Corey Smith, left, works to equalize the difference in air pressure in his ears following his flight aboard a Dover Air Force Base Aero Club Cessna while Zachary Klinkenborg gives an enthusiastic thumbs up in reaction to his ride. The two were part of the AMC Museum’s annual Summer Camp, which features a week’s worth of instruction dedicated to aeronautics. A highlight of each class is a flight through the airspace around Kent County.

Mother Nature Comes A-Callin’

First a hurricane, followed by an earthquake, followed by a tropical storm. Perhaps somebody is trying to tell us something? The August 23 trembler shocked everyone. An earthquake in Delaware? I mean, earthquakes only happen in California, right?

I was at work when it hit, but instead of the teeth-rattling experience I expected because of watching too many bad Hollywood movies, the real thing felt more like a slow motion walk across a kids’ Moon Bounce. Some people in my office even stood around, mutely staring up at the ceiling, seemingly mesmerized by the tons of lights and air conditioning ducts swinging back and forth just above their heads.

Good old Hangar 1301, home of the Air Mobility Command Museum, just shrugged off the event. If our venerated walls could talk, the hangar probably would say the quake was one of the less memorable events in its 70-year history.

Indeed, the only damage the Museum complex suffered was a broken window in our air traffic control tower, now under reconstruction, and a dislocated wall panel in an adjacent building we use for storage.

Just about the only preparation you can make for an earthquake is to keep a lucky rabbit’s foot handy. At least when it comes to hurricanes and similar events, planning is the key to survival.

Hurricane Irene roared into Delaware August 20, dealing the area a major swipe of its windy, rainy hand. Dover Air Force Base evacuated its fleet of C-5s and C-17s to safety at other bases, but unfortunately the same could not be done for the Museum’s fleet of display aircraft, including the newly arrived VC-9, known formerly as Air Force Two.

Then, a little over two weeks later, what was left of Tropical Storm Lee dumped more buckets of rain and accompanying windstorms across an already soaked Delmarva.

Since they couldn’t be flown out, our priceless collection of airplanes simply had to hunker down and literally ride out the storms. Luckily, everything turned out well; Museum Director Mike Leister and crew did a bang-up job in getting our facility ready for the meteorological nastiness.

— Jeff Brown, editor
From Museum Store Manager Jim Stewart:

Come visit the AMC Museum and see us in the new expanded and refurbished store. You will not recognize the place! We have lots of new items as well as the good old standbys. There is a lot to see for children of all ages. We have an extensive collection of books about military airlift and the new photo history of Dover Air Force Base by Ken Wiggins. The kids will be thrilled with the wide selection of toy planes and gliders and we have a large selection of posters.

Profits from Museum store sales go to the Air Mobility Command Museum Foundation to help fund the many programs, exhibits and restoration projects taken on by the Museum. Come have fun shopping and help the Museum all at the same time. We look forward to seeing you in the near future.

Contact store manager Jim Stewart by phone at 302-677-5992; by fax at 302-677-5949; or email at storemanageramcm@comcast.net. Members receive a 10% discount.

The Hangar Digest is printed by Farley Printing Company, Dover, Del.
Mailed by D&B Printing Services, Newark, Del.
From the Director

Last issue I led off with a mention that we had just hired an outstanding addition to our paid staff, Mr. Dave Straughen, as an exhibit technician. That is a vague title but Dave is a super-talented individual who can do cabinet making, aircraft maintenance, exhibit building and much more. That’s the good news.

The bad news is that, due to budget cuts across the board in the Air Force, he had to be laid off at the end of September.

We are looking for ways to bring Dave back, because he is such an asset and because in the short time he was here he made lasting improvements to a number of projects.

One of those projects is the aircraft control tower. As I write it is still in progress but we are hoping that by late fall it will be open to the public. After the contractor is complete with the basic infrastructure we will install the old air traffic control equipment we have been collecting during the course of the project.

Our goal is not to “improve” the tower but to make it as close to an operating tower from the 1980s and 1990s as we can. Some of the original laminate on the control consoles was too badly deteriorated to save so Dave replaced it with matching laminate, minus the chips and a few too many gaping holes where old equipment had been yanked out.

There will be a live feed of traffic chatter supplemented with recorded transmissions during quiet times. We have obtained a flat screen TV and camera so that those who cannot climb the stairs still can see what’s out there from the comfort of the ground floor. I have to say, with or without all the bells and whistles, this will be an eye-popping exhibit.

Dover Air Force Base just hosted the Air Mobility Command’s Installation Excellence Team. Three years ago Dover won the honor of the best base in the Air Force. Now that we are eligible again we are competing with one other base semi-finalist to represent AMC. The wrap-up rally was held here at the AMC Museum and they could not have had a better setting for the event.

