



AMA Chapter # AMA

Chino Valley Model Aviators Official News



September 25, 2021

Volume 24 Issue 9

www.chinovalleymodelaviators.org

"To create an interest in, further the image of, and promote the hobby/sport of model aviation"

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Matt Hinshaw's 67" Wingspan Avios Grand Tundra



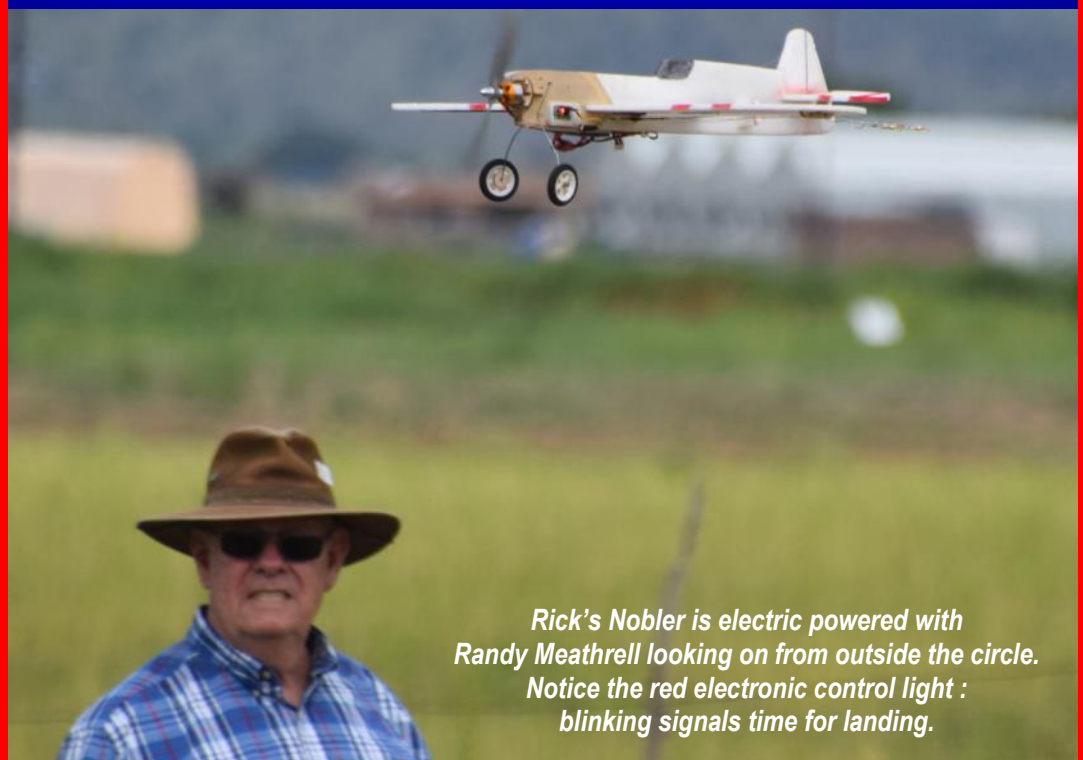
Matt flies his Tundra on a 6S Lipo battery, it has a 5045 500 KV motor and 80 Amp ESC.

Quote of the Month:

"Success usually comes to those who are too busy to be looking for it."

Unknown

Rick Nichols C/L Nobler Zipping Around the Circle



Rick's Nobler is electric powered with Randy Meathrell looking on from outside the circle. Notice the red electronic control light : blinking signals time for landing.

Support our Local Hobby Shop



**Valley Hobby
Prescott Gateway Mall**



Bill Gilbert: CVMA President's Message



Our event season is winding down, having just concluded our largest event of the year; The Annual Steve Crowe Fun Fly. We had a good turnout, quality raffles, excellent demo flying, and burgers on the grill. It was a very good time, even if the weather got a bit breezy as the morning went on.

We're looking forward to some good competition for the annual Build N Fly event on Oct. 16. We have a lot of talented builders in the cub, and the fly off of newly-built creations should be exciting.

Our club is in a very healthy state with 138 members currently, field is in good repair and getting a lot of attendance by the members. Income is being generated via events and raffles, which helps offset our maintenance costs. Your continued support for these events are very helpful to keep our flying facility enjoyable. Volunteering to help during these events is a great

way to contribute to the overall success of the club.

Please review and continue to adhere to the Field Etiquette rules so that everyone can enjoy the facility. At times it gets a bit crowded with the parking situation, to be expected with 138 members. Do your part so that the enjoyment level can be kept high. It's a give and take situation at those times. Once we complete Phase II of the field expansion some of these issues being experienced will be alleviated as we add more parking spots in front of the new cabana.

