



Hangar Talk

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Meeting Minutes

22 May 2008

The meeting convened at Gander mountain 7:00 pm with Hank Barron presiding. In attendance were Dennis Lesondak, Les Sullivan, Herb and Karen Varona, Ron Martin, John and Dave Hogan, Greg Hight, Jerry DeGraff, Milo Fritts, Jeff Griego, Jim Shaw and Bob LeMasters.

The Treasurers report was read and accepted.

Dennis Lesondak reported that the scheduled date for the work party was moved out one day to June 1st. Work to be done includes washing the club house windows and painting the interior walls. Replacing the safety fence is the only task slated for outdoors.

There was general talk about the event at Platteville. Those that attended had a good time. MAS is soliciting donations to be applied to buying a model to be given away at kids day. At Platteville we collected \$108.00 for that purpose.

Mark Smith AMA regional Vice President will be in town on June 15th. MAS plans to have a pot-luck at the field that day.

Plans for a MAS air show on July 27th are progressing. Jim Shaw gave a progress report and asked for flying participants to fill out a form outlining their particulars. He identified some of the people who will be in charge of the various activities. Milo Fritts will be the Field Coordinator, Ron Martin will be in charge of concessions, and Gary Hodges will be in charge of PR. The Air Show will be on the day following the Adams County parade. MAS will have a float in the parade. Dave Hogan will be in charge of MAS activities concerning the float and the parade.

To clarify the timing of the payment of the initial \$125.00 fee that all new members must pay, a motion was made, seconded and passed to the effect that the payment can be made at any-time during the year. However, new member payments made after September 30th will be applied to their membership dues for the following year.

The next club meeting will not be held at Gander Mountain. It will be held at the MAS field, the meeting date is June 26th. The meeting will start at 7:00 pm MDT.

Dave Hogan won the fuel door prize, the meeting adjourned at 7:55pm.

Upcoming meetings and events

June 26th club meeting at the MAS field

July 26th, Parade

July 27th M.A.S. Air show

August 9th, Kids Day

SECRETARY TREASURER'S REPORT

22May2008

There are now 55 members in the club.

Adams County has increased the assessment value of MAS's field from \$2087.00 to \$2105.00 this will increase club property taxes by 46 cents per year.

A new (to the club) used portable toilet was purchased and installed at the field and one of the existing ones was refurbished. The other toilets at the field were beyond redemption and were carted away.

No deposits were made into the checking account. Three checks were written one for \$200.00 to Earl Keffer to reimburse him for expenses that he incurred at the field; one to Gander Mountain for \$86.87 for a new grill; and one for \$340.00 to Bertsch Brothers for toilet updates at the field. The balance in the checking account is \$756.99.

Two deposits \$.36 in interest and \$215.00 in dues were made into the savings account. The balance in the savings account is \$9070.22. Total bank assets are \$9827.21

MAS AIR SHOW **Sunday, July 27, 2008** **9:00 AM**

It's that time again, MAS is having an Air Show for the general public. We will be at the Brighton Parade on July 26, 2008 and will be handing out flyers about our club and the Air Show. We need your planes in the parade. We will have a float that the Hogan's are building. Please contact them if you can bring a plane for the parade. We also need as many members as possible to walk along the float and hand out flyers. The Hogan's can be contacted at: 303-288-2948, ask for John or David....

The Air Show will be on Sunday and we do need flyers and workers. Anyone who wants to fly in the show should contact Jim Shaw ant 303-654-1718. We now have only 3 flyers but we need at least 10. Jim Shaw has a hand out to be filed out by the flyers. This will be used by our announcer at the show to describe who you are and what you are doing. We need the following information, Name, AMA number, Phone number, Description of your aircraft and a write up on what you will be doing. All show flights will be about 5 minutes in duration. Let's all get together on this and make this a show to remember.

Famous Pilots

<http://www.airracinghistory.freeola.com/PILOTS/Dick%20Rutan.htm>



Dick Rutan

Richard "Dick" Rutan was born in Loma Linda, California, on July 1, 1938. An eager individual, Rutan earned both his pilot's and driver's licenses on his 16th birthday. At the age of 19 he joined the Air Force Aviation Cadet Program and was later commissioned a lieutenant in the Air Force. He flew 325 missions over Southeast Asia during the Vietnam War until September 1968, when his F-100 plane sustained a hit from enemy fire and he had to eject from his aircraft. He evaded capture and was rescued by American forces. Due to his exemplary military record, Rutan received the Silver Star, five Distinguished Flying Crosses, 16 Air Medals, and a Purple Heart.

The second Voyager pilot Jeana Yeager was born in Fort Worth, Texas, on May 18, 1952. By 1978, she had earned her pilot's license. During her early aviation career, Yeager mainly wanted to learn to fly helicopters, but her interests branched off and she turned her attention to high-performance aircraft. Yeager, who is no relation to the famous test pilot Chuck Yeager, first met Dick Rutan, and his brother Burt, at a California air show in 1980. At the time, Burt and Dick ran their own aircraft company. Interestingly, Yeager set four separate speed records in Rutan EZ planes in the early 1980s.