The third Saturday in September was the first time we had the VC-9 open for scheduled tours. In spite of the suddenly cool weather many people came out for a chance to see a piece of American history as well as a piece of Air Force history. Over the coming months we will be adding some explanatory signage inside the plane and we are preparing an exhibit of Air Force One- and Air Force Two-related memorabilia. Stay tuned.

We are working on an offer from the Commemorative Air Force to receive their donation of a Lockheed C-60 Lodestar. Although not as successful as its competitor, the Douglas C-47, the U.S. Army Air Forces purchased more than 400 of this aircraft during World War II and used them stateside for paratroop training, crew training and hauling priority passengers. This one suffered a landing accident a few years ago and after doing much of the restoration work, the team just could not continue. Efforts to sell it in the current economy were unsuccessful as well.

I often talk about our volunteers because they are the most awesome part of our operation. We have four restoration/conservation projects going on at once. That’s a lot for any museum. Plus we are building exhibits and handling an upsurge in visitors. None of it can happen with them. Say thanks whenever you see them. They make it happen.

— Mike

‘Private Benjamin’ signs on as AMC Museum tour volunteer

But newly minted tour guide and former USAF mechanic Mary Hill doesn’t think of herself as a trendsetter

It was 1977 and Buffalo, N.Y. native Mary Hill was right out of high school when she had what she described as a pivotal moment: wanting the opportunity to change her life, she decided to join the military.

But Hill was at a loss when it came to making the decision about what uniform she’d wear.

“I had no clue about any of the services,” she said recently. “I needed a job.

“I went to the recruiter’s office in downtown Buffalo, but walked past the Marines because I didn’t want to go there. The Army guy was at lunch, but the Air Force recruiter was in.”

“It was one of those Private Benjamin things you see on TV: the military looked great.”

And just like the title character in the film “Private Benjamin,” Hill found her calling in life.

Now, after a fulfilling military career as an aircraft engine mechanic, Hill is retired from the Air Force and is calling the Air Mobility Command Museum home as an exhibit tour guide. Every Tuesday she’s on hand to lead visitors through the Museum’s displays, with particular emphasis on those mysterious objects that put aircraft as large as the C-5 into the air.

Not bad for someone who claims to have had no mechanical aptitude at all when she first donned Air Force blue.

“When I took my tests, my mechanical score was my worst, but it...

SEE VOLUNTEER, PAGE 4
The crew chiefs accompanying the plane from Scott Air Force Base decided to run the engines, so we cranked them up and cooked them at 85% for almost 45 minutes. The engines, starving for gas, gradually slowed and then stopped as the tanks ran dry. Defuel complete! We have other things on the to-do checklist such draining engine oil, removing engine fire bottles and depleting oxygen bottles, all to make the plane safe for visitors. While we’re doing that, the plane has been positioned near the control tower. It’s scheduled to be open the third Saturday of each month, although weather will be the determining factor.

Great progress has been made on the control tower in recent weeks and it’s looking quite good. All the drywall work and painting is complete, the suspended ceiling is done and the cracked window has been replaced. Unfortunately, the earthquake we experienced August 23 cracked another pane so it will have to be replaced as well. But overall, the tower rehab is moving along.

Some of youse guys will have to walk but the rest can pile in for a quick ride to the restoration hangar. WOW -- take a look at that! Our restoration guys are busy taking apart a Cessna given to us by the base Aero Club. It was damaged some time ago in a freak wind storm and we now have it. Plans are for our guys to de-skin one side of the plane and turn it into an educational exhibit showing how the flight controls operate via cables. There’s quite a lot of work to be accomplished but as usual, our restoration volunteers will turn out a great exhibit.

In the next bay, the CG-4 work continues and the glider is actually starting to look like an aircraft. Amazing what can be produced from piles of, well, let’s call it debris and leave it at that. The glider team is transforming those piles of parts into what will be a premier restored aircraft. More to come as time moves on.

That’s it for this trip folks. Thanks for coming along. Take care of yourself … you couldn’t do it for a better person. See ya!!

— Jim

The Air Mobility Command Museum offers free tours by qualified and trained tour volunteers during all open hours, from 9 a.m. to 4 p.m. Tuesday through Sunday. Most tour volunteers are retired military personnel who have experience either flying or working on at least one of the 30 aircraft on display at the Museum.
Bigger really is better at renovated AMC Museum store

It’s the first thing a visitor notices when coming into the Museum: the store, chock full of memorabilia, videos, books, models and just about anything else a budding aerophile or seasoned old airman could want.

The first-time visitor may be forgiven if he or she spends more time exploring the store than originally planned, just as the returning visitor spends extra time making new discoveries while combing through familiar displays.

“We think people are going to be pleased and surprised,” said manager Jim Stewart shortly after the refurbished store opened its doors July 2. “It’s really given us the chance to offer more for our visitors.”

