



AMA Chapter #3798

Chino Valley Model Aviators

Official News



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www.chinovalleymodelaviators.org

"To create an interest in, further the image of, and promote the hobby/sport of radio controlled aircraft"

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Aviation Fact:

The Boeing 747 burns approximately one gallon of fuel every second.

Support Our Local Hobby Shop



6594 E. Second Street
Suite C,
Prescott Valley, AZ
775-4971

Bob Wurth's U-Can Do



Bob's very nicely done **U-CAN-Do** has an O.S. 75ax 2 stroke with a 14 X 7 prop, yes there are still a lot of nicely done glow powered planes in our club.

Larry Parker's Beechcraft Twin



Larry's electric Dynam Beechcraft flies with Tomcat Skylord 30 Amp ESCs and sports electronic retracts, flaps and pre-installed flap servos. It also has LED navigation lighting. A very nice 50" wing span twin scale model with two powerful KV1100 brushless motors.



Wikipedia tells me the dog days of summer are “the hot, sultry days of summer. They were historically the period following the heliacal rising of the star system Sirius, which Greek and Roman astrology connected with heat, drought, sudden thunderstorms, lethargy, fever, mad dogs, and bad luck.” The good news is the 23rd of August is considered the end of the dog days. The bad news that this doesn’t always apply in Arizona. Maybe another month and we’ll see some cooler weather.

We’ve had our general meeting upset the last three months. First a cancellation,

then an impromptu parking lot gathering, and finally our Quonset hut hootenanny. Thanks to everyone for being adaptable and making this period as easy as possible. Airport staff assures me September’s meeting should bring us back to our regular location.

At the last meeting there was a long discussion about our field rules. Rule 4 concerns frequency pins and will be rewritten since most of us are on 2.4 Ghz.

Rule 6 refers to a field map that nobody has and isn’t on our website, so that will be corrected. There was quite a bit of discussion about Rule 11, though we didn’t read it or ad-

dress it formally. It states, “When flying, R/C pilots must stay in the flight station.” Unless that rule is changed, ALL pilots regardless of what you are flying need to stay within the flight station. This is for our safety, so you and other pilots can call out your intentions and be heard. We pride ourselves on having as few rules as possible, but the ones we do have are there to keep everyone as safe as possible.

Finally, a shout out to Clint Manchester, Glenn Heithold and Marc (Cark) Robbins for repairing the gate. Time had taken its toll on one of the poles, eventually fracturing. Clint, Glenn and Marc took it upon themselves to fix it, planting a new

pole with concrete and stretching the fence back in place. It’s things like this that make it a real joy to be a member of this club. When you see them please give them a pat on the back and an “attaboy”.

Happy flying,



CVMA NEWSLETTER
AMA Chapter #3789

President — Don Crowe



Vice President — Larry Parker



Treasurer — Marc Robbins



Secretary — Bob Steffensen



Safety Officer — Jerry English



At Large Member — Randy Meathrell



Newsletter Editor — Bob Shanks



Flight Instructor — Marc Robbins

What Historic Airplane Cockpit is This?



Hints:

1. First fighter to fly over 400 mph
2. Only fighter produced throughout WWII
3. Over 10,000 produced during the war
4. Exceptionally quiet power for flight

See Page 8

A glider mishap!



MARK YOUR CALENDARS

2018 Club Events

- Sept 22, 2018 – Annual Steve Crowe Memorial Fun Fly
- Oct 27, 2018 - Second Annual 2018 Build & Fly Challenge.
- Dec 8, 2018 – Christmas Banquet Prescott Centennial Center



Club Meetings:

Third Wednesday of Each Month—7 PM
Prescott Airport Executive Building.



BORN IN A BARN?

IF YOU ARE THE LAST ONE TO LEAVE THE FIELD:
PLEASE REMEMBER TO LOCK THE GATE.



SAFETY: ALWAYS A CRITICAL ISSUE

Our field's main runway often has fickle winds. Many clubs have a system where everyone flies the same track due to the days prevailing winds. However that just won't work well for our often very unpredictable wind conditions found in northern Arizona.

As an example, recently the wind forecast was for light winds 2 to 3 mph, however on that day the wind would often not be blowing at all and then suddenly come up one way and then just as quickly die down or even change direction. We also have some wicked cross winds to contend with as well.

Our flight instructors tell new flyers they must learn to fly in the wind so that is one of the main instructions, learning to navigate the wind. One member said his former club was in an area in Illinois where the wind seemed almost a constant issue so he often flies here when others don't due to our wind.