It is important to keep in mind the potential legal liability for accidents, and everyone can do their part to minimize the clubs' exposure. Our Town lease requires every pilot to have liability insurance, which we enforce as AMA membership. Please, strictly adhere to that AMA requirement with any visitors or guests; no AMA - no

flying. Help protect our club.

Officer elections are just around the corner, they will be held during the October meeting. September 30th is the last day to indicate interest in being nominated for office (see Rick Nichols and/or Bob Shanks, they are the Nominating Committee).

Consider putting in for a nomination if you want to get involved in the "nuts and bolts" running of the club. It's a great way to give back and help keep or club at the high standard we expect.

Enjoy the flying, and see you at the field!

Bill



CVMA Flight Instructors

- > Steve Shephard
Chief Flight Instructor
- > Al Marelo-Basics
- > Jack Potter-Gliders

CVMA NEWSLETTER

AMA Chapter #3789
Published Monthly

What Airplanes Complex Cockpit is This?



See Page 11

President — Bill Gilbert



Vice President — Mark Lipp



Treasurer — Harold Ellis



Secretary — Bob Steffensen



Safety Officer — Rick Nichols



At Large Member — Dan Avilla



At Large Member — Dennis O'Connor



Newsletter Editor — Bob Shanks



HOW BOEING DOES SAFETY INSPECTIONS...



2021 — MARK YOUR CALENDARS



Oct 23 Fourth Annual Build & Fly Challenge

Oct 20 Boat Float Fly — Lynx Lake 0800

Dec 3 Annual Christmas Banquet



BORN IN A BARN ?

IF YOU ARE THE LAST ONE TO LEAVE THE FIELD **CLOSE & LOCK THE GATE.**



SAFETY IS ALWAYS A CRITICAL ISSUE

By Rick Nichols, Club Safety Officer

Safety First:

Another month has gone by without having to raid the club first aid kit. (almost). If you were in attendance at the September 18 Club meeting you learned of an incident that occurred at our field. For those that missed the meeting here are the Cliff Notes of what happened.

A non-member of our club and a non-AMA member came to the field to fly one or two of his airplanes, one of our most experienced pilots was at the field and advised him that his airplanes and equipment was not safe to fly. The person was reported to be the type that "knows it all" and would not heed or listen to advice he was given.

He eventually was loading his airplane into his vehicle. It was an electric airplane and was still fully armed. He accidentally bumped the throttle on his transmitter,

and this resulted in many very deep propeller gashes to his arm and obviously requiring many stitches. Our club member offered to drive him to the hospital, and he declined saying that "he did not have any insurance." Later a club member observed him going to a emergency care facility.

Several actions could have prevented this from occurring on our property. As he was unknown to our members, he should have been asked to produce a valid AMA card and a club membership card.

If he could not produce and documents he should have been told not to fly and possibly to leave our property. I will also add that the Town of Chino Valley that holds our lease requires that each pilot be covered by a \$1M insurance policy which we cover by having an AMA membership.

As I have stated many times at our meetings and in my safety column, **"Every Club Member is a Safety Officer."**

Each and every person flying at our field **MUST hold a valid AMA card.** No Card, No Fly!!

O.K., that was a little more than Cliff Notes, but it is very important that each club member understands the importance of everyone policing the activities at our flying site.

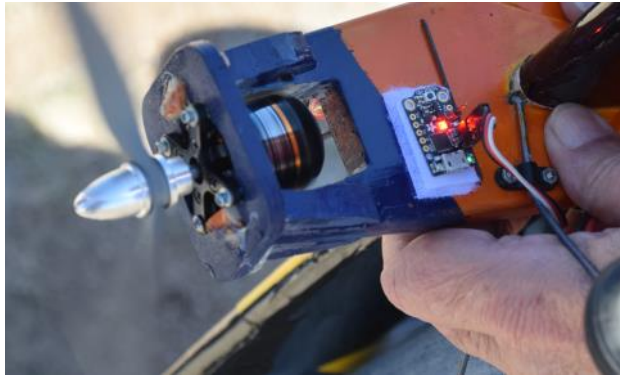
On the lighter side, I would like to compliment our club members on the decorum they continue to show to their fellow pilots. Every one of you are always there to aid your fellow pilots with help, advice and sharing needed parts. I see that every day that I am at the field. We can all be very proud of our group of 144 aviators.