The renovation and expansion at the store is its first major upgrade in 15 years. Located immediately inside the main entrance, the store offers visitors a chance to find everything from Air Force-themed clothing to one-of-a-kind books on numerous types of aircraft to carefully detailed mahogany models of some of the Air Force’s most famed airplanes. It also offers snacks and drinks to help bolster the energy levels of Museum guests as they explore the more than 30 aircraft and other exhibits inside and outside of the Museum building.

All proceeds from the store go toward financing the Museum itself, Stewart said, adding that its annual sales are a major source of revenue for the Air Mobility Command Museum Foundation, which supports the Museum and its collection.

But it wasn’t always that way.

When the Museum was chartered in 1986, there was no real means for guests to find mementoes of their visit or to expand their own collections of aircraft-related material. In the beginning, it was just a display cabinet that later expanded into small sale space.

That changed when the Museum moved to Hangar 1301 in 1996 and the store was set up in an area formerly occupied by a World War II machine shop. While sales grew, they eventually reached a plateau. That’s when the Foundation’s board of directors decided something else was needed.

Like many other aspects of the AMC Museum, the store was run by volunteers, many of who were self-trained.

Stewart, who came to the Museum in 2010, had no experience in retail sales but his 26 years of experience with running the state of Delaware’s museum system told him some level of expert assistance was needed.

“I realized we had taken the store as far as we could, as far as amateurs could, and I’m including myself in that,” Stewart said. “None of us were professional retailers.”

With approval from the board, Stewart contracted with a Buffalo, N.Y. design firm with the unlikely but encouraging name of Thinking Outside the Square to take a look at how to bring the store into the 21st century. Design work began in November 2009.

Starting in April 2011, the first thing was to move the Museum volunteers’ waiting room – work accomplished mostly by the volunteers themselves – and knocking out walls to expand the sales floor by one third. New furnishings, enhanced display areas and new carpeting were installed, along with specialized lighting to highlight some of the store’s more desirable, high-end items.

Prior store sales accounted for approximately 55% of the cost of the renovation work, with Museum members making additional contributions of almost $7,400. Members of the AMC Museum Foundation Board of Directors contributed an additional $2,000. The rest came from public donations and other fundraising efforts.

One of the ironies in having the renovated store in full swing is figuring out what to buy and how much to stock, Stewart said. Using the old store as an example doesn’t work too well, since things that once were slow movers now seem to fly off the shelves. Stewart credits the enhanced displays with the pickup in sales.

“It’s sort of like going to an improved model of a familiar aircraft,” he said. “You have to change your way of thinking, you have to figure out how to operate the new way instead of the old way.”

There’s still a little more work to be done, including sprucing up the hallway just inside the main entrance, which should help draw more attention to the store, but Stewart is more than satisfied with results so far.

“This Museum started from a very small shop and now it’s a very successful institution,” he said. “That’s the result of all the hard work and support of all the members, the volunteers and the staff for all these years.”

The renovated store will help build on the success of the past, Stewart predicts.

“Our membership can take a lot of pride in their role in that,” he said.
This year’s AMC Museum Foundation Annual Mixer, held Friday, September 9, was a great success. As promised, not much “program,” but lots of “mixing.” Our director, Mike Leister, took our guests out to Air Force Two for private tours and then gave a brief run-down of what’s been happening at the Museum and what’s on the horizon. Following Mike, I gave a quick overview of what your board members have been doing for the Museum over the past year.

The Foundation’s raffle for Fat Stuff II went great. Donated by aviation artist and long-time friend of the Museum David Godek, the money from the raffle for this painting will be used to purchase a cheek gun window for our B-17. The painting was won by Rich Harper, a longtime Foundation Board member. Rich initially asked to re-draw so someone else could win, but was convinced to keep the painting. In typical Rich Harper fashion, he is donating the painting to the niece of one of the original gunners on the original B-24, Fat Stuff II. We plan to offer giclées of the painting — watch for more information at our website, www.amc-museum.org.

This Mixer saw the release of our latest giclée in our AMC Museum Foundation Aviation Art series, Off to the Rodeo, by local aviation artist Paul Rendel.

The painting depicts a Dover Air Force Base C-17 Globemaster III leaving the base with the AMC Museum prominently in the background.

Hangar Flying Series “Spacesuits and Airships” — The AMC Museum is going to repeat its most popular “Hangar Flying” presentation, so pack up the kids and grandkids at 2 p.m. on Sunday, February 5, 2012. Our featured speaker (and AMC Museum Foundation Board Member) Bill Ayrey of ILC Dover once again will reveal the fascinating story of how a little Delaware company became the world’s leader in spacesuit development.

Using a terrific slideshow and some exclusive video — including a moonsuited technician tossing a football around Wesley College’s stadium — Bill narrates a riveting review of what worked and what didn’t and how it affected the space race. He’s been with ILC for more than 30 years and along with his primary job as test and calibration manager, he acts as company historian. And here’s a NEWSFLASH: the story is unique enough that Universal Studios has bought the movie rights to the book Space Suits—Fashioning Apollo, that details this story.

