



# Hangar Digest

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## From the Editor:

In 1948, the Military Air Transport Service began operations with three Divisions: the Atlantic, Continental and the Pacific. The Headquarters of the Atlantic Division was located at Westover AFB, Massachusetts; Kelly AFB, Texas was the home of the Continental Division and Hickam AFB, Hawaii, was the Headquarters of the Pacific Division. In this issue, I offer an insight into the history of the Pacific Division.

In November 1951, flying his MATS C-54 from Thule Air Base, Greenland to Goose Bay, Labrador, AMC Museum volunteer Bill Voigt had as his passenger Colonel Bernt Balchen. Who was Colonel Balchen? His story appears on page seven.

The annual AMC Museum Foundation Mixer is scheduled for 4 November at the Museum from 5:00 pm to 7:30 pm with snacks, drinks, and a guest speaker. The cost will be \$10 per person; however, free for Squadron Commander Memberships and above. Call (302) 677-5938 for more information.

The United States Air Force blue uniform — how did it get that way? Learn more in the January issue.

And finally, on behalf of the Museum's board of directors, the Museum's staff and volunteers, I extend our best wishes for a safe and Happy Holiday season.

*Harry E. Heist, Editor*

## LOOKING BACK

Airmen flying through the night will be able to see with daylight clarity thanks to an optical amplifier the Wright Air Development Center is perfecting. Nicknamed "Cat Eye", the electronic system presents an image on the screen of a cathode ray tube. The optical amplifier is 1,000 times more sensitive than a standard television camera. "Cat Eye" amplifies the always present light — too dim to be perceived by the human eye — by increasing the contrast between light and dark.

Source: The MATS Flyer. June 1956



## From the Director

One last reminder: the 2006 Dover AFB Open House will take place on October 7-8 2006 right here at your AMC Museum. The USAF Thunderbirds will be the headliners and as I write this there are several more exciting aerial acts being booked. Check our web page for details at [www.amcmuseum.org](http://www.amcmuseum.org).

The C-119 finally looks like it belongs on our ramp. Our own restoration crew has continued with their excellent progress with the interior. However, it is the painting contractor that has succeeded in making one of our less attractive airlifters look like the belle-of-the-ball. We selected a 1950's arctic markings pattern with red wing tips and tail as none of the other aircraft in our collection currently have these markings. Since our C-119 served primarily with the Royal Canadian Air Force we were free to select an appropriate generic USAF paint scheme. When it meshes with our mission, we try to recreate the correct markings that a particular plane used in service; which was not possible in this case.

The T-33 which graces our main entrance has received a coat of shiny silver metallic paint as a kind-of field test to see if the new environmentally acceptable natural metal paint holds up. We have marked the plane as a MATS T-33 that was used as a pilot refresher and trainer. Several T-33s were stationed here at Dover in the 50s & 60s.

Volunteer Mike Boyd has started an absolutely wonderful project in documenting all of the different paint schemes and markings that each of our aircraft have worn over their years of service. This is quite a challenge and he has already made tremendous progress. In some cases he has located the markings of similar aircraft that served in the same unit as one of ours. Of the five aircraft he has researched so far, he has located previously unknown photographs of three of them by researching the internet, checking arcane library books and contacting his friends in the model building world. This is a tremendous asset not only to the museum but to researchers and modelers alike. In each case he is creating a line art drawing in color showing the correct markings. In cases where no actual photograph exists he is recreating them using other archival information. So far he has located two published photos of our C-45 when it was in service with Air America, the old CIA "airline". He also found a picture of our C-123 sitting on the flightline in Vietnam before it had jet engines added and most amazingly he was able to confirm that our C-124 was used in the background shots of the movie "Strategic Air Command" back in 1955. All of this adds to the value of our collection. As years go by more and more of these old photos are being lost. I wonder what future generations will do when there are no old stable black & white photos and there is no such thing as a negative?

If you have been following the restoration of our Super Constellation you might remember our aircraft is really a civilian Lockheed 1049E that we are restoring to C-121C standards as no military C-121s were available to us. (Thanks again to Amoco Oil Company for donating the aircraft after they bought the property where it had been used as a restaurant/disco for some years.) A recent package from our Irish friend Ray Flynn, brought a detailed log of some of the trials and tribulations suffered by our "Connie" when she was in airline service. Our Connie flew with seven different airlines during her career. One interesting connection to the USAF is that while she was flying for Seaboard & Western Airline in the 1950s she was often chartered by MATS to haul troops and families to Europe and back. I'll have more on the Connie in the next issue.