Rick Nichols



Riley Harley's Bristol MD-1

Club Members Fabulously Funny Flying Machines



Rick Nichols electric Nobler with the motor running showing the electronic control that signals the C/L flyer how the battery is doing during flight. (See page one.)



Gene LaFaille flying Randy Meathrell's C/L German ME-109 for the first test flight.



Rick Nichols launches Randy Meathrell's C/L Platter



Adam Sanders Corsair about to touch down.



Bob Shanks' C/L Nobler test flown by Gene LaFaille

Roger Calvert at right and his Big Jim McKay Bulldog gas powered biplane.



Three CVMA Carl Goldberg Winners.



Editor Bob rarely gets his picture taken so Gene LaFaille took Bob's camera for a quick photo and it just so happens all three of these members, left to right, Randy Meathrell, Rick Nichols and editor Bob Shanks happen to be past AMA Carl Goldberg winners!



A herd of cows were grazing at the far north edge of our field in late August..

The Many Masterful Member Models At the Flying Field!



Randy Meathrell's C/L Platter

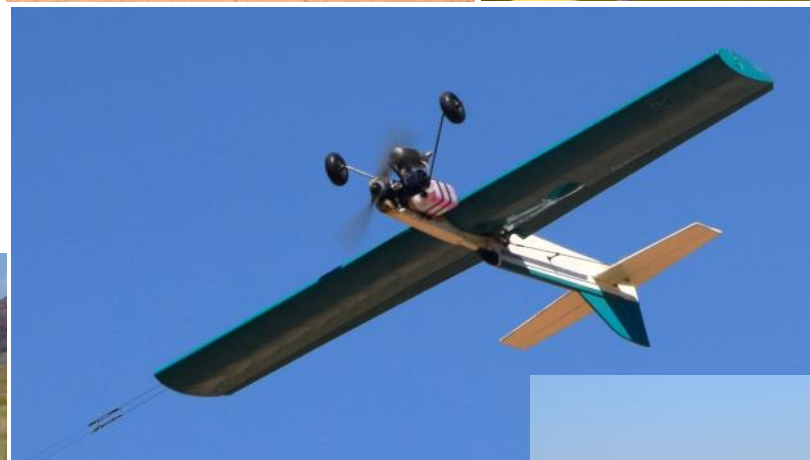


Here's a photo at left from member Shel Liebach. He often flies turbines at the Red Dry Lake Bed 30 miles north of Kingman, AZ.. Shel did his maiden flights on both of these turbine powered jets Thursday August 27.

Shel says the silver one is a Torus with 160 turbine with a 92" wingspan, the blue one is a Viper with 120 turbine and a 73" wingspan. Lots of unlimited room to fly there a great place to go watch some cool turbine flying. Check with Shel and drive up with him and a few others from the club next time they go.



Far left, Randy Meathrell holds the plane as Gene Lafaille gets ready to fly. In the large photo, one can see the pink fuel all to the outside of the tank due to the centrifugal force of going around in a high speed 40' circle upside down. Gene's Nobler Look-alike is called a Twister. Photo below shows how close the C/L circle is to the field entry gate.



Steve Zingali launches Rick Nichols' patriotic Russian LA-7 pylon racer.



Brian Jones semi scale BT-13 a look-a-like trainer.



FORGOTTEN FIGHTER OF WWII: HAWKER HURRICANE

<https://www.bbc.com/future/article/20201127-the-forgotten-fighter-plane-which-won-the-battle-of-britain>

By English Historian Steve Hunnisett

Eighty years ago, a small single-seat fighter was largely responsible for defeating German's attempts to invade Britain. But it wasn't the Spitfire.

On 7 September 1940, southern England suffered what was then the biggest air raid the world had ever seen. Over the previous three months, the aircraft of Germany's Luftwaffe had tried to break the resistance of Britain's Royal Air Force (RAF). Already severely depleted from the heavy fighting during the invasion of France, the RAF had buckled several times under the strain. A particularly brutal offensive against its airfields and the factories producing its fighter planes over the weeks before had left it dangerously close to running out of both planes and pilots.

If the attacks had carried on with the same intensity for a few more weeks, the RAF might have collapsed completely. German invasion barges were waiting on the other side of the channel for just such a moment. But then Germans then turned their attention – mystifyingly – to Britain's cities, hoping that indiscriminate bombing would cause widespread panic and force Britain to surrender. The Luftwaffe decided to throw every available aircraft into the offensive. It started on 7 September 1940.

During the early afternoon, British radar observers hunched over their screens started seeing something massive taking shape. From airfields across France, wave after wave of German bombers and fighters took to the air, forming up into one enormous formation over the English Channel. It was so large – nearly 1,100 planes – that it covered 800 square miles (2,072 sq km). The last time a force this powerful had threatened England was the Spanish Armada, 500 years before.