In conjunction with our Hangar Flying event, the Museum Store will be open -- look for their packets of space food! One of our best attended and best reviewed events, it’s guaranteed to be worth your Sunday afternoon if you like space, aviation or just interesting local history.

It’s informative and free for members and children 16 and under. All other attendees are asked for a $5 donation to help cover the cost of light snacks.
Our Air Mobility Command Museum Store renovation is now complete. Store manager Jim Stewart and Foundation Board members Paul Gillis and Larry Tasker did an incredible job of coordinating contractors, from design-work and setting up the temporary store, through completion. And we can’t say enough about the great work of our treasurer, Leonard Heavner, without whom the money part just couldn’t have happened.

New, more efficient shelving, displays and storage all help make your visit more exciting. Come out and see the new offerings we have — you won’t be disappointed.

The Board is saying farewell to a long-time friend of the Museum, Rich Harper.

In July 1988 Rich retired as commander of the 436th Air Base Group at Dover Air Force Base and joined our Board shortly thereafter, staying through 1996. A highlight of that term was the planning and execution of the museum’s Annual Big Band Dances. He rejoined the Board in 2004. Since then, he’s managed our annual United Way and State Employee Charitable Campaign applications, chaired the Air Show Committee for Dover’s last air show, and has been an important part of our Golf Committee for each of our seven tournaments. He served with our Store Renovation Team, assisted with most of our mixers and Hangar Flying events and has spoken to various local organizations on behalf of the Museum several times. Rich says he has “enjoyed, and will continue to enjoy, helping where needed as the Museum moves forward.

“It has been great to be a part of such an active Board and Museum Staff; the growth of the facility has been exciting to watch,” he said.

Having Board members like Rich Harper is a great part of what makes your AMC Museum such a world-class institution. Thanks, Rich!

Finally, last year’s Annual Life Member Campaign brought in $2,895 contributed by 36 people. This year’s Annual Campaign brought in $7,890 from 104 contributors — 50 of you have given $100 or more. What’s the difference? The last few years we’ve sent donation request letters only to our 130 Life Members. This year we took a chance (it costs us money to send out a mailing) and in addition to Life Members, we sent each of you a donation request letter. **We had an incredible 25% response rate and your generosity has been amazing! Thank you!** The AMC Museum Foundation is recognized by the Internal Revenue Service as a 501 (C)(3) organization. Your gift or contribution is **tax deductible** within IRS regulations. Your donations help us fulfill the mission of the AMCM as an aviation and aerospace education, scientific, cultural, historical and inspirational facility for the public and the Air Force community. And we’re still the **NUMBER ONE free tourist attraction** in the state.

Thank a veteran today! Fly safe!
Silent wings

in angry skies

Gliders such as the AMC Museum’s CG-4A Waco made history in World War II

It’s been said that for ill, war is one of mankind’s greatest motivators for innovation and new ideas. Some become little more than footnotes in the history books; others change the world.

Giders – basically complete aircraft minus the engines – fell somewhere in between. A relatively untried idea at the start of America’s involvement in World War II, less than three years later they played an important role in the storming of Adolph Hitler’s Festung Europa on June 6, 1944, and in several operations afterward. But by the end of the 1940s, advancing technology, notably the development of the helicopter, made these silent flying machines little more than relics.

The Air Mobility Command Museum is proud to have the cockpit of one of these gliders, a CG-4A Waco, currently on display, and anticipates having a completed Waco fuselage mated to the cockpit, with both on display in early 2012. This glider will be one of only a handful of surviving Wacos and will provide a unique opportunity for the public to see this rare piece of aviation history.

German Lilienthal preceded Wright Brothers

Much early glider development took place in Germany through the experiments of engineer Otto Lilienthal, work that later was adopted by Wilbur and Orville Wright into their successful powered flying machine.

Despite Lilienthal’s death in an 1899 flying accident, gliding captured the German public’s imagination and evolved into a popular sport. The militarization of Germany under Hitler also motivated glider research, where many civilian sport gliding programs actually masked study for their eventual wartime use. During the war, Allied military intelligence officers suspected glider use in several early German military operations, spurring on what was a fledgling glider program in both Britain and the United States into full scale production.

The basic idea was simple: lightweight, unpowered aircraft would be attached to larger, engine-driven airplanes, and flown within striking distance of an enemy position. The glider then would be released from the tow plane and silently piloted to a landing on just about any unimproved area. Once on the ground, soldiers and equipment could be quickly unloaded and put into battle.

Glider operations relied on the stealth and surprise provided by their noiseless aircraft to achieve their objectives.

