

MINNESOTA AIR NATIONAL GUARD HISTORICAL FOUNDATION  
**MINNESOTA ANG MUSEUM NEWS**  
*Minnesota Aviation History - Learn of the Past*  
*Fall 2021*



## Museum's tribute to the ANG's century of history displayed at MSP

by Anja Drescher



If you are passing through the Minneapolis/St. Paul International Airport, make sure to walk Concourse C. You won't want to miss our new "A Century in the Sky" exhibit that has been two years in the making.

2021 commemorates the 100th anniversary of the Minnesota 133rd Airlift Wing and a century's worth of important aviation history. The Centennial Committee has been planning, designing, and executing this milestone celebration since early 2019.

Those plans were largely stifled by the worldwide COVID-19 pandemic. One part of the plan was able to move forward: an over 200-foot-wide exhibit at the Minneapolis/St. Paul International airport, Thomson Reuters, Concourse C Art Gallery.

### A long story

The exhibit is a striking collection of four 16' glass cases, one 36' glass case, and 123' of wall space. Visitors are treated to a walk through the long history of the Minnesota Air National Guard, with each case focused on a specific period of time and highlighting our many points of pride.

*Airport display story continues on page 6*

Members of the committee, other participants and friends gather at the Minneapolis/St. Paul International Airport, Thomson Reuters, Concourse C Art Gallery on July 28, 2021 to celebrate the museum's display, featured through the end of November.  
*photo by Sam Fuentes, Arts@MSP*

## New display exhibited at State Fair Military Appreciation Day

by Bruce Graham

On Military Appreciation Day, August 31, 2021 at the Minnesota State Fair, museum members set up their new "100 Years of the Minnesota Air Guard" timeline exhibit. This was a perfect venue to display the proud heritage of our unit and promote our museum. We had a booth in one of three huge tents the state fair set up for just that one day. Of all the many military related organizations participating, we had one of the largest booths to display our exhibit.

This was the first time the museum's "100 Years of the Minnesota Air Guard" traveling display was unveiled. It consists of 12, 4 foot x 8 foot free standing fabric panels on aluminum frames that can be packed up and

*State fair display story continues on page 4*



### Also inside:

- T-37B "Tweetie Bird"
- Three new books highlight MNANG
- Artifacts enhanced by volunteers

## Our volunteers: Kevin Auger

story and photo by Terry Morris

Kevin Auger has always had an interest in military aviation. The North Saint Paul, Minn. native initially learned about the museum through visits with his father who was a former 133rd Airlift Wing member. Kevin served in the USAF from 1978 to 1982 as a munitions specialist supporting F-4 and F-16 aircraft both stateside and in Germany. From 1988 to 1993 Kevin served with the Minnesota Army National Guard as a crew chief on UH-1H Huey helicopters stationed at Saint Paul's Holman Field.

Between his active Air Force and Army Guard service, Kevin completed an Electro-Mechanical program which he used to pursue a career as a Field/Tech Support Engineer. He had a major role in the installation of the next generation 911 systems used by the majority of Minnesota's counties and a number of counties in North Dakota.

After reading military aircraft history books inherited from his father, Kevin was inspired to live and help preserve that history by becoming a museum volunteer. Since joining us this year, Kevin has used his career skills to make the C-97 cockpit exhibit "come alive" with colorful LED lighting of the instrument



panels. He also has been active in the maintenance and restoration of the museum's F-89. His history book reading found a photo of the Minnesota Gopher tail art on the F-89s used by the 109th FIS. This art will be added to the museum's airplane.

When asked what he likes best about being a volunteer, Kevin replied that it's the opportunity to share military history with fellow volunteers and the public. When asked about his favorite airplane, he replied it was the F-89 which in its day was one of the most heavily armed fighters in the world!



One of four flight simulators donated by Farnsworth Aerospace school in St. Paul. They had also been used in the Mall of America ACES store.