The aircraft defending London that day were spearheaded by the Supermarine Spitfire, an iconic single-seat fighter plane which had only entered service a few months before the start of World War Two. The Spitfire was fast, sleek and very agile – but it was outnumbered two to one by another fighter, one often ignored in the popular retelling of the battle. It was the Hawker Hurricane, and most of the RAF squadrons flying over London that day were equipped with it.

It was an aircraft that not only helped turn the tide of a war, but whose legacy can be found today in a wide range of modern life – from aviation to medicine. This year marks the 85th anniversary of the Hawker Hurricane's first flight, and what follows offers some insight into the impact it has had.

The 7 September raid marked the first time in history 1,000 aircraft had taken part in an air raid (two-thirds of them were fighters protecting the bombers). London's docks and the working-class neighborhoods of the East End were devastated. The fires were so fierce that one of the RAF's fighter airfields 40 miles away couldn't operate because huge palls of drifting smoke made it too dangerous to fly. The fires – like the ones in the factories of Woolwich, which produced flames hundreds of feet high – burned long into the night, a beacon for further night-time attacks. "Black Saturday", as it became known, marked the start of The Blitz, an eight-month-long series of night attacks which destroyed vast swathes of London's industry and housing, causing unimaginable despair among the civilians who endured it.

Several Hurricane pilots lost their lives that day, among them Richard "Dickie" Reynell, a 6ft 6in Australian who must have found the Hurricane's cramped cockpit a tight squeeze indeed. Reynell's aircraft was hit by a German fighter in a huge dogfight in the skies over Greenwich, the historic naval district on the south side of the Thames River. Local military historian Steve Hunnisett, who has combed through the declassified records from Reynell's squadron, says he was most likely wounded in the aircraft, and had managed to get his canopy open and jump out of his stricken plane, but blacked out before he could open his parachute. He fell into the garden of a house in the suburb of Blackheath, the house of a naval officer who happened to be at home on that day.

According to a declassified casualty report that Hunnisett has been able to read, "life was extinct and the body was removed to the Royal Herbert Military Hospital, Woolwich". Reynell was 28 and left behind a wife and young son. He is buried in Brookwood Cemetery in Surrey, England.

Richard Reynell died a minute's walk from my house. He was a highly experienced test pilot who had flown Hurricanes for Hawker, the company which had designed and built it. The RAF had been so short of pilots that Reynell had been seconded to a fighter squadron during the summer, partly, Hunnisett says, because Hawker wanted him to "get combat experience and feedback on modifications that might need to be made".

His secondment had ended that morning. If he hadn't decided to delay his trip back to Hawker until the Monday, he would probably have been on a train out of London when the Black Saturday raid lumbered towards the capital. The Hawker Hurricane flew only a few short years before the Spitfire, but to all intents and purposes it was from an earlier age. Where the Spitfire was sleek and streamlined, the Hurricane was stubby and workmanlike. It wasn't just a case of aesthetics, either. The Hurricane had as much in common with aircraft built 20 years earlier than it did with the Spitfire – aviation in the 1930s really did sprint forward in leaps and bounds.

The Hurricane was the first monoplane fighter to enter service with the RAF. Up until then, it had been flying biplanes, which tended to be sturdy, agile, stable and easy to fly. There was a drawback, however – speed. The extra drag from two sets of thick wings prevented them getting much faster than 300mph (480km/h). Engines, however, were getting more and more powerful, and aircraft designers were already coming up with monoplane bomber designs that could fly faster than biplane fighters.

[Go to the web site in the headline above to read the longer and very complete article on the Hawker Hurricane.](https://www.bbc.com/future/article/20201127-the-forgotten-fighter-plane-which-won-the-battle-of-britain)



Former Club Member Steve Crow: A WWII Hero

By Bob Shanks, Newsletter Editor

Long-time member and great club supporter *Chuck Colwell* wrote an article about *Steve Crowe* for our newsletter years ago and that's when Steve was still among us as a club member and great RC enthusiast. At that time *Randy Meathrell* also built a small spitfire with Steve's squadron MD insignia on it. Chuck's article centered on Steve as a young man flying light planes in the San Fernando Valley of California. Steve was having a ball but half-way around world the war in Europe against the Nazis was heating up. Steve had an opportunity to meet a man at the Hollywood Roosevelt Hotel who flew in World War One in the Lafayette Escadrille. Steve's contact arranged for him to leave the country and join the RAF Eagle Squadron 133. Steve was only 21 years old when he arrived in England. At that time our government frowned on folks getting involved but Steve couldn't resist the adventure of flying Hawker Hurricanes and Spitfires. Steve was shown the operations manuals on the Spitfire, checked out on it, and then he underwent gunnery practice. He then quickly moved into the cockpit of a RAF Spitfire to fly in combat during the Battle of Britain. He also flew the Hurricane as well.



