment I fly just has a lousy little worn black knob about 5/16 of an inch in diameter that turns so freely. Some knobs have a mark, but the way it is made it wears off easily. Few seem to have a detent feature which would keep the setting from vibrating towards off.

I think you get my point. All volume/squelch knobs and switches should have clear visible markings that won't wear off. All switches should have a detent feature so vibration can't change the settings, and the operator should be able to "feel" the markings and detent with bare fingers in the dark.

Alex Poliakoff, CFII
Richmond, ME

Thanks for your comments. You listed some good suggestions and warnings for anyone flying with equipment like yours. We do want to clarify a possible misstatement in your letter. Avionics switches do have detents for their various positions. If anyone can't feel the "detent," they should have the switch replaced or repaired. Concerning your other comments, manufacturers, what can you do to help this gentleman?

FAA AVIATION NEWS welcomes comments. We may edit letters for style and/or length. If we have more than one letter on the same topic, we will select one representative letter to publish. Because of our publishing schedules, responses may not appear for several issues. We do not print anonymous letters, but we do withhold names or send personal replies upon request. Readers are reminded that questions dealing with immediate FAA operational issues should be referred to their local Flight Standards District Office or Air Traffic Facility. Send letters to Editor, FAA AVIATION NEWS, AFS-810, 800 Independence Ave., SW, Washington, DC 20591, or FAX them to (202) 267-9463. INTERNET address: Phyllis.Duncan@faa.dot.gov

FAA'S HAL BECKER HONORED BY AOPA

During its annual expo and convention last October, the Aircraft Owners and Pilots Association (AOPA) honored FAA's Harold "Hal" W. Becker for his "innovative and courageous leadership in advanced airspace design." Former FAA Administrator David Hinson and AOPA President Phil Boyer presented Becker with a plaque that also indicated that Becker's work "has freed flight operations from many burdensome and unnecessary restrictions."

Becker is currently the Manager of the Airspace Planning and Analysis Division in Air Traffic and has been featured before in FAA Aviation News when he obtained his aerobatic training. An aircraft owner, Becker was cited by AOPA "for your great contribution to aviation efficiency and safety during your exemplary career."

Photo caption: AOPA President Phil Boyer (left) and former FAA Administrator David Hinson (right) present an AOPA award to FAA's Hal Becker.

NEED YOUR ABC'S OF AIRSPACE REFRESHED?

The FAA's airspace reclassification to international aviation standards is now nearly four years old, but there are new pilots always entering the system, as well as we "grizzled" veterans, who need a handy reminder of Class A, Class B, etc. During the education effort and transition period to the new classification system, *FAA Aviation News* published numerous articles explaining and depicting the new airspace configurations. We reprinted those articles—nearly half a million of them—and they remain a popular request from readers, among them flight instructors and pilot schools.

Unfortunately, we are totally out of stock of those reprints, although we are considering printing a "pull-out" in an upcoming issue. In the meantime, if you need a pocket-sized airspace reminder, you can get copies of a 3" x 5" card, "U.S. Airspace Classes at a Glance." Printed on both sides, the card shows a generic depiction of the various classes and an explanation of each class. It is an excellent tool for pilots of any level as a reminder, and it's size allows you to carry it easily in a chart wallet or flight bag.

The cards are free, and you can order them in quantity from FAA's Office of System Safety's Request Line. You can leave your request on an answering machine at (202) 267-7770, fax an order to (202) 267-5956, or place an order through the Internet at http://nasdac.faa.gov .

When you order also ask for the Office of System Safety's catalogue of other safety publications and videos on a variety of aviation safety topics.

DATES SET FOR OSHKOSH '97

The 45th Annual EAA Fly-In Convention will be held July 30 through August 5 at Wittman Regional Airport in Oshkosh, WI. EAA indicates two new exhibit hangars and a new taxiway will increase attendees of the annual fly-in.

In addition to the usual champion aircraft awards, on the schedule are celebrations of the 50th anniversary of the U.S. Air Force and the 50th anniversary of the breaking of the sound barrier. For additional information contact EAA at (414) 426-4800 or check out their homepage on the WWW: http://www.eaa.org .