## Museum Projects

story and photo by Mike Drews

Spring, summer and fall have been busy times at the museum. When the volunteers were allowed back on base, only four of them could be at the museum at the same time due to the Covid-19 virus restrictions. All of our volunteers are now allowed to be at the museum, but the museum remains closed to the general public.

Earlier this year the main floor office area was painted and the hallway was re-carpeted. The gift shop has been rearranged to be able to showcase more of the museum's items for sale.

The MiG 15 aircraft received a new paint job and new decals. It is now back in the air park. Work is progressing on the replacement of the C-130 cockpit windows. The F-94, F-4 and F-89 are all getting a paint touchup and their canopies will be cleaned and polished. We will continue to work on outside projects as long as weather permits.

The museum received four donated simulators from Farnsworth Aerospace School in St. Paul. At one time the simulators were located in the Mall of America at the ACES store. When we need to work indoors again, these units will need to be assembled for use by our museum visitors.



## Mission Statement

The mission of the Minnesota Air National Guard Historical Foundation is to preserve the heritage and traditions of the Minnesota Air National Guard.

### Board Members

Chairman: Greg Haase  
Vice Chairman: Karen Wolf  
Secretary: Terry Morris  
Executive Dir./Dir. of Operations: Mike Drews  
Operations Assistant: Anja Drescher  
Treasurer: Tom Simonet  
Members: Rick Dow, Deon Ford, Herb Ketcham, Ray Pittman, Mark Schutta and Lowell Ueland  
Wing Advisor: Col. Jamie Lindman  
Legal Counsel: Kelly & Lemmons, P.A., Joe Kelly and Kevin Beck

Newsletter Editor: Pete Backlund  
Assistant editors: Sharon Drews, Deon Ford and Mark Moss  
Past Newsletters can be accessed on the museum website at: <http://mnangmuseum.org>

### Museum Hours and Access

The museum remains closed to the general public. Please visit our website for any updates.

Address all correspondence to:  
Minnesota Air Guard Museum  
P.O. Box 11598  
St. Paul, MN 55111-0598

(The Minnesota Air National Guard Historical Foundation, Inc. is a 501(c) (3) non-profit organization and not affiliated with the Dept. of Defense, Minnesota Air National Guard, or the 133rd Airlift Wing.



## Comments from the Board Chair

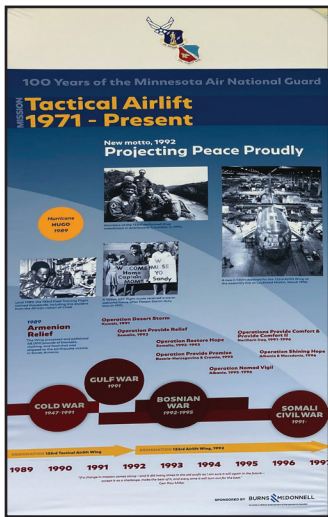
Summer just seemed to fly by. A museum team spent a good part of the summer preparing the exhibit at the airport – an over 200 foot display on Concourse C of MSP. The Airport Arts Foundation hosted a ceremony on the morning of November 15. I am expecting two more evening showings for all interested. The exhibit is a professional display of the Minnesota Air National Guard's 100 years of service to the state and nation. Many thanks to Karen Wolf for securing the grant that allowed us to hire Museology to put the display together. Anja Drescher, Herb Ketcham and Ted Biro spent countless hours ensuring the display was accurate. They, along with Mike Drews, meticulously searched for artifacts appropriate for the display.

The museum board determined a hierarchy for the team seeking an alternate home for the museum with the objective of being open to the public year-round. The first course of action (COA) is to stay at the Wing. The southeast corner of the Wing property could be configured to have a fence within the perimeter fence. That allows the Wing to shut down the inner fence and leave the Bloomington Road gate open. The second COA is to find property adjacent to the Wing. The third COA is to find property in close proximity to the Wing, and the fourth would be to utilize property in the greater metro area to include the feeder airports. At present, all COAs are being considered. If one presents itself as obtainable, energy will be focused in that direction.

