



Chino Valley Model Aviators Official News



AMA Chapter #3798

October 31, 2020

Volume 23 Issue 10

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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BUILD & FLY CONTEST PARTICIPANTS FOR 2020



Left to right: Bob Shanks, Rick Nichols, Don Crowe, Riley Harley, John Riese, and Gary Cosentino. See page eight.

Quote of the Month:

"I fear the day that technology will surpass our human interaction. The world will have a generation of idiots."

Albert Einstein

Control Line Flying is Alive and Well!



Many a modeler started out in control line flying. Here Randy Meathrell revisits this aspect of the hobby that is still going strong.

Support our Local Hobby Shop



Valley Hobby
Prescott Gateway Mall



Bill Gilbert: CVMA President's Message



Our event season was just concluded with the 4th Annual Build N Fly. We had some great participation, with creative builds from our members. See further down in this issue for details and results. The Pancake breakfast afterwards was also a hit with our members. Hopefully we can have more of these in the coming year. If you have any ideas for additional events please let me or any of the other board members know your suggestions.

Our Annual Meeting was held and officer elections took place. The entire board of directors was re-nominated, then re-elected for the next year. I am honored to be your clubs' president for another year. The rest of the board and the members have been very supportive, making this challenging position rewarding. We aim to keep the club enjoyable and well maintained.

This year we have had the good fortune and generosity of past

members donating no longer used or wanted RC items. These items have been sold off with a great benefit to the club. This windfall of funds have put us in a nice financial position.

We have some good plans to continue to improve the club facility for the enjoyment of the members, while increasing safety. The LRPC is doing a great job taking your inputs and prioritizing desired improvements. Please consider the next project we have discussed at the meeting; of extending the walkway and other concrete work.

Give us any feedback you may have on this proposal. If we decide to move forward with this work we will alleviate the existing overcrowding at the E end of the pits, increase safety at the W end of the pits, we will have a nice area for BBQs and for maintenance of the clubs' equipment. The tie-down for the Porta-Potty will be a great feature come windy season!

With winter coming on fast, we

have an alternate meeting site to the field. We will be back to meetings during the 3rd Wed. of the month at 7:00 pm, until March. The Chino Valley Senior Center has a large room which will be suitable with appropriate social distancing, and we have reserved it for the next 4 meetings.

We have one more meeting this year, then the annual Christmas Banquet on Dec. 4th. Let's enjoy all the flying we can get in before we hit the throes of winter weather!

Bill



CVMA Flight Instructors

- Steve Shephard- Chief Flight Instructor
- Al Mareello-basic
- Lloyd Oliver-basic
- Riley Harley-basic
- Jack Potter-glidors

CVMA NEWSLETTER

AMA Chapter #3789
Published Monthly

President — *Bill Gilbert*



Vice President — *Doug McBride*



Treasurer — *Harold Ellis*



Secretary — *Bob Steffensen*



Safety Officer — *Rick Nichols*



At Large Member — *Dan Avilla*



At Large Member — *Dennis O'Connor*



At Large Member *Mark Lipp*



Newsletter Editor — *Bob Shanks*



What Plane Has This Cockpit?



See Page Nine

A 2020 Summertime Vacation Remembrance...



2020 — MARK YOUR CALENDARS



Dec. 4 Christmas Banquet

Field Clean Up as Needed Before Events



Club General Membership Meetings:

Due to Covid 19 we have been meeting at the flying field



BORN IN A BARN ?

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



SAFETY IS ALWAYS A MAJOR ISSUE

By Rick Nichols, Club Safety Officer

It's October, probably November when you read this. Let's look at October for a minute. It was a pretty much a good safety month however we did have a couple of safety and legal issues that should be considered. Our first mishap was when a pilot had his airplane sitting behind the lines in the pit area, on the ground. It was armed and he accidentally hit his throttle sending his airplane into the pit area where pilots park their airplanes.

This action of having an armed airplane in the back pit area resulted in totaling out another airplane. Please arm your airplanes on the benches and take them to the flight line before testing the controls.