By the early 1940s, the Allies developed two separate models of war service gliders, the British Airspeed AS 51 Horsa and the American-made Waco. The Horsa, named after a legendary Anglo-Saxon warrior, was 68 feet long, almost 20 feet high and had a wingspan of 88 feet. It could carry up to 28 fully equipped soldiers or 7,000 pounds of equipment, which included jeeps, trailers and artillery pieces.

Constructed primarily out of plywood, British factories churned out more than 5,000 of the gliders between 1942 and the end of the war.

In contrast, the Waco was smaller and lighter and carried a comparably smaller load. It was 48 feet 4 inches long, 12 feet 7 inches high and had a wingspan of 83 feet 8 inches. It weighed in at 3,750 pounds, and could carry almost that much under normal conditions. Under emergency conditions, the Waco’s gross weight could be increased to 9,000 pounds.

Unlike the wood-based Horsa, the Waco was constructed over a frame of steel tubing covered with fabric. The wings were plywood, as was the floor. Two pilots seated side by side manned the simple control cabin, although the Waco often flew with only a single man at the controls.

The CG-4A’s leading manufacturer was the Waco Aircraft Company of Troy, Ohio, which built almost 1,100 gliders. Work on various components of the glider, which despite its overall simplicity contained more than 70,000 pieces, was parcelled out to companies that had little experience in aircraft manufacturing. This was a deliberate effort on the part of the War Department to concentrate bomber, fighter and cargo airplane development with companies having a proven history of powered aircraft development.

Overall, 15 companies were contracted to build the more than 12,000 gliders that served in World War II.

Flying the Waco

The Waco flew like almost any other cargo aircraft except that its...
forward momentum was provided by its tow plane, usually a C-47 Skytrain (or as it was more commonly known, the “Gooney Bird”). It was designed to fly at a maximum speed of 150 mph, a speed generally slower than the cruising speed of the C-47. The glider was attached to the tow plane by a 350-foot long nylon rope that measured just under three-quarters of an inch in diameter. Under certain conditions, a second Waco could be towed by the C-47 using an additional 425-foot long rope. Communications between the glider and the parent aircraft at first was provided by a telephone wire, but this often broke or shorted out. Radios were tried later, but this solution, too, often proved unreliable.

Takeoff meant the tow plane would taxi down the runway with the Waco attached. The CG-4A’s March 1945 Pilot Training Manual warned pilots to be particularly observant during takeoff, noting the rope could “break and snap back, injuring anyone in its path” if the brakes were not disengaged. The glider also had a tendency to nose over when slack was gone. Once in the air, pilots were instructed to use trim tabs on the stabilizers to keep the craft in level flight, which could range anywhere between 20 degrees below the C-47 or 25 degrees above.

Glider flying was much more than pilots sitting back and enjoying the ride. Pilots had little warning if their tow plane ran into trouble during takeoff and were advised to “watch the tow plane carefully for such signs of engine trouble as excessive smoking, backfiring or windmilling.” Trouble meant an immediate disconnect from the C-47, and a quick, sometimes futile search for a suitable landing spot.

In some instances, a glider could be picked up by a passing C-47. The Skytrain would lower a hook that snagged a tow cable suspended between two poles; a drum holding approximately 1,100 feet of cable would pay out gradually, allowing the glider to be pulled into the air. Acceleration was less than one G for those in the glider, only a “little more shock than the sudden jerk of a starting trolley car,” the pilot’s manual noted.

In combat situations and once released from the C-47, pilots had to make sure their unpowered aircraft was flown at an attitude that still gave it enough lift to stay in the air. Landings had to be carefully coordinated – a difficult task when flying through anti-aircraft fire – because the engineless Waco had no way to go around again for a second landing try.

Landings were even more hazardous when the enemy knew gliders would be coming. At Normandy during the D-Day invasion, German forces flooded possible landing zones or riddled them with upright telephone poles to prevent landings. Many poles were strung with explosives, making operations even more hazardous.

Neither the Horsa nor the Waco was built to be reused and many were smashed and splintered upon landing. Entire loads of soldiers or equipment were lost during bad landings.

However, once the glider made a successful landing, its crew could quickly get to work unloading cargo. While the Horsa carried an explosive charge that literally split the aircraft in two, the Waco was unloaded using a winch system that rotated the cockpit up above the fuselage. Sometimes this was done manually, but if the glider carried a motorized vehicle such as a jeep, a cable attached to the rear of the vehicle slowly raised the cockpit as it drove out of the glider. Each glider carried ramps that assisted in unloading cargo.

A big box with wheels

Then as now, having a pair of aviator’s wings on your uniform was a major achievement, for they were gained only after months of intense and sometimes grueling training.