Steve Crowe flew a Lysander (Steve had often told members the Lysander was his favorite airplane) and dropped spies behind enemy lines. His squadron also went on a mission to Brest, France. They encountered severe European weather, heavy flack, ran low on fuel and almost all of those members were lost. *Steve also told one member there were three things a pilot was never to do, 1. Don't get married, 2. Don't have your picture taken with your plane, and 3. Don't save your money.*

How many other special flights did Steve Crowe make? We may never know. We need to do a better job of documenting these kinds of heroic efforts of the many fine young Americans we have in our military. So many stories and deeds of heroism have been lost. Chuck was able to give us the following thumbnail synopsis of Steve's career.

"Steve shot down four enemy aircraft and got to have tea with the King and Queen of England. He came back to the U.S and became a flight training instructor. Steve flew for some actors in Hollywood as well and became a bush pilot in Alaska for eight years. He was an avid modeler all his life and lived in Chino Valley. Steve was inducted into the Aviation All of Fame in 2002." So, we as a club honor *Steve Crowe's* memory and we have to wonder how many other heroes have impacted our lives and we don't even realize it or know who they are. We owe a great debt to those individuals like *Steve Crowe* who step up to serve and have impacted our freedoms in such a special way. We celebrate his memory as part of our club's history, as part of our national history. As *Chuck Colwell* summed it up in his original article, "*Steve has passed on to the ages and is in our special memories now. Some people are momentarily thrust into positions and circumstances, and they become heroes.*" Like so many others of the "Greatest Generation" he has left us, Steve died in August of 2009.

Steve was a rather unassuming quiet individual and a joy for me to have met him. It is indeed an honor for our club to celebrate his contributions to our freedoms. I thank *Chuck Colwell* for writing the original article for our club and for *Randy Meathrell* for building the small electric Spitfire modeled after Steve Crowe's Spitfire he flew and getting a picture of him at the field. Sadly, we don't have any pictures of Steve from his time in Europe. He took the "never to do list" above seriously. However, we do have a couple of photos of his squadron and a photo of some of the other American pilots who flew for England during those dark times.



Memorial Steve Crowe Fun Fly Held September 25th

Great crowd of pilots and community observers.

For a change, we had a great turnout for our annual Memorial Steve Crowe Fun Fly event. I think everyone is pretty much fed up with all the "covid restrictions". Since it was outside only a couple of folks were wearing masks.

Great to see so many local families and kids at the event. And two lines of cars parked along the entry road with some folks in fold up chairs watching along the barrier rope.

We had a number of raffle prizes folks could buy tickets for and submit in various boxes plus we had club hats and t-shirts for sale.

Thank you to *Mark and Jane Lipp* for cooking and those who volunteered to help man the table and get things done. A big thank you to *John Meyers* for flying his ultra light airplane into our field for display.

This page and the next one will be of some of the fantastic flying that was done. Your editor won't attempt to identify all the planes and flyers on these two pages. We had visitors flying from the Phoenix area plus of course a lot of our members.

Our bleachers had onlookers and many were also under the cabana watching all the fun plus we had two lines of parked cars with folks watching.

[Thanks to all who helped.](#)



John Meyers ultra light.



Raffle prizes



Chino Valley, AZ Chamber of Commerce CEO *Lorette Brasheer*, her daughter and her boyfriend *Jason* attended the Fly In.



Still plenty of room for the crash cart to park as well.

Parking barrier and new concrete addition now Allows three trailers to back into position to the pit area,



More on the Memorial Steve Crowe Fun Fly



Our Field was Full

Steve Zingali flew two of his creations.



Lots of kids enjoyed the Fly In.



Dane O'Brien's flew his Bushmaster.



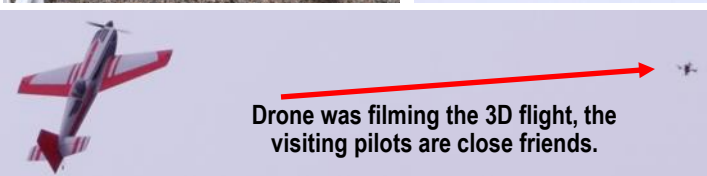
MC Randy Meathrell



Dan Avila's turbine.