The second occurrence was an error that probably all of us had made at one time or another. We spend a lot of time making sure of the controls of our airplanes are working correctly. We check the throttle to be sure the airplane is responding in the proper way, we watch the rudder to insure it turns left and right as it should, the elevator needs to go up and down as we want it to and the Ailerons must function in the correct manner.

Each of us watch our Ailerons while checking to see if they are moving. One of the problems is that we may neglect to observe if they are moving in the right direction. Seeing if they are moving is not enough. Seeing and ensuring that they are moving in the proper way is essential. If you are on your first flight of the day or your seventh flight of the day take the time to check your airplanes controls each and every flight.

The legal issues we need to be aware of are the NOTAMS, (Notice to Airmen) that are issued to full sized aircraft and now even to model airplane pilots such as us.

NOTAMS are posted from time to time in flight areas relating to the distance from airports. Our club President notified our members on October 17 of a NOTAM that was issued for certain hours of the day on Monday, October 19 that our field needed to be shut down and flying our airplanes was not allowed. The occasion was our President flying into Prescott Regional Airport. These NOTAMS should be strictly adhered to. We

do not need to put our club in jeopardy flying when we are ordered not to do so. October offered a lot of hours of really great flying weather for us. It is looking good for the rest of the month also. We still have the threat of Covid 19 and I encourage you to at least observe a bit of distance among us as we enjoy our sport. We do have a member and his wife that contracted the virus and was quarantined for several weeks. Please do not have the attitude that this can not happen to YOU and yours, it can!

I will see you at the Christmas party. Fun things are planned.

Rick

Editors Note: Here's Jerry Calvert's prop chopped hand healing well from last month's "Pilot #3" Incident safety column.



Members Models
at the Field



Tony Pacini's A-10



Thanks to the hard work of Vice President *Doug McBride* and several members we can now drive right over the field hanger. The culvert has a drain tube and is now covered in rock.



Bill Gilbert's Laser AJ Aircraft 290Z powered by a big gasser DA 70.



Greg Daebellienn flying his Uproar From his power scooter due to some back issues.



Bill Gilbert's Laser AJ Aircraft 290Z powered by a big gasser DA 70.



Randy Meathrell, from page one, uses his radio to start his electric control line model and also to stop it in case of dizziness and when he is finished flying.

His hand is on his radio getting ready to fire up the motor in this photo.



Photo by Rick Nichols

This aerial photo from a helicopter shows the orientation of the police firing range relative to our field. Rick used his cell phone. Target stations are not in direct line with our field.



Two CH-47 Army Chinooks flew over the field at about 700' so always be alert to full size aircraft traffic and call it out for all to be aware and fly accordingly.





MORE COOL MEMBERS & THEIR FLYING MACHINES

Bill Gilbert's Laser 290Z Gasser



Toni Pacini with his nice flying EDF A-10 Wart Hog.



Jack Potter flying his *Globe Ultimate* biplane.



Jack Potter's pilot looks like some of our members!



Mark Lipp's 1955 free flight he had in his "scrap box" converted to RC. EP power is from a Rimfire, purple covering is Monocote also from his "scrap box".



Steve Zingali flying his "Z" UFO.



At left is Steve Zingali's "Planet Garage" Delta. Nice color combination for flight orientation.



FIVE AERODYNAMIC FACTS ABOUT FLAPS

<https://www.boldmethod.com/blog/lists/2020/09/five-aerodynamic-facts-you-should-know-about-flaps/>

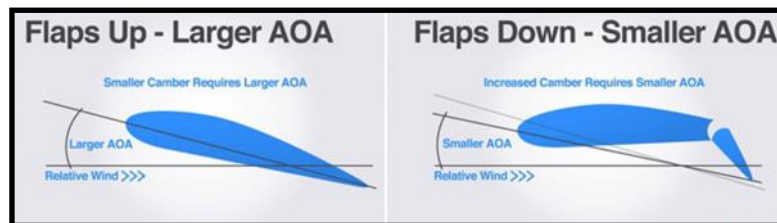
1) Extending flaps increases the camber, or curvature, of your wing.