The Wing is hosting a ball on March 19, 2022 at The Depot in Minneapolis. This will be part of the Wing's celebration of the centennial. They also plan to beef up family day to include a commemorative salute to the centennial; more information to follow. Finally, thanks to all who contributed to the production of the book, "Century in the Sky: A Commemorative History of the 133rd Airlift Wing 1921-2021", and the centennial video, which volunteer Mark Moss produced. The video was displayed at the Minnesota State Fair on the military appreciation day. The book is hopefully going to the publisher in December with the goal of printing copies by March 1, 2022.

Thanks again to everyone for your diligence in sustaining the museum and working on the 100th anniversary celebration, not an easy task considering all the restrictions during the past few months.

Greg Haase  
MNANGHF Chair



easily transported. It is an exact replica of what is currently on display at Minneapolis/St. Paul International Airport Concourse C, minus the artifacts and artwork.

Greg Haase, museum board chairman, Mike Drews, museum executive director of operations, and volunteer Bruce Graham arrived on the fair grounds at 6:00 a.m. on August 31st to unpack and set up the new traveling display. Current guardsmen, Chief Master Sergeants Amy Goossen and Rick Schumacher arrived a few minutes later and we all began assembling the colorful display panels depicting the 100 years history of the 133rd Minnesota Air National Guard (Tom Simonet, museum treasurer, was a few minutes late as he could not resist the state fair food smells and had to stop at one of the booths for breakfast.).

We got the panels assembled, set up a large flat screen TV and chairs for visitors to watch the history of the 133rd, a continuous running video that Mark Moss, museum volunteer and newsletter assistant editor, put together. He did an excellent job. You have to see this video!

Because this was the first time we set up this exhibit, we quickly learned we needed a banner outside to identify who we were and bring people in to our display area. The Chiefs were able to quickly get large 133rd banners hand delivered from the base to our tent. Along with handing out museum brochures, we also had some goodies from our base recruiters to hand out.

Many fair attendees stopped by including current and retired 133rd AW personnel. Col. John Cleet, 133rd Airlift Wing Commander, and Col. Jamie Lindman, Vice Wing Commander, along with their families, also dropped by.

Television news stations covering Military Appreciation Day saw our display and wanted to interview our people. Greg Haase, board chairman, did a live TV feed on KSTP. He talked about the 109th connection with KSTP in 1929 when the first air to ground broadcast was made from one of our new 109th Douglas O-2H airplanes. It was heard live over the airwaves on KSTP radio. In 1929 this was a very big deal! Local CBS news interviewed Chief Master Sgt. Rick Schumacher about his family's three generations in the Minnesota Air Guard and Fox 9 interviewed Chief Master Sgt. Amy Goossen about what military appreciation day meant to her and some of our members. Those interviews were broadcast later that evening.



Throughout the day several current 133rd guardsmen, (young guardsmen who will possibly be future museum volunteers) took turns to help out at the booth and answer questions. Because this was Military Appreciation Day, many fair visitors came in to thank our men and women in uniform and ask questions. When questions were asked about the history of the Air Guard, our current guardsmen would direct them to the older museum reps. This gave us a chance to chat with visitors about the history of the 109th AS/133rd AW and promote our new book, "Century in the Sky." The 400+ page book should be released sometime after the first of the year. In my opinion, our exhibit had to be the most impressive display of all the military exhibits. People could walk in, sit down in the chairs, and watch the video, which many did.

At the end of the day we hand carried the 12 fully assembled exhibit panels across the fairground, through the crowds, and over to the 4H building where the Air and Army National Guard have their yearly display area. It remained there for the rest of the fair for people to view and enjoy.

Tuesday morning, after the fair was over, we went out early to take down the museum's display. The Chiefs had everything packed up by the time we got there. We were all thinking about having that last corn dog for breakfast but were a little disappointed when we found out that the food booths were all closed.

The exhibit was then taken to the 133rd AW dining facility for display during the September and October drills.