By mid-1942, Army Air Forces Chief of Staff Lt. Gen. Henry H. “Hap” Arnold had called for up to 6,000 men to be trained as glider pilots, a demand that put such tremendous strain on the Army Air Forces’ training facilities that civilian schools across the country were drawn into the effort. At first enlisted volunteers with flying experience were sought for the training program, then civilian pilots, the demands for manpower were such that anyone who could meet the physical and mental standards for the job was recruited. One of those men was Denton, Md., native George Theis, now 86. Unable to meet the eyesight requirement for powered aircraft pilots and having no previous flight experience, Theis enlisted in October 1942. After completing his training, he was sent to Orleans, France and on March 24, 1945, flew his one and only glider mission.

The undertaking, dubbed Operation Varsity, was intended to land British and American troops on the eastern side of the Rhine as a
means of securing access to Berlin. It was the largest, and as it turned out, final airborne assault effort of World War II.

Theis described the Waco as “almost like any other airplane you’d fly.” Once cut loose from the tow plane, the Waco became like a big kite, slow and very maneuverable, he said.

“It was just a big box with wheels,” he recalled, although he remembered being amazed the first time he saw one.

“I said, ‘My gosh, that’s huge.’ It had an 84-foot wingspan. I thought that was a big airplane, and it was.”

Training for Operation Varsity included one incident that could have had a tragic ending, however. Theis was flying a Waco when he allowed it to stall out; the right wing hit the ground, then the left, and the glider broke in two upon coming to a stop.

“Other than that, it flew great,” he said.

Assigned to deliver a jeep and four troopers, Theis and his copilot were just one of 90 gliders in his group, an echelon so large he said it took three hours for it to pass a point on the ground. Overall, there were 1,300 gliders employed for the operation.

“Flying [it] was like being inside a bass drum, because of the fabric stretched over the metal frame,” he said. “We had to shout to hear over the wind noise.

Theis’ mission went exactly as planned until his echelon of four tow planes and gliders reached their release point.

“When we were cut loose, it got real quiet real fast. We weren’t supposed to stay in the air very long, because the idea was to get on the ground.”

Theis looked out his cockpit window and saw a large slope obscuring the landing area. Additionally, British troops had been using smoke generators to cover their attempts to cross the Rhine.

“We were coming in to land, but the area was just covered in smoke,” he said. “When we cut loose, all we could see was the smoke.”

Theis doesn’t remember any anti-aircraft fire or tracer rounds being fired at his ship as he made a 270-degree turn into the landing zone, where he and his copilot made it to ground in a nearly vacant field that presented no obstacles to a clean landing.

“It was a textbook landing, just like a training mission,” he said. “We were in excellent condition, while other gliders had their wings knocked off because they ran into obstacles or each other.”

After the jeep was unloaded he set out to find the command post, but ran into a fellow pilot who was with a brigadier general who asked if it stood for ‘glider.’

Theis sums up the attitude glider pilots had during the war.

Assigned to deliver a jeep and four troopers, Theis and his copilot were just one of 90 gliders in his group, an echelon so large he said it took three hours for it to pass a point on the ground. Overall, there were 1,300 gliders employed for the operation.

“The Germans were shooting at me all the time, so I’m very lucky to be alive,” he said. “You can’t imagine what it was like. You know how a goose feels when he flies over a bunch of hunters and they start shooting.”

Houck jumped out of the grounded Waco and took cover, but despite his efforts at evasion, he was captured and spent the remainder of the war, about five months, in Stalag Luft I, near Barth, Germany.

Except for a burn caused by an exploding anti-aircraft shell, Houck escaped injury. He turned down the award of a Purple Heart after his return to the United States.

“All I felt was the heat from the shell, like sitting on a hot plate with a bare bottom,” he said. “I never got anything so much as a scar. Other fellows lost arms and legs. They deserved it. I was just lucky.”

**The ‘G’ stood for guts**

Both Theis and Houck had successful careers following the war, and both made it a point to return to the scene of their wartime experiences. Houck had only one other gliding experience, when he piloted a sailplane in 2001, but Theis has been up several times, including a glider flight near his original landing site with some German friends.

Both also belong to the National World War II Glider Pilots Association, which maintains the Silent Wings Museum in Lubbock, Texas, and displays photographs and artifacts of military gliding. It also has numerous hands-on exhibits as well as a restored Waco.

Both Theis and Houck look back upon their days as glider pilots with satisfaction and some humility. Glider pilots were ranked as flight officers, a grade equivalent to the lowest ranking of today’s warrant officer. Even though many fellow airmen didn’t consider them “real” pilots, history has proven glider pilots were just as important to the war effort as any other soldier, airman or Marine.

Proudly sporting aviator’s wings on their uniforms, wings with the capital letter “G” emblazoned in the center, they fought just as bravely and many died performing their duty.

Theis sums up the attitude glider pilots had during the war.

“The power pilots looked down on us like we were washed out cadets. People would look at our wings, with the G in the center, and ask if it stood for ‘glider.’