*Mike*

## Cruisin' with the Curator

Okay folks, this will be just a bit of a change for this edition. We're parking the PT Cruiser and taking the shoe leather express so lace them up and here we go!

Sit back and while reading this, imagine that you're a part of the team that's going to move the C-124 over to the museum. Contrary to popular belief, these planes don't just levitate to their nesting spot. Quite a bit goes in to getting them there. You're about to find out how much:

First is the planning stage where I sit at my desk with a paper layout of the ramp. I have paper plane cutouts

**(Continued on the following page)**

## **Cruisin' with the Curator (Cont.)**

(to scale) placed where existing planes are positioned and, believe it or not, I move them around each other as if towing them to see which aircraft I have to move to get others in their new place of honor. Whoever said that this job isn't fun! When I'm satisfied that my plan is good, the real work begins. A week prior, I give the C-124 restoration crew (that's you) the heads up about the move and have you report to the plane at 0900 the following Thursday. On the day before the tow, you meet me at the museum and we proceed to unfasten all the tie-down chains on the aircraft we have to move to get the 124 to its spot. Let's see....that's only 24 chains times 6 bolt/nut fasteners per chain for a grand total of 144 bolt/nut combos. Hey get back here, we just started. Next, go get the forklift and move 20 pet rocks that moor the planes to the ground. They weigh about 3650 lbs a piece so you'll be moving 73,000 lbs of concrete. Okay...take a break while I contact Airfield Management and Transient Maintenance to coordinate tomorrow's tow. That's all we'll do today, see you at 0530 tomorrow morning. Oops, just remembered, we still have to move 5 aircraft off of the museum ramp over to the South ramp. While I'm getting the tow vehicle, you take the forklift and move 40 jersey barriers out of the way, okay? Now, in this order we'll move the C-9, C-130, C-123, C-7 and the C-119. As we hook up the tow bar and tug to each plane, 6 concrete parking blocks have to be moved from the landing gear of each plane. Hours later.....thanks, guys but before you go for the evening, put the jersey barriers back, the cops won't let us leave them stowed for tomorrow's tow. See ya in the morning.

Good morning! It's time to get to work. Go get the forklift because we have to move the jersey barriers out of the way again. With that done, we head over to the restoration hangar for a safety briefing and I assign chock walkers and wing walkers for the tow. All is ready and we hook up the tow bar and tug and head out. It's a slow tow down the flightline but I'm cognizant of the fact that most of us on the tow don't walk as fast as we used to. I stop the tow at the transient ramp to let the chock and wing walkers take the museum pickup over to the museum ramp to wait for us to cross the runway.

Okay, here we come with the Shaky to the museum ramp. First order is to park the 124 in its new spot. After a few tries, we get it right. Chock the plane and..... hey hey hey, we're not done yet. There are still 5 planes that we have to put back on our ramp! Who hasn't driven the forklift yet? He-he-he, there's still 40 jersey barriers to put back into place and then the 30 concrete parking blocks. Remember the pet rocks too and the tiedown chains. That being done, the equipment is put away and another plane finds its spot at the museum. Not as easy as you first thought? Darn right!

Thanks for all your help; we'll do it again soon. I promise!

Jim

## **An old acquaintance was renewed**

between Major General (ret) Jim "Bagger" Baginski and Hangar Digest editor Harry Heist at the last meeting of the Airlift/Tanker Association's National Board of Officers held at the AMC Museum. General Baginski serves as Chairman of the A/TA's Board of Advisors. He was the Airlift/Tanker Association's "Hall of Fame" inductee for 2005.

The Airlift/Tanker Association is dedicated to ensuring that American military forces continue to have the air mobility capability required to implement U.S. national security strategy. Association membership includes active duty, reserve, guard and retired military personnel, both officers and enlisted, as well as civilian and industrial supporters of the air mobility mission. For membership information, log on to <http://www.atalink.org/membership.html>.