So what's the point of this "windy con-

versation"? Since we all know about our wonderful winds most are very good at letting others know intentions. We often hear "Taking off downhill", "landing up hill", "coming out" or other intentions involving being on the runway for whatever reason.

So members **ALWAYS CALL OUT YOUR INTENTIONS**, so others will be aware of your flight activities. Seems occasionally we have members who forget to call out intentions which can cause runway collisions or other possible inflight collisions. It is not uncommon for only one person to be flying but those in the pit area can hear intentions even though no one else is flying. Nice habit to get into.

Calling out intentions loudly is needed due to louder gas and glow engine noise and also we have a variety of hearing issues many members deal with. Flying at one end of the flight box and looking up the runway makes it

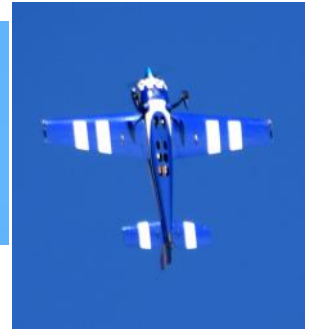
harder for someone at the other end of the flight box looking down the runway the opposite way.

It is not uncommon for all six flight stations to have members flying on busy days so one can readily see why calling out intentions is a critical safety issue. There have also been those wonderful weather days when we have had as many as two pilots in a flight box flying.

The reason the flight stations are all grouped together in one area is so those flying can hear each other in case of a dead stick landing or the need to venture out onto the runway to retrieve a plane, parts or other debris.

On busy flight days it is also important to have a spotter. If you are testing a plane for the first time let folks know so the runway and flight area can be cleared for a brief time while the new project is test flown. A spotter or helper is a good idea too!

CLUB PILOTS AND THEIR FLYING MACHINES



Associate member *Craig Guest* lives in the Anthem area. He says it's often shorter for him to drive here to fly than to drive across Phoenix to the flying field closer to his home due to Phoenix traffic.



Mark Lipp cleaned the grill, it didn't work well for the July 4th event but it worked.



Dick Bjork's Ultra Stick flown by *Terry Steiner*.



Randy Meathrell's aerobatic Hyperion Helios.

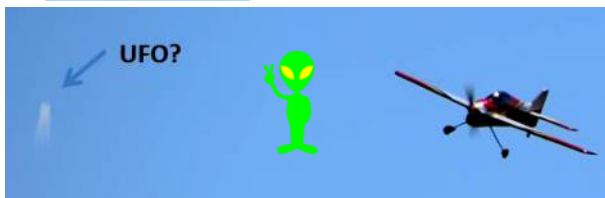
Marc Robbins signature slow nose-up pass over the runway with his Yak!



Shel Liebach's realistic EDF F-86!



Telephoto lens compresses distances, makes it look like *Shel Liebach's* twin is just barely clearing some wires as he lines up to land!!



Is *Randy Meathrell's* Helios sharing the sky with a strange UFO or not?



Rick Nichols and his Astro Hog.

Former member *Lee Dugan* donated three very nice kits to the club for future raffle prizes, a C-47 ARF, a Bristol and SE5A biplanes.

THANK YOU LEE!!



MORE MEMBER ACTIVITY AT THE FIELD



Dennis O'Connor's Zero



Members **Ron Dickson** and **Jerry Calvert** from Williams.



Tuesday early birds **Randy** and **Carol Meathrell-0730?**



Member **Andrew Grant** above and far left, a professional RC pilot, was helping **Bill Gilbert** get his plane trimmed and test flown.

Member **Dick Mastin** at left was flying with his visiting grand kids and they took time out to watch Andrew do a series of show aerobatics with Bill's plane, a PAU (Professional Aircraft Unlimited). Bill's plane has been wrung out and is ready for Bill to fly aerobatics!



Glenn Heithold's Number 5 design.