Upper left: a panel in the State Fair display.

photo by Mark Moss  
Right: Chief Master Sgt. Amy Goossen and two other 133AW members greet visitors.

photo by Bruce Graham

Bottom left: panorama of the entire series of panels telling the 100 year story.

photo by Greg Haase





# UH-1H “Iroquois” and C-97 simulator get electronics upgrades

by John Eichenberger

My volunteer work at the museum began in late 2019. At that time I expressed an interest in using my electronics background. Mike Drews and I discussed the C-97 simulator and “Huey” as being two potential projects which needed some work. He highlighted the need for cockpit illumination. Both aircraft had been dormant for many years. We agreed that lighting up the various indicators and ambient flood fixtures would add to the visitor experience. One of the key requirements expressed by Mike was to make both exhibits free-standing in terms of a power source. The use of 110-volt AC power cords mid-hanger is problematic so it was determined that the final solution had to be battery powered. Of course, any such modifications had to be easy to use and reliable.



The UH-1H and the C-97 simulator inside the museum hangar on Oct. 11, 2013. Visitors who sit inside the artifacts will appreciate the upgraded lighting and other features.  
*photo by Mark Moss*



In the case of the C-97 we needed to reduce the overwhelming power requirements. The decision was made to replace nearly 100 of the original 28-volt incandescent bulbs with 12-volt LEDs equivalents which consume only a fraction of the wattage yet yield nearly the same illumination intensity and color. Work began in April 2021. We sourced a large used AGM battery from a local dealership at a very favorable cost and began converting one panel at a time. We added an onboard charger to make it easy to maintain over time.

A special thanks to Mike for his guidance and to Kevin Auger for helping me complete the transformation and for his personal touches such as simulating a radar image.

The UH-1 “Huey” has also been a dark cockpit for several years and was in need of a power source. Since the “Huey” is one of my favorite aircraft, I jumped at the chance. Newer aircraft (>1950s) can’t be easily converted to 12-volt systems with a simple bulb swap so the decision was

made to keep the original cockpit illumination intact. I set out to find a 28-volt battery solution. The OEM Bell replacement battery would have been very expensive so I decided to combine two 12-volt batteries together to yield 24-volts which is close enough to get the cockpit to light up. This also allowed the “Huey” to be self-powered thus eliminating the need to run a power cord from the hanger wall.

Now that the cockpits were lit, we decided to take the realism up a notch by using audio soundtracks. A hidden Bluetooth speaker was installed so that the tour guide could simply cue up an audio file on their cell phone to give the visitor a sense of what it’s like during the engine start sequence.

Center left and bottom right: Upgrades to lighting panels, weather radar display and other features enhance the experience for visitors sitting inside the C-97 simulator.  
*photos by Mike Drews*





### Case 1: Origins

The first case shows how it all began: outlining the Unprecedented Trip on September 26, 1921 when three dashing, grinning airmen took off from Curtiss Field. This includes Capt. Ray Miller's actual winter flight coat and examples of the leather helmet and goggles worn by WWI pilots.



### Case 5: War on Terror

From witnessing the attacks from the air on 9/11 to long-term deployments in Iraq and Afghanistan, the 109th AS was there throughout the global fight against terror. Visitors are invited to experience some of the stories of our brave men and women.



Exhibit cases and wall timeline panels along the Minneapolis/St. Paul International airport, Thomson Reuters, Concourse C Art Gallery on Pages 6 & 7. photos by Youa Vang, Arts@MSP

Annie Young with one of her paintings, right, as others help set up the display on June 14, 2021. photo by Anja Drescher

Lower left photo on Page 7, members of the museum's centennial committee pause in front of one of the exhibit cases on July 16, 2021, along Concourse C of the Minneapolis/St. Paul International airport. photo by Sam Fuentes, Arts@MSP

### Case 2: Aerial Reconnaissance

The 109th had a critical role in aerial photography during WWII – especially for D-Day preparations. Visitors get to see some of those photos along with cameras, lenses, and other artifacts from this important part of our mission.