When you extend the flaps on your plane, you lower your aircraft's stall speed, and at the same time, increase drag. When your wing has a higher camber, it also has a higher lift coefficient, meaning it can produce more lift at a given angle-of-attack.



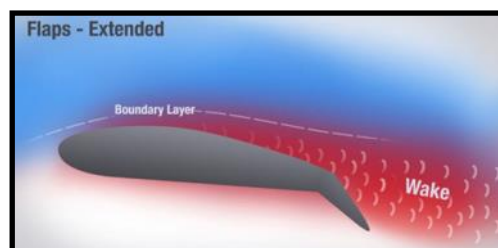
2) Extending flaps reduces your aircraft's stall speed.

Because your wing creates more lift with the flaps down, you don't need to use as much angle-of-attack to balance the four forces of flight. And because you can fly at a lower angle-of-attack with flaps extended, your stall speed will be lower as well.



4) Takeoff flap settings typically vary between 5-15 degrees.

Aircraft use takeoff flap settings that are usually between 5-15 degrees (most jets use leading edge slats as well). That's quite a bit different than landing, when aircraft typically use 25-40 degrees of flaps. Why the reduced flap setting? By extending the flaps a little bit, your plane benefits from the increase in lift (due to camber), but it doesn't pay the high drag penalty caused by fully extended flaps.

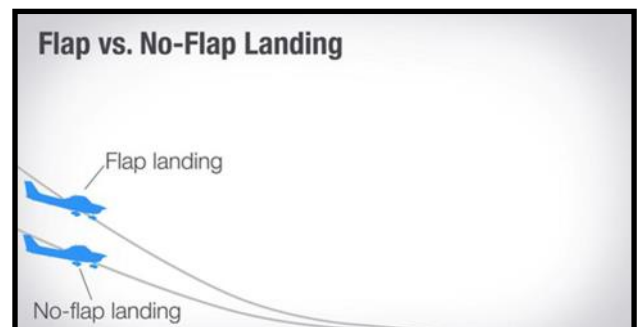


5) When you're landing, you typically extend your flaps close to maximum setting.

By putting the flaps out all the way, you maximize the lift and drag that your wing produces.

This gives you two distinct advantages:

- 1) you have a slower stall speed, which means you can land slower.
- 2) you produce more drag, which allows you to fly a steeper descent angle to the runway.



Dynamic RC Soaring Attains High Speeds

By Elliot Williams

<https://hackaday.com/2020/09/24/dynamic-soaring-545-mph-rc-planes-have-no-motor/>

And fast is *fast*. The progress in speed records stalled for a number of years due to the fact that there were no commercially available radar guns that would measure above 300 mph — supercars are slow compared to carbon-fiber RC gliders. When better radar detectors became available, largely due to continual pestering by [Spencer Lisenby](#) an avid designer and the Dynamic Soaring (DS) community, measured speeds jumped up dramatically with record speeds in the [545 Mph](#) range!



When the sport was young, the highest achievable speeds were limited by the stiffness of the wings: *Flutter* is the wing-killer. If an oscillation in the wing starts up at high speed, there's a lot of energy to keep it amplifying, and the result is that the wing tears itself apart or away from the body of the plane.

Modern planes have flutter-resistant airfoil designs, but are also made out of carbon fiber and other high-tech composites. Unlike "normal" gliders, DS gliders have the enviable problem of being confronted with too much wind energy, so they can be built strong without worrying so much about weight.