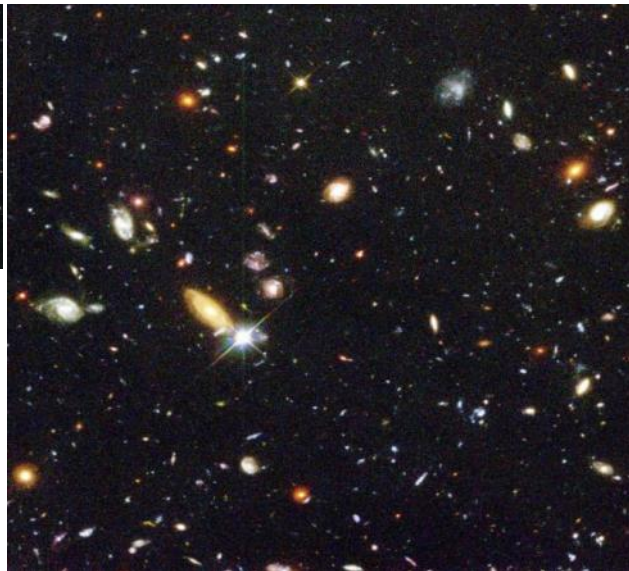
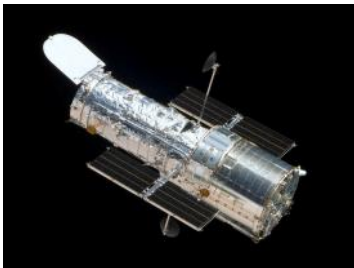


Photos by Marc Robbins



The entry gate on the right, as one enters the field, finally gave out. The repair crew at left, **Marc Robbins**, **Clint Manchester** and **Glenn Heithold** made the repairs after President **Don Crowe** obtained a replacement gate pole.

*Hubble Space Telescope Stares at Empty Spot in Space **



The empty black spot was not as empty as some thought!

ASTRONOMER Bob Williams wanted to point the Hubble Space Telescope at a patch of sky filled with absolutely nothing remarkable. For 100 hours. It was a terrible idea, his colleagues told him, and a waste of valuable telescope time. People would kill for that amount of time with the sharpest tool in the shed, they said, and besides — no way would the distant galaxies Williams hoped to see be bright enough for Hubble to detect.

Plus, another Hubble failure would be a public relations nightmare. Perceptions of the project, which had already cost multiple billions of dollars, were pretty dismal. Not much earlier, astronauts had dragged Hubble into the cargo bay of the space shuttle Endeavour and corrected a disastrous flaw in the prized telescope's vision. After the fix, the previously blind eye in the sky could finally see stars as more than blurred points of light. And now, finally, it was time to start erasing the frustrations of Hubble's early years.

Except that staring at nothing and coming up empty didn't seem like the best way to do that. But Williams was undeterred. And, to be honest, it didn't really matter how much his colleagues protested. As director of the Space Telescope Science Institute, he had a certain amount of Hubble's time at his personal disposal. "The telescope allocation committee would never have approved such a long, risky project," he explains. "But as director, I had 10 percent of the telescope time, and I could do what I wanted."

Williams suspected the billion light-year stare might capture eons of galactic evolution in a single frame and uncover some of the faintest, farthest galaxies ever seen. And to him, the potential observations were so important and so fundamental for understanding how the universe evolved that the experiment was a no-brainer, consequences be damned.

"Scientific discovery requires risk," Williams says. "And I was at a point in my career where I said, 'If it's that bad, I'll resign. I'll fall on my sword.'" So, with his job perhaps on the line, Williams went off, put together a small team of post-docs, and did exactly as he'd planned. For 100 hours, between Dec. 18 and 28, Hubble stared at a patch of sky near the Big Dipper's handle that was only about 1/30th as wide as the full moon. In total, the telescope took 342 pictures of the region, each of which was exposed for between 25 and 45 minutes. The images were processed and combined, then colored, and 17 days later, released to the public.

It turned out that "nothing" was actually stuffed with thousands of galaxies. More than 3,000 of them came spilling out, some roughly 12 billion years old. Spiral, elliptical, irregular — red, white, blue, and yellow — the smudges of light that leapt from the final composite image cracked the universe in ways scientists never could have imagined.

"With this achievement, the estimated number of galaxies in the universe had multiplied enormously — to 50 billion, five times more than previously expected," wrote John Noble Wilford in *The New York Times*. And some of the older galaxies — those distant, faint ones that were supposedly impossible for Hubble to see — looked really, really different.

"When the galaxies were young, they were very irregular — they were having collisions, they were erupting, they were having adolescent outbursts," says Robert Kirshner of the Harvard-Smithsonian Center for Astrophysics. He was among the scientists who initially thought the deep field was a bad idea. "Bob was right, I was wrong. The use of that discretionary time was a courageous thing," he says.

But there was more. Williams had gotten in touch with astronomers at the Keck telescopes in Hawaii ahead of time and asked them to point their Earth-based guns at the same patch of sky. Together, the observations helped astronomers develop something of a shortcut for determining cosmological distances to these galaxies, unlocking large portions of the universe.