### Annie Young

The committee was honored to include artwork from Tech. Sgt. Annie Young on the wall spaces and within the cases. The paintings of this award-winning American artist and veteran help tell and enhance our story in unique ways.

Annie lost her sight from rod cone dystrophy. Now, guided by her mind's eye and heightened senses, she considers herself an artistic topographer. Out of darkness, she translates visual memories into touchable impressions.

Through vivid, bold images, Annie shares her message of hope and possibilities. She challenges the boundaries of her 'perceived' limitations as she explores the rules of composition, color, and contour.

Unable to see her work, Annie continues to ask, "Do you see what I feel?"





### Case 3: Cold War and Beyond

The third and largest case is the centerpiece of the exhibit and brings the Century in the Sky together. It provides an overview of how the role of the 109th changed, but the dedication remained steadfast. Artifacts here include Maj. Gen. John Dolny's helmet, Maj. Gen. Miller's leather flight suit, and more.



### An Entire Timeline

Between each display case, the entire 100-year timeline is outlined on large panels grouped in four eras; 1920-1942 Aerial Observation, 1959 Reconnaissance/Interceptor Fighters, 1960-2000 Airlift Wing and 2001-2021 War on Terror.



### Case 4: Humanitarian Efforts

Focusing on the aeromedical services and worldwide humanitarian support missions, this glass case shows how much of an impact the 109th has had around the globe. Examples include support missions following natural disasters and medical training missions across several continents.



Capturing 100 years of important history and making it accessible to an international audience of all ages is a difficult undertaking.

There were many whose skills were indispensable in the creation of this exhibit.

A special thanks for the generous and dedicated support and participation to Arts@ MSP, Sam Fuentes, the department of Military Affairs /Support Our Troops grant funding, the Minnesota Air National Guard Historical Foundation, Inc. and the Minnesota Air National Guard Museum, Greg Haase, Brig Gen, USAF/MNANG (Ret), Karen Wolf, Col, USAF/MNANG (Ret), Lew Wolf, Col, USAF/MNANG (Ret), Thomas Simonet, Col, USAF/MNANG (Ret), Lowell Ueland, Lt Col, USAF/MNANG (Ret), Ted Biro, Lt Col, USAF/MNANG (Ret), Bruce Graham, Chief Master Sgt, USAF/MNANG (Ret), Mark Moss, Senior Master Sgt, USAF/MNANG (Ret), Terry Morris, Veteran, 934th, Anja Drescher, Volunteer, Herb Ketcham, Veteran, USAF/MNANG, Rick Dow, Volunteer, Mike Drews, Veteran, USAF, Ray Pittman, Veteran, Army, 133rd Airlift Wing, Minnesota Air National Guard, Jamie D. Lindman, Col. USAF/MNANG, Artist Annie Young, and Museology, Larry Hutchinson and Bret Pearson who brought the entire exhibit together.

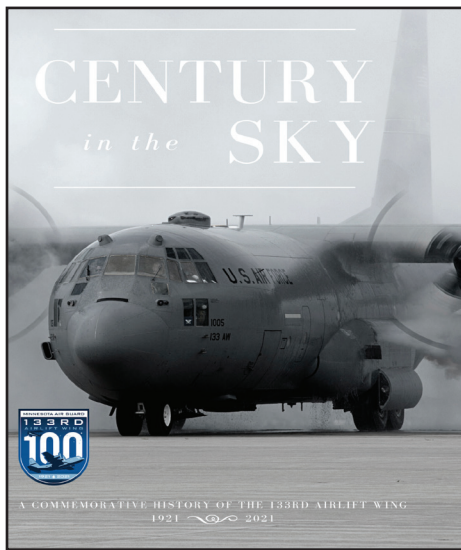
If you are unable to see the exhibit, visit <https://mnangmuseum.org/news> to see a quick walk through.