Gen Baginski (L) and Harry Heist

## 20,000 Leagues Over The Sea—MATS' Pacific Division

Racing the sun westward around the world, the Military Air Transport Service's Pacific Division (PACD) flew across the world's biggest ocean—the Pacific—and much of the world's largest land mass—Asia. No other Division of MATS spanned so much of the earth's surface. It extended from California across the Pacific, Southeast Asia, India and Pakistan and on into Dhahran, Saudi Arabia. Pacific Division Headquarters was located at Hickam AFB, Hawaii, the only MATS Division outside the continental limits of the United States.

The Pacific Division crews covered not only huge distances but they also encountered a majority of the world's cultures from that of modern day United States, through exotic tropical islands and atolls of Polynesia, the mysterious Orient, ancient India and the deserts of Arabia. The distances and changes were confusing. One crew member was heard mumbling to himself, "I know where I am—but when am I?" And many crew members had eaten a Thanksgiving dinner in Tokyo, climbed aboard their airplane, flown all night and arrived in Honolulu just in time for another Thanksgiving dinner in Hawaii.

One of PACD'S greatest achievements came during the Korean War when thousands of tons of high priority cargo and personnel were flown from the United States to the combat area. However, this was not just a one-way operation, for when the aircraft had delivered their emergency cargoes to the war zone, they were reloaded with top priority stateside passengers—the wounded.

The 1453rd Aeromedical Evacuation Squadron, also based at Hickam, was able to gain a tremendous amount of experience and data in long distance air evacuation. Men wounded at places like Taegu, the Chosin Reservoir, Old Baldy, The Punchbowl and Inchon, were flown all the way from Tokyo to California. Medical specialists and nurses of the squadron also cared for the prisoners of war returning from operations "Little Switch" and "Big Switch."<sup>1</sup>

There was a lighter side to flying these vast distances—take the International Date Line for instance. Flight crews humorously toyed with the problem of how to get an extra day's per diem when crossing the International Date Line. Even with the use of slide rules, sextants, Loran and a textbook on basic logic, they were not able to solve this tricky problem.

The Division had three transport wings assigned to carry out its mission. The 1501st Air Transport Wing located at Travis Air Force Base, California had two C-124 squadrons: the 77th and the 85th along with two C-97 squadrons, the 55th and the 75th.

At Hickam, the 1500th<sup>2</sup> Air Transport Wing had the 48th and the 50th, both C-124 squadrons. The 47th Air Transport Squadron had C-97s and two Navy Transport Squadrons, the VR-7 and the VR-8 both flew the R7V Lockheed Super-Constellations. And, the 1503rd Air Transport Wing in Tokyo, Japan had two C-54 squadrons assigned.

The Navy crews assigned to the 1500th at Hickam flew the most glamorous mission that the divisions operated—"The Embassy Run"—the flight across the Pacific and the Far East that connected with the Atlantic Division at Dhahran. This flight read something like a travelogue. It originated in Hawaii with stops at Wake Island, Guam, Manila, Saigon, Bangkok, Calcutta, New Delhi, Karachi and finally Dhahran.

Distance represented little difficulty under normal operating conditions with the crews and equipment of the Military Air Transport Service. But when an emergency arose, the remoteness of the Pacific and the limited facilities of the Oriental countries became a grave problem. An aircraft commander in trouble, say, between Tokyo and Midway Island, would contact an Airway and Airways Communications Service (AACS) ground station which in turn would alert Air Rescue Service units in Japan, Guam and Hawaii plus Naval air rescue units and ships operating in the area.

If a plane went down, a temporary rescue force of long-range aircraft would be established in the area, drawing rescue aircraft from units all over the Pacific. This all took time! Even with the precision operations of the rescue units, such a task force may well expend the first few valuable hours getting the equipment to the appropriate location before the full scale search activity could be started.

**(Continued on the following page)**



## Arctic Rescuer Colonel Bernt Balchen

Colonel Bernt Balchen was America's greatest Arctic expert of modern times. Born in Norway in 1899, he served as a cavalryman in the Finnish Army fighting against the Russians in WWI before becoming a pilot in the Norwegian Naval Air Force in 1921, where he acquired his initial Arctic flying experience. In 1925, he was a pilot on the Amundsen-Ellsworth Relief Expedition to Spitzbergen; the next year he was a member of the Amundsen-Ellsworth-Nobile Arctic Expedition. In 1927, he was a pilot on Admiral Byrd's famous flight across the Atlantic and in 1928, he flew to Grenny Island north of Newfoundland to rescue the crew of the German airplane "Bremen" which had crash-landed after flying the Atlantic. During 1928-30, Balchen was chief pilot on Byrd's Atlantic expedition and on November 29, 1929, he piloted the first airplane to fly across the South Pole. He was made a U.S. citizen by Act of Congress in 1931.