As for public relations? The image is now known as the Hubble Deep Field and captivated pretty much everyone. To say it was a triumph would be an understatement. "The nerve that it took to say, 'We're going to point where there isn't anything,' was interesting," says John Mather, a Nobel Laureate and senior project scientist for the James Webb Space Telescope. "And Bob Williams got a lot of nice recognition for that leadership."

Not long after, Williams' experiment was repeated in a different patch of sky in the southern constellation Tucana, and came to be called the Hubble Deep Field South. In 2004, a million-second exposure of nothing produced the Hubble Ultra Deep Field, filled with even more galaxies than the original. And in 2012, combining 10 years of Ultra Deep Field exposures produced the Hubble Extreme Deep Space Field.

* <https://www.nationalgeographic.com/science/phenomena/2015/04/24/when-hubble-stared-at-nothing-for-100-hours/>

AIRLANDER 10: THE FUTURE OF AVIATION?*

National origin - United Kingdom

Manufacturer - Hybrid Air Vehicles

First flight - 7 August 2012 (as HAV 304)

Status - Prototype, Number built—One

Unit cost - 25million pounds or \$33 million dollars.

The Hybrid Air Vehicles HAV 304/Airlander 10 is a hybrid airship designed and built by British manufacturer Hybrid Air Vehicles (HAV). Comprising a helium airship with auxiliary wing and tail surfaces, it flies using both aerostatic and aerodynamic lift and is powered by four diesel engine-driven ducted propellers. The Airlander 10 is the largest aircraft flying today.

The HAV 304 was originally built for the United States Army's Long Endurance Multi-intelligence Vehicle (LEMV) program. In 2012, the HAV 304 conducted its maiden flight at Lakehurst, New Jersey, in the United States. In 2013, the LEMV project was cancelled by the US Army.

HAV reacquired the airship and brought it back to RAF Cardington in England. It was reassembled and modified for civilian use, and in this form was re-designated as the Airlander 10. In 2016, the airship returned to the skies.

During the 1990s, the UK based company Hybrid Air Vehicles (HAV) formed a partnership with US aerospace and defense company Northrop Grumman to collaborate and promote the type to various military operators, particularly those of the US. Following the successful demonstration of the HAV-3 small-scale demonstrator, and with Northrop Grumman as the prime bidder, the hybrid airship concept was accepted for the US Long Endurance Multi-intelligence Vehicle (LEMV) project, in preference to the Lockheed Martin P-791 that had also been submitted.

Northrop Grumman were responsible for the integration of the various electro-optical/infrared, signals intelligence, radar and communications relay payloads onto the airship. Requirements included the capability to operate at 6 km (20,000 feet) above mean sea level, a 3000 km (2,000 mile) radius of action, and a 21-day on-station availability, provide up to 16 kilowatts of electrical power for payload, be runway independent and carry several different sensors at the same time. According to the U.S. Army, the LEMV was to have been a recoverable and reusable multi-mission platform. It could be forward located to support extended geostationary operations from austere locations and capable of beyond-line-of-sight command and control.

Operationally, the LEMV was originally intended to be typically flown autonomously or as a remotely operated aircraft; for being transported to theatres of operation or within normal civil airspace, the airship can also be flown by onboard operators. According to Northrop's projections, one LEMV could provide the equivalent work of 15 fixed-wing medium-altitude aircraft.

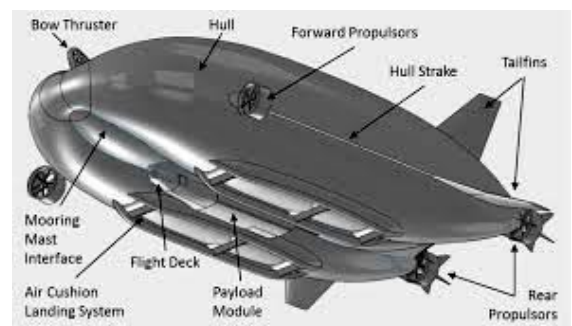
Airlander 10

The HAV 304 / Airlander 10 is a hybrid airship, achieving lift, and thereby flight, via both aerostatic and aerodynamic forces. Unlike most airship designs, it does not have a circular cross-section, having adopted an elliptical shape with a contoured and flattened hull. This shaping is deliberate so that it acts as a lifting body, contributing aerodynamic lift while the airship is in forward motion; generating up to half of the airship's lift in a similar manner to that of a conventional fixed-wing airplane. Buoyancy is also provided by helium contained within the envelope, the pressure from which maintains the airship's unique shape, between 60 per cent and 80 per cent of the aircraft's weight is supported by the lighter-than-air helium. The Airlander 10 is equipped with a set of pneumatic skids with which are designed to let the airship land and take off from a wide variety of terrain, as well as from water.