# Books Galore!

by Karen Wolf

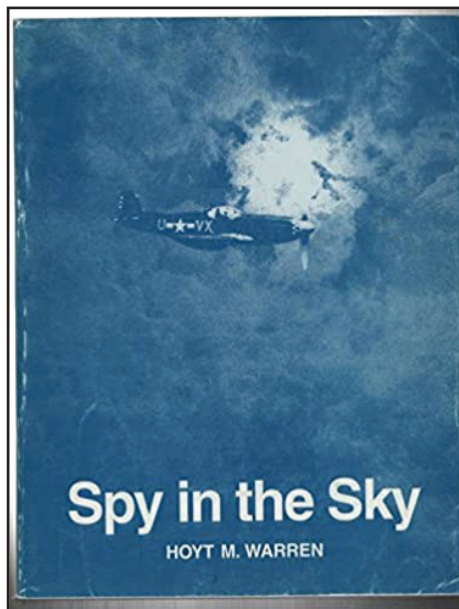
The Minnesota Air National Guard Museum's Centennial Committee has been busy this year developing, editing, republishing, and assisting in the following book projects that tell the story of the MNANG through three lenses. These books are out, or coming out in the near future. Each of these books makes us all feel proud to be a part of such exceptional history.



**Century in the Sky: A Commemorative History of the 133rd Airlift Wing, 1921 - 2021.** The writing team, inspired by the years of research and compilations of former MNANG member Lt. Col. (ret) Lowell Ueland, began in earnest over a year ago. This book chronicles our 100

years of service to the nation, from its humble beginnings, through the heroic years of WWII, into postwar rebuilding, and finally into our contemporary total force mission of worldwide tactical airlift. The book, when finished, will be available in hard copy and on e-book platforms. Stay tuned for the publishing date!

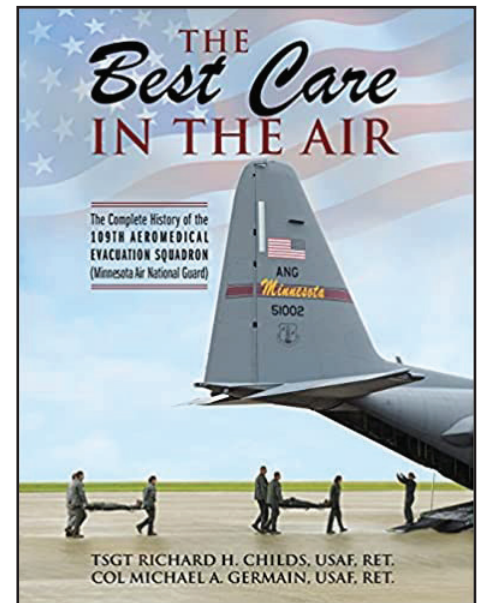
**The Making of a Spy in the Sky: A Story of a World War II Pilot,** by Dr. Hoyt M. Warren. This book, originally published in 1982, tells the story of Dr. Warren as a young man, responding to the call to serve after the Pearl Harbor attack. We are taken through the months of training becoming a P-51 pilot,



then to England, where he is assigned to the 109th Tactical Reconnaissance Squadron (which was born out of the federalized 109th from the Minnesota National Guard) and served through the war. With this 4th printing, it has been re-edited and an Afterword has been added, written by Lt. Col. Lowell Ueland, to bring the book up to date on how the 109th, its parent 133rd wing and associated support units, have evolved since World War II. The book will be available in hard copy and on e-book platforms. Stay tuned for its publishing date!

**The Best Care In The Air: The Complete History of the 109th Aeromedical Evacuation Squadron (Minnesota Air National Guard),** by retired members Tech. Sgt. Richard Childs and Col. Michael Germain. They have spent the last 8 years compiling the 60 year history of the 109th AES, which continues to secure its place in history as a premier airevac unit in the USAF. The book is organized by chapters dedicated to the commanders who have led this great unit through the years, from the formative days of no uniforms, no prescribed training resources, to the highly professional lifesaving force of today.