During the 1930s, Balchen continued to participate in Arctic and Atlantic flight operations and when World War II started in 1939, he began ferrying airplanes to England and to Singapore for the British. In 1941, prior to the attack on Pearl Harbor, he joined the Army Air Force at the request of General 'Hap' Arnold and on personal orders from Gen. Arnold, went to Greenland where he supervised the construction of, and later commanded, the famous U.S. air base known as "Bluie West 8". While in Greenland, he led many spectacular rescue missions which saved lives of numerous U.S. flyers whose planes had gone down on the icecap.

In 1943, Balchen was made Chief of the Allied Transport Command for Norway, Sweden, Denmark, Finland and the USSR, with a secret base in Scotland. During that time, his planes flew 4,399 people from neutral Sweden to Great Britain across enemy-occupied territory. He also led highly-secret aerial missions into Norway to resupply the Underground Resistance Forces in their operations against the Nazi invader.

Balchen was recalled to active duty with the USAF in 1948 and assigned to command the 10th Rescue Squadron in Alaska. The next year he made the first nonstop flight from Alaska over the Pole to Europe. He was transferred to HQ USAF in 1951 to participate in building up northern defenses and surveying Arctic sites for the Ballistic Missile Early Warning System (BMEWS). Also, he pioneered the development of Thule Air Base in Greenland and blazed airborne trails to assist both commercial and military aviation in the Arctic region. After retiring from the USAF in 1956, Balchen continued to serve the Air Force on special assignments and aviation and energy industries as a consultant until his death in 1973.

Source: [www.wpafb.af.mil/museum](http://www.wpafb.af.mil/museum)

### Name the Artifact by: Deborah Sellars



You're looking at a part of one of the museum's newest artifacts. Do you know what it is? See page 9 for the answer.

### Membership Recognition

*The AMC Museum Foundation expresses its gratitude for the generosity of our members during the recent Lifetime Member Fundraising Campaign:*  
**Donald A. Adams, Bruce C. Creamer, Paul A. Frederick II, Charles W. Hardie, Lionel L. Leblanc, James R. Leech, George D. McDuffie, Priscilla Rittershofer, James T. Thompson, Alonzo B. Wickers and Clarence C. Wolgemuth.  
*And, the Foundation further recognizes the following who have contributed \$100.00 or more in support of the AMC Museum through new and/or renewed memberships:* **Lt Col Diego Alvarez, Lt Col Paul Gillis, USAFR (Ret), Col Richard B. Harper, Jr. USAF (Ret) and Col David Wuest.****

## “Name the Plane”

The airplane that I asked you to identify in July’s issue of the Hangar Digest is the Douglas DC-4E.

The Douglas DC-4E was an experimental airliner that was developed before World War II. The design originated in 1935 from a requirement by United Airlines. The goal was to develop a much larger and more sophisticated replacement for the DC-3 even before the first DC-3 had even flown. There was enough interest from other airlines, that American Airlines, Eastern Airlines, Pan American Airlines and TWA joined United in providing \$100,000 each toward the cost of developing the new aircraft.



With a planned capacity of 42 passengers, the DC-4 (as it was then known) would seat twice as many people as the DC-3. It would be the first large airplane with a nose wheel. Other innovations included auxiliary power units, power-boosted flight controls, alternating current electrical system, and air conditioning. Cabin pressurization was also planned for the production aircraft. The aircraft also featured a novel tail with three vertical stabilizers. This provided sufficient vertical stabilization permitting the aircraft to take-off with only two engines operating on one side yet allowing the plane to fit into existing hangars.

The prototype first flew on June 7, 1938 from Clover Field in Santa Monica, California. It was used by United Air Lines for in-service evaluation during 1939. Operating the aircraft was remarkably trouble-free. However, the complex systems proved to be expensive to maintain and the design was abandoned in favor of a less complex four-engine single vertical stabilizer design. This newer design was designated the DC-4 leading the earlier design to be re-designated the DC-4E (E for "experimental"). The DC-4E was sold to Japan, which was buying western aircraft for evaluation and technology transfer during this period. The design became the basis of the Nakajimi G5N1 Shinzan bomber.