“We said no, it stood for ‘Guts,’ because you flew a one-way mission. You’d cut loose and you had to go down, so you’d better do it right because you didn’t get a second chance.”

In the next issue of the Hangar Digest, a crew of AMC Museum volunteers is chronicled during efforts to restore the fuselage of a CG-4A glider.
**Aviation Art Series**

LIMITED EDITION GICLÉES ON CANVAS

Signed and numbered by the artist.

**BERLIN AIRLIFT**  
*Artist: Paul Rendel*

**STARLIFTER LIBERTY SALUTE**  
*Artist: Raymond Meats*

**OPERATION NICKEL GRASS**  
*Artist: Gil Cohen*

**CLEAR GUNS**  
*Artist: Paul Rendel*

**OFF TO THE RODEO**  
*Artist: Paul Rendel*

All Aviation Art series giclées are now available in the Air Mobility Command Museum store. They make great Christmas gifts for any aviation enthusiast.

**FRAMED**  
$150

**STRETCHED**  
$99

**ROLLED**  
$69

**What is a Giclée? (zhee-clay)**

Giclée is an invented name for the process of making fine art prints from a digital source using ink-jet printing. The word giclée, as a fine art term, has come to be associated with prints using fade-resistant “archival” inks (including solvent inks) and the ink-jet printers that use them.
Around and About the AMC Museum

The AMC Museum’s newest display aircraft, the VC-9C, “Air Force Two” arrived August 18, 2011.

The lines were long as members of the public got their first tours of the interior of the famous aircraft, now at rest following 37 years of service. The AMC Museum will offer free tours of the VC-9C on the third Saturday of each month.

Ev Sarbheck photos
Former AMC Museum Foundation Board Chairman Mike Quarnaccio made a surprise appearance during the board’s Aug. 4 meeting to present a limited edition of Keith Ferris’ lithograph, “Gallant Beginning.” Donated by longtime supporter George Chabbott, who in turn received it directly from the artist, the painting depicts the March 2, 1910 flight by Lt. Benjamin Foulois over San Antonio, Texas.


Members of the Singh family of Parsippany, N.J. chat with Museum volunteer Donald Clark during their tour of the Museum’s tarmac Aug. 17. From left are mother-in-law Judy Bellach of Staten Island, N.Y., sons Paul and Christian Singh, mom Janice Singh and dad Rajpal Singh, along with Clark. The family was vacationing in Delaware and made their first trip to the Museum as part of their travels. “It was something we wanted to see,” Jacob Verba, 2, and his grandmother, Judy Mohr, both of Allentown, Pa., look over the Friends of the C-133 plaque while vacationing Aug. 10. “Our kids are into airplanes,” she said. “We’ve been here before and we wanted to come back now that they’re older.”

Aviation artist Paul Rendell, left, chats with Museum supporters Graceann and Eric Simmons during the AMC Museum Foundation Board mixer, held

Lindsey Levis of Lewes and dad Rob Stump of Dover enjoy the sights during their afternoon at the Museum Aug. 17.
**Pave a Path to History In Commemoration Park**

**With One Brick…**

You can accomplish two things — become a permanent part of history in Commemoration Park and join the AMC Museum Foundation in support of the museum.

And what a great idea! There are so many reasons to order your brick today!

- Offer tribute to or memorialize a loved one
- Give a holiday or birthday gift
- Commemorate a special date
- Recognize a special group
- Show your personal or business support for the AMC Museum

To acknowledge the purchase of your brick, you’ll receive a certificate of recognition that’s suitable for framing or presenting to the person you’ve honored. Bricks may be purchased by individuals, businesses, groups, or organizations.

<table>
<thead>
<tr>
<th>INDIVIDUAL</th>
<th>BUSINESS/ORGANIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>4” X 8”</td>
<td>8” X 8”</td>
</tr>
<tr>
<td>1-3 lines—15 characters and spaces on each line</td>
<td>1-6 lines—15 characters and spaces on each line</td>
</tr>
<tr>
<td>$65</td>
<td>$125</td>
</tr>
</tbody>
</table>

All letters are capitalized. Don’t forget to count spaces between letters, too.

**BUSINESSES**—Have your logo engraved on a brick! Designs must be pre-approved by the engraving company.

Call the AMC Museum Store at 302-677-5992 for more information.

Mail form and payment to:

**BRICK PROJECT MANAGER**
AMC MUSEUM FOUNDATION INC
P.O. BOX 02050
DOVER AFB DE 19902-2050

Name (Mr. Mrs. Ms. Rank) ___________________________________________________________

Address ___________________________________________ E-mail ________________________

City _____________________ State ____ Zip _____________ Phone _________________

☐ Notify me of my brick’s location

Payment Method ☐ Check ☐ VISA ☐ Mastercard ☐ American Express ☐ Discover

Name as it appears on card ______________________________ Phone (Rqd for credit card payment) ____________________

Credit Card Number__________________________________________ Exp Date ________

Signature (credit card only) ____________________________________________

Amount Enclosed $________

Please order the size brick I’ve checked below:

☐ Individual 3-line $65

☐ Individual 6-line $125

☐ Business 3-line $125

☐ Business 6-line $250

Photocopy this form if you’d like to order more than one brick.