This book is now available for purchase. You can order through Amazon at [www.amazon.com](http://www.amazon.com) for hardcover, paperback and Kindle eBook; Barnes & Noble at [www.barnesandnoble.com](http://www.barnesandnoble.com), for hardcover, paperback and Nook eBook; or through the Publisher's website at [www.outskirtspress.com](http://www.outskirtspress.com).



If you have any questions about any of these publications, please feel free to call or email the museum.

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# Cessna T-37B “Tweetie Bird” USAF serial number 56-3526

by Greg Bastyr



On the cover:  
The museum's T-37B arrived at the airpark unassembled in July 2015.

Left:  
A USAF T-37B on display at Shaw Air Force Base, S. C.

Below:  
Cessna A-37 “Dragonfly” at the National Museum of the United States Air Force.

*submitted photos*

The aircraft pictured on the front page is the newest arrival at the Minnesota Air National Guard Base, a Cessna T-37B “Tweetie Bird.” This aircraft was retired from Vance AFB, Okla. and was put on outdoor display at Camp Robinson, North Little Rock, Ark. prior to being relocated here in July 2015.

For more than 52 years the T-37 served as the U. S. Air Force’s primary training aircraft, having first flown on Oct. 12, 1954. After completing primary training in the T-37, students moved on to other advanced Air Force, Navy, Marine Corps or allied trainers. With a total of 1,269 Cessna T-37A, B, and C aircraft, the USAF retired its last T-37 on July 31, 2009.

The T-37 was delivered to the USAF beginning in June 1956. The USAF began cadet training in the T-37 during 1957. Instructors and students considered the T-37 a pleasant aircraft to fly. It handled well and was agile and responsive, though it was definitely not overpowered. The T-37 was capable of all traditional aerobatic maneuvers. The T-37C aircraft was built for export.

#### Interesting Facts:

The Cessna A-37 “Dragonfly” or “Super Tweet” is a light attack aircraft developed from the T-37 in the 1960’s and 1970’s. The A-37 was introduced during the Vietnam War and remained in peacetime service afterward. The main differences from the T-37 aircraft are:

- \*Fitted with two General Electric J85-GE-17A engines
- \*An inflight refuel probe added to the nose
- \*Stronger wings
- \*Three stores pylons on each wing
- \*Wingtip fuel tanks
- \*A General Electric 7.62 mm Gatling-style machine gun
- \*A gunsight and gun camera
- \*Better avionics
- \*Tougher landing gear

#### Unofficial Name: “6,000 Pound Dog Whistle”

#### General Characteristics:

**Crew: 2**

**Length: 29 Feet 3 Inches**

**Wingspan: 33 Feet 9.5 Inches**

**Height: 9 Feet 2 Inches**

**Empty Weight: 4,056 Pounds**

**Maximum Takeoff Weight: 6,569 Pounds**

**Powerplant: 2 X Continental-Teledyne**

**J69-T-25 Turbojets producing 1,025 pounds of thrust each**

#### Performance:

**Max Speed: 425 MPH**

**Range: 810 Miles**

**Service Ceiling: 25,000 Feet**

#### Armament:

**T-37A/B: None**

**T-37C: provisions for 2 underwing pylons (one under each wing) for up to 500 pounds of munitions**



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St. Paul, MN 55111-0598**

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**Save the date: The 133rd Airlift Wing hosts a ball on March 19, 2022 at The Depot in Minneapolis.**



Retired Brig. Gen. Greg Haase, left, chairman of the museum board and former commander of the 133rd Airlift Wing, speaks during a reception hosted by the Metropolitan Airports Commission on Nov. 15, 2021, celebrating the centennial of the Minnesota Air National Guard along Concourse C of the Minneapolis, St. Paul International Airport. 133rd AW Vice Commander, Col. Jamie Lindman, right, expressed his appreciation to members of the commission. Elements of the display include stories, paintings, images, videos, uniforms and other memorabilia from 100 years of the Minnesota Air National Guard. The exhibit will be on display at the airport through November, 2021.  
*photos courtesy of the Metropolitan Airports Commission*