Our randomly selected winner of the “**Name the Plane**” contest is Donald Isleib of Newtown, Pennsylvania and he will receive a selection from the Museum’s gift shop. Congratulations!

This time I ask that you identify the airplane depicted below including the manufacturer, mission, design and series (if applicable); i.e., Boeing B-17G. Please send your entry by letter, e-mail, FAX or post card to any of the addresses listed on page 2. **Please do not leave your entry by phone**. I will designate each correct answer with a number ID from which I will randomly select one winner. Please send your entry as soon as possible and please include a return address. The winner will receive an aviation related selection from the museum’s gift shop. Good luck and thank you for your participation!

(Museum staff and volunteers are not eligible)



## Around the Bases: Yokota Air Base, Japan

Located on the Kanto Plain 28 miles northwest of Tokyo at the foothills of the Okutama Mountains, Yokota Air Base is the home of Headquarters U.S. Forces Japan, the 5th Air Force, the 374th Airlift Wing (Pacific Air Forces) and the **730th Air Mobility Squadron (Air Mobility Command)**. Yokota is one of three operational U.S. Air Force bases in Japan. The base was named Yokota after a small village previously located in the northeast corner of the base. The base population is approximately 14,000 and is the closest military installation to the Tokyo metropolitan area.

Headquarters U.S. Forces Japan is a joint service headquarters—coordinating matters affecting U.S. and Japanese defense relations. The Fifth Air Force and its subordinate headquarters in Japan enhance the U.S. deterrent posture and should deterrence fail, provide tactical fighter and military airlift support to conduct offensive air operations. The 374th Airlift Wing is Yokota's host unit.

The 374th Airlift Wing is the only airlift wing in the Far East. Reorganized on April 1, 1992, the 374th came to be in the wake of a restructuring of Air Force units. The former host unit, the 475th Air Base Wing and its subordinate units, were inactivated. The 374th Tactical Airlift Wing was redesignated the 374th Airlift Wing and transferred from the Air Mobility Command to the Pacific Air Forces.

Yokota is the primary airlift resource for the Pacific Forces with an area of responsibility covering more than 100 million square miles. Aircraft assigned to Yokota include the C-130 Hercules, UH-1N Huey helicopters and C-21 Learjets. The base supports the Department of Defense agencies throughout the Pacific with scheduled missions within Japan, to Korea, Micronesia, Guam and Thailand.

The base opened in 1940 as Tama Army Airfield, a flight test center and aviation maintenance school for the Japanese Imperial Army during World War II. By the end of 1942, the airfield was operating at its peak as the "Wright Field" of Japan, where newly designed aircraft were first tested. The name of the airfield was derived from Tama Prefecture — or county in which it was located. The base received minor damage during the war and remained fully operational until the surrender of the Imperial Armed Forces on August 15, 1945. United States operations began on September 4, 1945, when U.S. forces occupied the area and where they found 280 of the most modern Japanese aircraft still in excellent running condition. The Japanese had removed the tops of the hangars to resemble bomb-damaged facilities so U.S. fighters thought they had already been bombed. The base was officially dedicated as an American base on August 15, 1946.

Today, the Air Mobility Command maintains the **730th Air Mobility Squadron**. The 730th is a unit of the 715th Air Mobility Operations Group based at Hickam AFB, Hawaii.

Prior to being activated as the 730th AMS, the squadron was designated the 630th Air Mobility Support Squadron. The change was enacted to better reflect the role of the unit as more operational than support oriented and became effective on March 15, 2001.

The squadron is part of the Air Mobility Command's en route system providing maintenance, aerial port and command and control support to Yokota and to deployed AMC forces worldwide.

Sources: [www.yokota.af.mil](http://www.yokota.af.mil); [www.globalsecurity.org](http://www.globalsecurity.org)



### Name the Artifact

You were looking at the grill of a 1972 Ford Custom sedan. This car was used as a staff car by eight different wing commanders at Charleston AFB over a 15 year period. It was stored onboard a C-124 at Charleston before was flown via a C-17 to the AMC Museum for display.



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For an updated Pave a Path to History  
brick form, please visit:

<http://amcmuseum.org/support>

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