Riley Harley's Nieuport 28 and Dennis O'Connor's Sopwith Pup flew in formation.



Drone was filming the 3D flight, the visiting pilots are close friends.



Reusable Spacecraft May Be Developed in the Future Could Reusable Spaceplanes Arise Again in the 21st Century?

<https://www.bbc.com/future/article/20210121-spaceplanes-the-return-of-the-reuseable-spacecraft>

The dream of flying all the way into space began when the first aircraft flew at Kitty Hawk, North Carolina, in 1903. Less than 70 years later, we had a thoroughly realistic example of what that might look like. In Stanley Kubrick's 2001: A Space Odyssey (1968), a large spaceplane maneuvers effortlessly in time with Strauss's Blue Danube waltz to dock with a huge spinning space station.

Despite many plans, prototypes, and experimental flights since, only two spaceplanes have ever entered service, the

Space Shuttle, and the top-secret Boeing X-37B. Only the small unmanned Boeing X-37B remains in service.

The dream of the graceful spaceplane is still live, even if the ambition for their actual role may have shrunk. In September 2020, China appears to have launched its own Boeing-like reusable space plane and may have as many as seven crewed and non-crewed spaceplane projects in development. [*The European Space Agency's similar autonomous Space Rider flying laboratory is expected to blast off in 2023 and India's own mini spaceplane later this decade.*](#)

But we still rely on rockets to blast astronauts into space, bringing them back to Earth in capsules suspended by parachute. So why has the spaceplane – apart from Nasa's now-retired Space Shuttle – not yet taken off? One answer to this question can be found at a test site 2,900km (1,800 miles) away from Kitty Hawk at the foot of the Rocky Mountains in Colorado. The facility at the Colorado Air and Space Port was purpose-built by Reaction Engines to run "hot tests" of the technology that the company's revolutionary new rocket engine depends on. Tests that were backed by the US government's secretive Defence Advanced Research Projects Agency (DARPA).

Reaction Engines is a British aerospace company founded by engineers Alan Bond, Richard Varvill and John Scott in 1989 after the cancellation of the British spaceplane project Hotol. Its aim was to create Hotol's successor, the ultra-sleek, single-stage-to-orbit spaceplane Skylon, together with the engine that would power it. The Synergetic Air Breathing Rocket Engine (Sabre) is a hydrogen-powered engine that can propel a spaceplane like Skylon from zero to hypersonic speeds by using the oxygen in the Earth's atmosphere, and then when travelling fast enough, blast the vehicle into space using an on-board supply of oxygen like a conventional rocket.

Today they are backed by big names in the industry, including Boeing, British Aerospace and Rolls-Royce, as well as the UK and European space agencies. Beyond the security fence, a modified engine from a Cold War-era fighter jet is used to replicate the very high temperature airflow generated at hypersonic speeds. The superheated air is blasted through a light-weight, ring-like device made up of thousands of thin-walled tubes through which coolant is passed. The aim of this precooler is to remove the extreme heat very quickly. When used in the Sabre engine, it's hoped it will prevent its internal components melting in the high temperatures and ensure the engine runs efficiently.

Early in 2019, the precooler had worked at 420C (788F) in conditions that replicated flight speeds of Mach 3.3, or more than three times the speed of sound. But the engineers wanted to reach the magic number of Mach 5. That is more than 6,200 km per hour (3,800 mph). It is also more than twice as fast as the cruising speed of Concorde and over 50 percent faster than the SR-71 Blackbird aircraft – the world's fastest jet-engine-powered aircraft. Mach 5 also happens to be the limit of today's materials used in aircraft production.



*Artist's concept
of a reusable spacecraft*

Club Control Line News

By Gene Lafaille



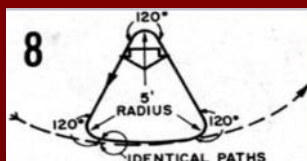
From Inside
the Circle

In the late 1950's the modern control line stunt pattern was developed and consisted of about 12 different maneuvers comprised of inside loops, outside loops and square turns that, when combined together, produced a spectacular display of flying skill. Most notable was that all maneuvers begin and end from an assumed floor of 5 ft, and required turns with a 5 ft radius!

Modern stunt models fly at about 55 mph or 80 feet per second requiring precise timing and control on the part of the flyer, precise engine tuning, and extraordinary design/building skill to produce a model capable of up to 120 degrees of turn with a 5 ft radius. Weight is extremely critical but the structure also has to be robust enough to withstand the high G turns day in and day out. To top it all off, competition stunt is a builder event where the models are awarded appearance points, often determining the winning competitor. Competition planes must have a perfect front row finish, built light enough to turn on a dime without stalling, and sturdy enough to hold up for years of the stress of competition.