Today, the limits to top speed are aerodynamics and the human pilot. The air moving over the top of the wing has to cross the sound barrier, where it is no longer compressible. This creates shock waves in the middle of the wing, which kill its aerodynamic efficiency. The solution, as with full-scale planes, is to sweep the wings backwards. This smooths out the pressure gradient along the wing, but it means an entire re-design of the plane. This is where Spencer's next design will be going. Check out this site if interested:

https://www.tngtech.com/fileadmin/Public/Images/BigTechday/BTD10/Folien/Folien_SpencerLisenby.pdf

When Spencer manages to design and build a plane that can approach the sound barrier, the next limiting factor may be the human in the loop. At speeds already in excess of 200 m/s, a human's reaction and decision time of around 250 ms to 500 ms translates to 100 m of plane travel. If a plane hits bad turbulence at those speeds while only 20 m above the ground, it could be carbon-fiber dust before any meatbag even has a chance to blink. To quote Spencer, *"With each new speed, you get this feeling like you're in over your head and your brain can't keep up with what's happening."*

While we're not quite there yet, it's likely that the fastest DS plane in another 20 years will be significantly more automated because humans just won't be able to keep up. This brings a slew of new challenges, from instrumentation and motors to algorithm design. There are tons of autopilot systems available out there in the broader model airplane hobby, like [Ardupilot](#) for instance, but none of them have the closed-loop response times that will be necessary for transonic DS. But they're faster than people.

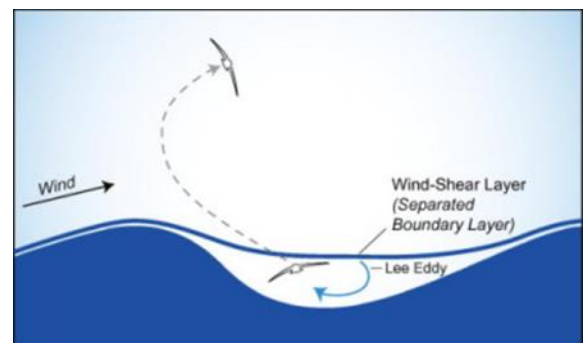
Sir Lord Rayleigh, a Scottish Scientist in 1883, first noticed that albatrosses flew for long distances without flapping their wings. He called this "gust soaring". But perversely, it wasn't until after the DS revolution in model airplanes that we fully started to understand the aerodynamics fully, and we've still got a lot to learn from nature on this front.

An albatross has an array of strain and windspeed sensors along the length of its wings that enable real-time analysis and control of its flight that we can't even begin to approach. They're reported to be able to soar in the wake of the waves even while they're asleep, a wingtip skimming only a few centimeters over the surface of the water.

Perhaps one future application of dynamic soaring will be UAVs that save power by harvesting windspeed gradients, whether on the ocean or taking advantage of specific terrain. We'd love to hear silent DS-bots replace their noisy helicopter-based brothers. Imagine gliders that pause along their course when they approach the leeward side of a windy hill, loop around to build up speed, and then move along to the next. Combine this with thermal lift sources over the flats, or solar, and you might have something.

But before our heads get too lost in the clouds, let's return to physics. You might be thinking "hey, with all this free energy out there, why aren't we harvesting it already?" The "dynamic" part of dynamic soaring comes from the top turn: the plane only gains energy when it is in the fast-moving air. The bottom half of the loop is just getting back to where it started. If you didn't need to go anywhere, you might imagine skipping the inefficient return path and doubling the energy-harvesting efficiency simply by tethering the plane to the ground with a tall mast. Let the wing spin a generator, maybe use three of them, and you've invented the modern windmill, which is at least twice as efficient as the best DS plane out there.

So maybe the future of dynamic soaring is exactly like the present: a fun sport that's chock-full of adrenaline, aerodynamics, and no shortage of design challenges.



2020 Chino Valley Model Aviators Build & Fly Contest

The winners of our 2020 Build & Fly competition are left to right, [Rick Nichols](#), [Gary Cosentino](#) and [Riley Harley](#). A panel of three member judges awarded points on building and flying.

The excitement of this event is that no contestant can fly until the day of the competition with the exception of a safety taxi. Each pilot had to take off do a lap around the field and land, [Gary Cosentino](#) captured the top slot and in second place was [Riley Harley](#), [Rick Nichols](#) Old School entry was voted as the crowd favorite. He had some really cool Road Runner decals made by Callie Graphics just for his plane. Each winner won an engraved beer mug done by [Rick Nichols](#).