Questions? Email member hipamcm@comcast.net.

THANK YOU!
# Become a Member!

**Support the AMC Museum**

<table>
<thead>
<tr>
<th>Membership Category</th>
<th>Annual Dues</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crew Member</td>
<td>$30</td>
<td>Membership certificate, member card good for 10% off purchases in the Museum store, quarterly Hangar Digest newsletter, *Museum pin and challenge coin</td>
</tr>
<tr>
<td>Flight Crew Member</td>
<td>$50</td>
<td><strong>Crew member benefits plus</strong> <em>challenge coin for each family member (maximum five)</em></td>
</tr>
<tr>
<td>Squadron Commander</td>
<td>$100</td>
<td><strong>Flight crew member benefits plus</strong> recognition in the Hangar Digest newsletter, name engraved on plaque, invitation to annual museum mixer</td>
</tr>
<tr>
<td>Group Commander</td>
<td>$250</td>
<td>Squadron commander benefits <strong>plus</strong> two museum coffee mugs</td>
</tr>
<tr>
<td>Wing Commander</td>
<td>$500</td>
<td><strong>Group commander benefits plus</strong> one crew member membership for friend, *signed and numbered aviation print, *museum golf shirt personalized with name and donor category</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Donor Category</th>
<th>Donation</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifer (Life Member)</td>
<td>$500</td>
<td>Wing Commander benefits</td>
</tr>
<tr>
<td>Eagle Donor</td>
<td>$1,000</td>
<td><strong>Wing Commander benefits plus</strong> special engraved plaque for your home or organization. All Eagle Donors receive further benefits and recognition. Please contact the museum at 302-677-5938 for more information</td>
</tr>
<tr>
<td>Bronze Eagle Donor</td>
<td>$2,500</td>
<td></td>
</tr>
<tr>
<td>Silver Eagle Donor</td>
<td>$5,000</td>
<td></td>
</tr>
<tr>
<td>Gold Eagle Donor</td>
<td>$10,000</td>
<td></td>
</tr>
<tr>
<td>Platinum Eagle Donor</td>
<td>$25,000</td>
<td>*Initial and 5-year anniversaries</td>
</tr>
</tbody>
</table>

Sign me up as a Friend of the AMC Museum at the following level:
- [ ] Crew Member
- [ ] Flight Crew Member
- [ ] Squadron Commander
- [ ] Group Commander
- [ ] Wing Commander
- [ ] Lifer
- [ ] Eagle Donor
- [ ] Bronze Eagle Donor
- [ ] Silver Eagle Donor
- [ ] Gold Eagle Donor
- [ ] Platinum Eagle Donor

Thank you for helping to preserve U.S. Air Force airlift and air refueling history. The AMC Museum Foundation is a nonprofit, educational organization that raises money and generates support for the AMC Museum. Dues and donations are tax-deductible in accordance with IRS regulations.

Name (Mr. Mrs. Ms. Rank) __________________________________________________________
Address ______________________________________ E-mail ______________________ (Required for credit card)
City __________________ State ____ ZIP _____ Phone ______________
Payment Method [ ] Check [ ] VISA [ ] Mastercard [ ] American Express [ ] Discover
Name as it appears on card __________________________________ Exp Date ____________
Credit Card Number ____________________________ Signature (credit card only)
Name as it appears on card __________________________________ Exp Date ____________
Signature (credit card only) __________________________
This is a gift membership for:
Name ______________________________________ E-mail ______________________
Address ______________________________________ Phone ______________________
City __________________ State ____ Zip __________

**Extra benefit for flight crew members and above:**
Number of coins (maximum of five) ____________________________

**Extra benefit for Wing Commander members and above:**
Shirt size (circle) Small   Medium   Large   XL   XXL   Name to be embroidered on shirt ____________________________

Questions? Email us at: membershipamcm@comcast.net.

<table>
<thead>
<tr>
<th>Mail application and payment to:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEMBERSHIP MANAGER</strong></td>
</tr>
<tr>
<td>AMC MUSEUM FOUNDATION INC</td>
</tr>
<tr>
<td>P.O. BOX 02050</td>
</tr>
<tr>
<td>DOVER AFB, DE 19902-2050</td>
</tr>
</tbody>
</table>
Thank you for your support!

UP NEXT …

An intrepid group of AMCM volunteers continue their work restoring a World War II Waco glider.

FOR ADDITIONAL INFORMATION ON UPCOMING EVENTS, VISIT OUR WEBSITE AT WWW.AMCMUSEUM.ORG