I know of no other competitive modeling endeavor that demands as much from the modeler who must be an accomplished designer/builder, engine tuner, stunt flyer, and finisher. Competition control line flyers represent, in my opinion, the pinnacle of model aviation, best of the breed! Those guys do it ALL well. If you ever have a chance to visit a top tier control line stunt competition you will be amazed and humbled by the quality of the models and flying.

By the way, several years ago someone proved, with the help of high speed video cameras, that the 5 ft radius turn was all but impossible. Now the AMA only requires a "sharp turn" instead of a 5 ft radius turn. Regardless, the old 5 ft turn is still the "holy grail" and has been for the decades since the rules were enacted.



1950's Aviation Lacked Refueling Techniques Used Today The RF-84F Provided a Way to Extend Reconnaissance Range

<https://planesoffame.org/aircraft/plane-RF-84K>

The RF-84K Recon fighter was a modified version of the F-84F Thunderstreak. It was designed to be carried semi-enclosed in the bomb bay of the GRB-36 Peacemaker bomber, and deployed as needed for reconnaissance and strike missions. At the time, jet fighters had relatively short range and aerial refueling was in its infancy, so this provided a means to extend their range.



The RF-84K started its development in 1952 as the GRF-84F, when the USAF ordered Republic Aviation to modify 25 RF-84Fs as part of the Fighter Conveyer (FICON) program. At the same time, Convair modified 10 B-36s into carrier aircraft, and McDonnell was tasked to develop the XF-85 Goblin, which was planned as a "parasite" defensive fighter for the B-36 series, using the same attachment gear as the RF-84K.

The reconnaissance gear was mounted in the nose of the RF-84F. Thus, unlike earlier models of the F-84 series, the RF-84F had the engine inlets mounted in the wing roots. The RF-84K retained this feature, and added a large retractable hook in the upper part of the nose, stabilizer rods behind the cockpit, and elevators with a significant anhedral. All of these modifications were to enable carriage by the GRB-36.

The RF-84K entered service in 1955, but difficulties during rendezvous with the carrier aircraft prevented its widespread use. Just two years later, improvements in jet engine technology and in aerial refueling made the parasite fighter concept obsolete. From 1957, RF-84Ks were flown off conventional runways until they were phased out of service.

The Thunderflash pictured was one of 25 RF-84Ks modified for aerial hook-up to B-36 bombers as part of the Fighter Conveyer (FICON) program. This RF-84K below, was assigned to the 407th Strategic Fighter Wing in 1955. The 407th Bombardment Group (Dive) was established 23 March 1943, at Drew Field, Florida during WWII.

The 407th was reactivated as the Strategic Air Command 407th Strategic Fighter Wing at Great Falls AFB, Montana in 1953. While it was established on 23 March 1953 it was not activated until 18 December 1953. The wing was assigned to the Fifteenth Air Force and composed of the 407th Air Refueling Squadron and composed of the 407th Air Refueling Squadron with KB-29 Superfortress tankers. (The KB-29 is a modified WWII B-29 bomber for refueling.)



Name The Cockpit Plane: Space Shuttle Endeavour

Built to replace space shuttle *Challenger*, *Endeavour* was the final orbiter to join the shuttle fleet. Many newer features were added to *Endeavour* during construction, such as updated steering mechanisms, upgraded plumbing and electrical connections to allow for longer missions, and a drag chute that reduced wear and tear on the shuttle's brakes and tires. Many of the innovations that were developed for *Endeavour* were added later to the other shuttles in the fleet.

Endeavour first launched on May 7, 1992 for mission STS-49. The crew's primary goal during that mission was to repair and release a communications satellite (INTELSAT VI) back into orbit. The capture of the satellite did not go as smoothly as planned, but the crew aboard was able to complete the mission through a series of four spacewalks—the most ever completed on a shuttle mission up to that time. One of the spacewalks was the longest ever recorded up to that time, and the second-longest ever—over eight hours! That first mission set a precedent for *Endeavour*, whose string of 25 missions was marked with ingenuity and success.

Another major mission for *Endeavour* was STS-61, the first service mission to the Hubble Space Telescope, which took place in December 1993. This mission was designed to correct a flaw in the Hubble's main mirror. During the mission, several elements were installed to fix the Hubble's "vision," which the popular media described as giving the Hubble "contact lenses" or "glasses." Without this technically challenging mission to fix the Hubble, we may have never seen some of the beautiful images from space that have made the Hubble famous.