The Rutans originally conceived of the Voyager during a lunch in 1981. They believed that they could design a plane that could break the world distance record of 12,532 miles (20,168 kilometres) set by a B-52 Air Force crew in 1962. Like many great innovators, they quickly sketched their ideas onto a napkin while still at the lunch table. With the help of an eager group of volunteers, they began building the Voyager the next year. Notably, the entire project relied solely on private funds and donations.

The creation of the Voyager posed several design challenges for the Rutans. Burt, the main project engineer, searched for just the right combination of materials to make the aircraft light enough to reach maximum efficiency and yet strong enough to sustain extremely long-distance flight. He also had to devise a way for the aircraft to hold the enormous amount of fuel necessary to power it, non-stop, around the globe. Eventually the Rutans decided to construct the Voyager's main structure/fuselage out of a space age composite material consisting mainly of graphite, Kevlar, and fiberglass. The structural weight of Voyager was only about 939 pounds (426 kilograms), but when its 17 fuel tanks were full, its takeoff weight exceeded 9,700 pounds (4,400 kilograms), or more than 10 times its structural weight. Voyager's wingspan was approximately 110 feet (36 meters). By the time the Voyager made its first test flight on June 22, 1984, the Rutans, Yeager, and scores of volunteers had spent more than 18 months and 22,000 hours working on the aircraft. After more than a year-and-a-half of testing and modifications on Voyager, Dick Rutan and Jeana Yeager were ready to attempt their record-setting flight.

Rutan, Yeager, and Voyager took off from Edwards Air Force Base, California, at 8:01 a.m. on December 14, 1986. The plane needed almost the entire 15,000 feet (4,572 meters) of runway, which was already one of the world's longest airstrips, to become airborne; the aircraft did not lift off until it was approximately 14,200 feet (4,328 meters) down the runway, and then it did so only after sustaining a bit of damage. Due to the large amount of fuel contained in Voyager's wing tanks, the aircraft's wings bobbed up and down while accelerating down the runway, and in the process, about a foot of each wing tip chipped off. Concerned about the condition of their craft, Rutan and Yeager circled the airfield and checked their plane's handling conditions. Fortunately, the plane seemed sound enough to continue the journey. Yeager and Rutan had to endure severe physical and mental demands during their trip. Because of the time required to make a circum-navigational flight, they became extremely fatigued. To combat the problem, they tried to rotate their duties. One crewmember would fly the aircraft, while the other rested. Initially, they tried to work in two-to-three-hour shifts, but things did not always go according to plan. Furthermore, it was extremely difficult to maneuver themselves into a comfortable sleeping position, particularly within the confines of Voyager's small cockpit, which was only the size of a phone booth.



The two aviators faced several dangers during their flight. One of their greatest challenges was bad weather. At several points during their trip, they had to evade menacing storm fronts. Once, they even had to fly around Typhoon Marge, a 600-mile (966-kilometer)-wide storm. While such manoeuvring helped them escape physical harm, it only added to their mental stress. Each time they had to adjust their flight plan by climbing above a storm, or going around one, they burned more fuel, and since Voyager had started the trip with a very tight fuel allotment, they grew increasingly concerned that they might not have enough to complete their journey. As it turned out, they had enough fuel, but just barely.

Rutan and Yeager completed their journey when they touched down at Edwards Air Force Base at 8:06 a.m. on December 23, 1986. The entire 24,986-mile trip had taken 9 days, 3 minutes, and 44 seconds, or a little more than 216 hours. During their trip, they had averaged around 116 miles per hour (187 kilometres per hour), and when they landed, they only had a few gallons of fuel left.

From a record standpoint, Rutan and Yeager became the first aviators to circumnavigate the globe non-stop, without refueling. They also endured the longest flight up to that time, and essentially doubled the previous flight record for distance. Because of their accomplishment, President Ronald Reagan awarded the Rutan brothers and Yeager with the Presidential Citizen Medals of Honour, which had been awarded only 16 times previously. They also received the Collier Trophy, aviation's highest honour, and several other prestigious awards.

In the late 1990s, Dick Rutan attempted to set another around-the-world record, this time in a balloon. Rutan and his team-mate David Melton began preparing for the journey when they learned that the Anheuser-Busch Company was offering \$1 million to the first team of balloonists who could successfully circumnavigate the world, non-stop. In 1998, Rutan and Melton set out on what they believed would be a record-setting journey, but only three hours into their flight, a helium cell ruptured in their balloon and they had to abandon their trip. Another team of balloonists, sponsored by the Breitling watch company, would beat them into the record books in March 1999.

The Voyager now hangs in a place of honor in the "Milestones of Flight" gallery in the Smithsonian's National Air and Space Museum in Washington, D.C. Its 1986 flight revealed just how far aeronautical engineering and design had advanced during more than 80 years of aviation. Rutan and Yeager not only established a couple of world records with the Voyager but also tested the psychological and physiological capabilities of humans under extreme pressure. Rutan and Yeager's flight proved that people really can live up to Rutan's personal motto: "If you can dream it, you can do it."