The Airlander 10 is capable of staying aloft for five days with a crew of two, and over two weeks while unmanned. This design had the potential for various civil and military applications; these include transportation purposes, conducting aerial surveillance, acting as a communications relay, supporting disaster relief operations, and various passenger services such as leisure flights and luxury VIP duties. Many of these duties could involve different configurations of the airship's mission module to suit. Northrop also said the LEMV could be used as a cargo aircraft, claiming that it had enough buoyancy to haul seven tons of cargo 3,900 km (2,400 mi) at 50 km/h (30 mph). According to HAV, the design would allow operators to choose among trade-offs between endurance and cargo capacity, carrying up to a maximum of 30,000 lb of cargo.

The airship is controlled by a side-stick mounted on the right-hand side, somewhat resembling that of a rotorcraft; there are no rudder pedals, the side-stick being automatically slaved to the vanes instead. Garmin-built avionics furnish the cockpit; the suite includes a closed-circuit television system that enables the pilot to view the otherwise-distant engines.

* https://en.wikipedia.org/wiki/Hybrid_Air_Vehicles_HAV_304/Airlander_10





Page Two Historic Cockpit Plane: *P-38 Lightning**



The pilot in a new American fighter, the P-38 Lightning, peeled down from the skies over Iceland on August 14, 1942. True to its name, the P-38 was akin to a force of nature: fast, unforeseen, and immensely powerful.

The aircraft's target, was a German Focke-Wulf FW-200 Condor patrol bomber. Its crew had never encountered anything quite like it before.

With its distinctive design, the P-38 was sleek but its twin tails gave the Lightning a radical new look. The pilot, pumping 409 rounds per minute from its nose-mounted machine guns, dispatched the Condor in seconds, marking the first successful American engagement of a German aircraft during World War II.

Within six months, as the P-38 showed its versatility in North Africa, a lone hysterical German pilot surrendered to soldiers at an Allied camp near Tunisia, pointing up to the sky and repeating one phrase — “der Gableschwanz Teufel” — over and over.

Once the phrase was translated, U.S. officials realized the focus of the pilot's madness. The P-38 had been given a new nickname: “The fork-tailed devil.”



100th P-38 THE ULTIMATE WEAPON

First conceived in 1937 by Lockheed chief engineer Hall L. Hibbard and his then assistant, Clarence “Kelly” Johnson, the twin-boomed P-38 was the most innovative plane of its day, combining speed with unheard-of advances: two supercharged engines and a potent mix of four 50-caliber machine guns and a 20-mm cannon.

Upon its official introduction in 1940, the P-38 was capable of climbing to 3,300 feet in a single minute and reaching 400 mph, 100 mph faster than any other fighter in the world. It also doubled as an intimidating long-range threat, capable of carrying a larger payload than early B-17s and boasting a range of 1,150 miles.

Its versatility and ruggedness were legendary. It could sink a ship: strafed enemies on the ground, crippled tanks, destroyed entrenched pillboxes and shot down numerous fighters and bombers in all theaters of World War II.

When a long-range battle-tested airplane was needed for the Allies' first round-trip mission to Berlin, a modified P-38 was chosen. And in 1943, when code breakers learned of a key inspection flight in the Pacific by Japanese Admiral Isoroku Yamamoto, architect of the attack on U. S. installations in Hawaii, sixteen P-38 pilots were dispatched to fly a five-leg, nearly 1,000 mile-long mission.

It proved to be a turning point in the war. After intercepting the admiral and his escort of Zero fighters, Japanese naval morale was crushed, and Allied morale soared. The intercept helped set the stage for an Allied victory in the Pacific.

A LEGEND IN ITS OWN TIME

As a World War II fighter, the Lightning's legacy is unmatched. A total of more than 10,000 P-38s—including 18 distinct models—were manufactured during the war, flying more than 130,000 missions in theaters around the world. P-38 pilots shot down more Japanese aircraft than any other fighter and, as a reconnaissance aircraft, obtained 90 percent of the aerial film captured over Europe.

Perhaps Colonel Ben Kelsey, a P-38 test pilot, summed up the war bird's legacy best of all when he said: “(That) comfortable old cluck,” he said, “would fly like hell, fight like a wasp upstairs, and land like a butterfly.”