Endeavour made several historic assembly missions to the International Space Station (ISS), including STS-88, in which the crew added the first U.S. component, the Unity Module, to the ISS. On STS-100, *Endeavour* delivered the Canadarm2 robotic arm and hand, and on STS-123, *Endeavour* added the first element of Japan's Kibo module as well as an additional robotic arm, Dextre (pronounced "Dexter").

Endeavour's final mission, in May 2011, delivered spare parts to the International Space Station, including parts for the Dextre arm it had installed many missions before. *Endeavour* leaves an amazing legacy in space—and shares part of that legacy with Los Angeles, California, and the world from right here at the California Science Center.



Total number of space missions: **25**
 Total number of fliers: **173**
 Total number of orbits: **4,671**
 Total miles traveled: **122,883,151**
 Time in space: **299 days**
 Orbiter length: **122 feet**
 Orbiter height on runway: **57 feet**
 Wingspan: **78 feet**
 Manufacturer: **Rockwell International Corporation**
 in Palmdale, California

CVMA Club Meeting for September



The General Membership meeting on Saturday September 18, 2021 opened at 9:59am with [Pledge of Allegiance](#).



Club membership stands at 138. Members present for meeting were 38 by head count, 34 signed in. New member Matt Campos was present as well. Minutes of last meeting on July 31 were unanimously approved by members.

President's Agenda

Treasurer [Harold Ellis](#) presented the Treasurer's report. Members unanimously approved the Treasurer's report.

President [Bill Gilbert](#) and Secretary [Bob Steffensen](#) updated the members on the clubs non-profit status with the IRS. We do not currently exist. Working with former member [David Williams](#) to establish a new name "Chino Valley Flyers, Inc. The club Articles of Incorporation have been updated with the new name and has been filed for incorporation with the AZ Corporation Commission. We will continued to do business as the Chino Valley Model Aviators. Maintenance: We are planning to replace the plastic fence netting around the pilot's station

and associated areas with chain link fencing to reduce the cost of maintenance of the existing fencing.

If you see a maintenance issue that requires purchase of supplies or parts...please seek approval for the purchase from the President or Vice President prior to purchase. We are accepting nominations for Board members for 2022 through September. Voting will be in the October meeting.

Our IMAC event in August was a again highly profitable for the club. However, there were not many of our members present. In other action... members approved a motion to schedule another event for 2022.

Events: Indoor flying is the 4th Saturday each month...through November; another float fly will be in October at Lynx's Lake...date and details TBD; Steve Crowe Memorial Fun Fly is September 25th; Build and Fly Challenge is October 16th; Open flying, swap meet with a pancake breakfast (\$4 fee to eat pancakes) will be November 13; and the Christmas party is December 3. Details will be out before the next meeting. The field will be closed for Embry-Riddle to test fly fixed wing drones from 10am-2pm on Octo-

ber 27th.

Safety Officer [Rick Nichols](#) says we should not offer to test fly non-members aircraft. Guest with AMA cards can fly 3 times in a year. No AMA no flying! Students on buddy box can fly with instructors for up to 90 days. If you see someone you don't know flying they should be engaged to determine if they are club member. Please do not block the off load driveway exit when you park. Stay safe!

Caution: The Chino Valley Grinder with about 100 cyclists will be moving down Perkinsville Road early on Saturday the 25th, the road will remain open.

Member Comments

[Lloyd Oliver](#) reminded us that AMA grants for field maintenance and improvements (response from President: we are aware of this and will be applying this year; [Larry Parker](#) said that Cable One email was going away. We took a break about 10:40am for the remaining doughnuts provided by [Paul Gendarme](#) and [Bob Steffensen](#). We resumed about 10:54am for Show and Tell.

Show & Tell: Planes and Projects

[Larry Parker](#) showed his new plastic Stuka; and [Steve Zingali](#) brought out his foam creation and F14 with servo activated swing wings.

Door Prize/Raffle

[Jack Potter](#) won the door prize with the proverbial glue, foam pad and Velcro strap. [Jerry Calvert](#) won the electric Stik.

A motion was approved to adjourn about 11:15am. Respectfully, [Bob Steffensen](#) Club Secretary.



Far left the board assembled under the "pop up". Right is [Larry Parker](#) with his Stuka Dive Bomber the scourge of WWII.



[Steve Zingali's](#) swing wing F-14 Tom Cat.



Raffle - Stik	Out-door Prize
	
Jerry Calvert	Jack Potter