- Voyager's flight was the first-ever, non-stop, unrefuelled flight around the world. It took place between December 14 and December 23, 1986.
- This milestone flight took 9 days, 3 minutes and 44 seconds.
- The absolute world distance records set during that flight remained unchallenged today.
- The flight was 26,366 statute miles, which more than doubled the previous record set by a B52 Bomber in 1962. (The FAI accredited distance at 40,212 km).
- The structural weight of the Voyager Aircraft was only 939 pounds.
- When the airplane took off full of fuel, pilots and supplies, the gross take off weight was 9,694.5 pounds.
- The average altitude flown was about 11,000 feet.
- The Voyager took off from and landed at Edwards Air Force Base in California.
- There were two crew members on board, Dick Rutan and Jeana Yeager.
- Dick's brother, Burt Rutan, who is a world-renowned airplane designer, designed the airplane.
- There were 99 ground volunteers that participated in the flight with weather, communications, fabrication, office staff, gift shop staff and more.
- Primarily individual contributions, and a few product equipment sponsors financed the Voyager. The project did not receive any government sponsorship.
- Four days after landing, President Ronald Reagan presented the Voyager crew and it's designer with the Presidential Citizenship Medal, awarded only 16 times previously in history. The Voyager Aircraft is on permanent display at the Smithsonian Institution's National Air and Space Museum in Washington, DC.



A-37 Dragonfly

History: In 1962, the US Air Force's Special Air Warfare Center decided to evaluate the T-37 trainer as a future Counter-Insurgency (COIN) light attack aircraft. The T-37 "Tweet" had been in continuous service with the US Air Force since 1957, and had amassed an excellent service-reliability history. Two T-37Bs were tested with their original 1,025-lb thrust Continental J69 engines. The aircraft were loaded to a takeoff weight of 8,700 pounds, almost 33% above their normal maximum, and were understandably found to be somewhat lacking in performance. Subsequently, each aircraft was modified with a pair of 2,400-lb thrust General Electric J85-GE-5 turbojets, and were designated **YAT-37Ds**. Flight testing showed that the new aircraft could be safely flown at weights up to 14,000 pounds, which allowed for the carriage of a wide variety of weapons. Nothing became of the project until 1966, when the US Air Force's involvement in Vietnam highlighted the need for a light strike-fighter. Cessna was contracted to convert 39 T-37B trainers procured from the boneyard at Davis-Monthan Air Force Base. Delivery of the new aircraft, now called the **A-37A Dragonfly**, began in May 1967. In addition to the larger engines, the aircraft was equipped with eight underwing hard-points and wingtip tanks. The first 25 A-37As underwent operational evaluation in South Vietnam and were eventually transferred first to the 604th Air Commando Squadron at Bien Hoa, then to the South Vietnamese Air Force in 1970.

Meanwhile, Cessna had built a prototype called the **Model 318E** which, while based on the T-37, had significant differences. Its airframe was stressed for 6 Gs, the fuel load was increased to 507 US gallons (1920 liters) plus 400 more gallons (1516 liters) in four underwing auxiliary tanks, and it had air-refueling capability. The aircraft was predictably re-designated the **A-37B** and, like the A-model, had a 7.62-mm Gattling Minigun in the nose, gun cameras, and armor protection for the pilots. It also had self-sealing fuel tanks, a tracking beacon system, and the ability to directionally track VHF and UHF signals. This prototype of the B-model was first flown in September 1967 and deliveries began in May 1968.

In addition to service with the US Air Force, the A-37 was supplied in small numbers to the South Vietnamese Air Force, Turkey, several South American air forces, and the US Air National Guard, where it remained in service into the early 1990s as an observation and light-attack derivative called the **OA-37B**. The A-37 is still active in South America, where it has soldiered on into the 21st century. Several have also made their way into the caring hands of private collectors, and it is probable that airshow audiences will begin to see them appearing on an increasingly regular basis.

Nicknames: *Super-Tweet*

Specifications (A-37B):

Engines: Two 2,850-lb thrust General Electric J85-GE-17A turbojets

Weight: Empty 6,210 lbs., Max Takeoff 14,000 lbs.

Wing Span: 35ft. 10.5in.

Length: 28ft. 3.25in.

Height: 8ft. 10.5in.

Performance:

Maximum Speed at 16,000 ft: 525 mph

Maximum Cruising Speed at 25,000: 489 mph

Range: 1010 miles (460 miles with 4,100 lb. external weapon load)

Armament: One GAU-2B/A 7.62-mm (0.3-inch) Minigun, plus various mixes of general purpose, incendiary or cluster bombs, rocket pods, and gun pods.

Number Built: A-37B: 577; A-37A: 39

Number Still Airworthy: Unknown number in active military service worldwide; at least 2 in private ownership.



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