Sources and Additional Reading

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Pace, Steve. Lockheed P-38 Lightning. Minneapolis, MN: Motorbooks International Publishers and Wholesalers, 1996.
Stanaway, John. P-38 Lightning Aces of the ETO/MTO. Oxford, UK: Osprey Publishing, 1998.
Gray, William P. “P-38” Life magazine, 16 August 1943.



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<https://www.lockheedmartin.com/en-us/news/features/history/p-38.html>



August Meeting Club Meeting Highlights



Meeting called to order at 7:00pm. There were 35 members attending. This meeting was relocated to the Northern most Quonset hut at the airport. We have been told that we should be back in our regular place, the admin building, next month. The meeting opened with the pledge of allegiance.

We had one new member present, **Ray Landry**. **Larry Parker** took minutes since **Bob Steffensen** was on vacation. No minutes were read because of Bob's absence. **Mark Robbins** presented the treasurer's report. Report emailed to everyone.

Mike Kidd made a motion to accept the report and **Randy Meathrell** seconded it. It was approved with no objections. **Mark Robbins** proceeded to discuss the up coming **Steve Crow Fun Fly**. A

short biography of Steve's WWII flying career in the service followed. This event is presented each year to satisfy the contract we have with the city of Chino valley. Our contract states, we must provide one event each year where the public is invited to participate. Mark indicated he is still in need of donation for raffle prizes. **Steve Shephard** said there were several items and kits, that had already been donated.

It was also noted that we need more pilots for demonstration flying during this event. Mark noted that he had several "pros" ready to give some demos. **Dan Avilla** sent word that he would give a Jet demo if he was in town. Also mentioned was the fact we will also have a swap meet at the Fun Fly.

Mark Robbins and **Rick Nichols** will present a CVMA discussion on KQNA radio the week prior to the Fun Fly. No time or specific date

was provided.

Bob Shanks discussed the upcoming elections and requested two board members help. **Randy Meathrell** volunteered, and **Bob** volunteered **Larry Parker** to assist if needed, a two member team should be all that is needed.

Following the business discussion, we turned our attention to the Flying rules for the field and the need to update them, specifically the 72 MZH rule. Don Presented a graphic of the "flight Box" at our field. A lengthy discussion followed concerning glider pilots launching from the helicopter area. The outcome was that we all need to use common sense when flying along with courtesy and to all who use the flight box.

Remember to always call out your intentions when talking off and landing. It was also noted that do to the noise from "slimmer's" you need to make sure your in-

tentions are heard.

Don Crowe discussed the need to have anyone using the fire extinguishers report the incident to **Jerry English**, our Safety Officer. If needed, we will get the used extinguisher refilled at a cost of \$35.

Jerry English presented his Comic PT-19 with Bevis and Butt-head figures, **Bob Shanks** discussed his balsa kit build from last year as a reminder for this year's challenge, (Oct. 27) he finally finished it and **Larry Parker** presented his P-51 he won at the club raffle several months ago.

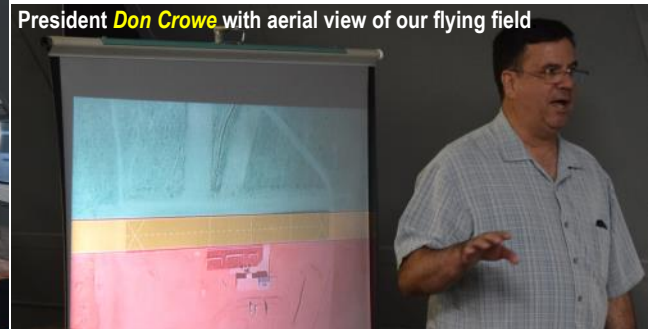
We broke for coffee and goodies. **Mike Kidd** provided the goodies thank you **Mike** and **Larry Parker** brought coffee from the Cracker Barrel – a relief from the aluminum tasting pot we normally use.

Respectfully Submitted:

Larry Parker, Vice President



Meeting was held at airport Quonset hut.



President **Don Crowe** with aerial view of our flying field



Jerry's PT-19 flown by Bevis and Butt Head



Randy Meathrell won the door prize, a variety of small workshop items and some glue!



Editor Bob's converted to RC Ringmaster from last year's Build & Fly Challenge. This year's challenge is just around the corner, Oct. 27, so get busy if you entered.



Larry Parker's P-51 he won at one of our past meeting raffles.

Raffle Winners:
Shel Liebach won the P-40,
Riley Harley won a cool wing bag.