CORRECTION

In the November/December 1996 issue of *FAA Aviation News*, one recipient of the new Pilot Proficiency Awards Program SEAWINGS was misidentified. Mr. Ed Burgin is actually Mr. John Burgin. We apologize to Mr. Burgin for the error.

THIS IS NO TIME TO GET TIRED

by Captain George Snyder

In January 1995 the FAA and the Department of Transportation held a Safety Summit in Washington, DC where hundreds of representatives from the government and the aviation industry met to form strategy on how to achieve aviation safety goals of the future. As a result of that conference, the FAA and DOT announced the goal of "Zero Accidents" and developed a plan on how to work toward that goal. Two years have passed, and the FAA has made many changes and adopted many practices indicated by the plan. Even after a year where 110 people died in the crash of ValuJet 592 and 230 people died in the crash of TWA 800, the FAA is still working hard toward Zero Accidents. But is the level of commitment of industry still as high two years later? We believe it is; read on, and see if you agree.—Editor

Transportation Secretary Peña's call to the industry for Zero Accidents is almost two years old. During this time, regulators, industry, and users have reexamined their part of the transportation safety equation to ensure that everyone is doing their part to realize this ambitious but yet attainable goal. The accident statistics dealing with technical causes have continued to decline, while the human factor numbers have continued to remain unacceptably constant. Therefore, it becomes quickly apparent that this area is most deserving of attention and resources. The issue of fatigue, coupled with its many causes, symptoms, and results, is a reality that our industry must carefully manage if total airline safety is truly our goal.

This joint management responsibility begins with our regulations. The demands on modern international flight crews has been addressed by limitations developed during the piston era of our evolution. Crossing eight time zones during the course of a duty period, trying to get the human body to enter a true rest cycle, and then doing it all over again was unheard of when flight time and duty time regulations were first formulated. While we cannot fault the creators for not envisioning the exponential evolution of airline operations, we can assign a responsibility for evaluation and review to today's oversight officials. Much research is now available that proves that our environment does indeed require state of the art guidelines, supported by the scientific community. Flight time and duty time constraints are no longer just a function of number of hours on duty but of the operating environment during which they occur.

[A Notice of Proposed Rulemaking on flight/duty/rest times was issued by the FAA in December 1995. The NPRM was based on research conducted by NASA in the U.S. and the Institute of Aerospace Medicine in Germany. The rule proposes to reduce the number of duty hours from the current 16 hours to 14 for two-pilot crews. The crew would be able to fly 10 of those 14 hours. There were a number of other provisions in this NPRM, which was published in the December 20, 1995 issue of The Federal Register and explained in the March 1996 issue of FAA Aviation News. The comment period has closed, and the FAA is evaluating the comments received.—Editor]

The secondary area of responsibility rests with the operators. Regulations are minimum standards that today require exceedance not just compliance. The effort must be continually made to put safety first during the performance of our corporate mission. We must listen carefully to those who carry out this mission. There is no better source of information on the existing operating environment than that provided by folks in the trenches. Closely spaced, multi-leg, optimized duty periods must never take precedence over the responsibility of providing employees with an environment that maximizes their ability to achieve required levels of performance.

Lastly, the final responsibility rests with the front-line employee. Never must we allow ourselves to enter the work environment in less than optimal physical, mental, and emotional condition. Whatever decisions we make cannot be allowed to cloud our ultimate responsibility of safety to our customers and fellow employees. We have a duty and a responsibility to perform our job functions to the best of our ability. We have completed much as an industry group in realizing our goal of Zero Accidents but much remains to be done.

This is no time to get tired.

Capt. Snyder is the Director, Flight Safety and Quality Assurance for USAir in Pittsburgh, PA. His article, sans our editorial comments, is reprinted with permission from the August 1996 edition of USAir's employee publication, Safety on Line.

U.S. Department
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Federal Aviation
Administration

800 Independence Ave., S.W.
Washington, D.C. 20591

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