After all the flying excitement the crowd of members were treated to a club pancake feed. Doing the cooking was [Mark](#) and [Jane Lipp](#).

This was the fourth year for this club contest and was the brainstorm of past president [Don Crowe](#).



The Winners left to right, [Rick Nichols](#) was second place and won the Crowd Favorite slot, [Gary Cosentino](#) won first place and [Riley Harley](#) won third place.



[Rick Nichols](#) Old School Mambo.



[Gary Cosentino's](#) Sterling Lancer.



[Riley Harley's](#) Balsa USA Stick 40.



[Bob Shanks](#) Steven's Aero S-pou.



[John Riese's](#) OV-7 "Chipmunk"



[Don Crowe's](#) Old School Wedell Williams Trophy Racer.

Entries by [Rick Nichols](#), [Don Crowe](#) and [Bob Shanks](#) were unable to get airborne for a variety of reasons. [Bob's](#) did get airborne but flipped upside down on the runway. [Don's](#) nosed over on the runway and [John Riese's](#) entry flew but was all over the sky and ended up crashing into the high grasses smashing the front of his plane.

Since none had been flight tested, as per the rules, no one knew what was going to happen, however, [Gary Cosentino's](#) and [Riley Harley's](#) entries flew very well. Gary says his was way out of trim but he was able to do his required lap and land safely.

[Riley's](#) entry flew so well he briefly entertained the crowd of members to some aerobatics during his lap around the flying field. He even was able to fly upside down as he showed off to the crowd of assembled members demonstrating his flying and building skills. All of the entries had very interesting decals and color schemes. A huge thank you to [Jane](#) and [Mark Lipp](#) for cooking our pancake and sausage breakfast.

All flight test photos are by [Grant Jensen](#). Thanks Grant.



The pancake lineup.



Eating some pancakes...

The Cockpit on Page Two Belongs to the OV-1 Mohawk *

The Mohawk was developed by Grumman Aircraft as a photo observation and electronic reconnaissance aircraft for the US Marines and the US Army. Due to budgetary constraints, the Marines bowed out early in the development cycle. The first Mohawk (YAO-1) prototype flew on April 14, 1959. The OV-1 entered production in October 1959 and served the US Army in Europe, Korea, the Viet Nam



War, Central and South America, Alaska, and during Desert Storm in the Middle East. The Mohawk was retired from service in September 1996. A total of 380 original OV-1 Mohawks were produced between 1957 and 1969. 133 OV-1Cs were built, the "C" designating the model which used an IR (infrared) imaging system to provide electronic reconnaissance.

The first Mohawk flew for the Army in 1960 as a visual observation aircraft. It was soon pressed into service in Vietnam. Its primary mission was gathering and relaying information on enemy activities. In subsequent years the mission and the aircraft underwent few changes. About 80 of the aircraft were built, and deployed in Vietnam, Germany, Desert Storm and Korea. Mohawk variants included the OV-1A, [visual and photographic], OV-1B [visual, photographic, and side-looking radar], the OV-1C [visual, photographic, and infrared], and the OV-1D.

The OV-1 was designed for aerial reconnaissance. The bulging oversized glass canopy provided the crew with much more visibility than a standard, streamlined canopy, to facilitate the OV-1's initial mission in Vietnam, visual observation of enemy activities. The two place, twin turboprop aircraft's thick, straight wings were designed to provide maximum lift rather than speed, with a wing span longer than the fuselage. This lift capability was needed to carry enough fuel for the missions that often lasted as much as six hours. Instead of one vertical surface to stabilize the aircraft, the OV-1 has three. Because of the torque created by the twin turboprop engines, a single vertical stabilizer would have been about 15-feet tall. Dividing the vertical surface into three sections increased maneuverability and stability, which enhanced the performance of the radar and photographic equipment used to record enemy activities. Operating the surveillance equipment was the primary responsibility of the technical observer, the enlisted member of the Mohawk flight crew.

The aircraft flew seven days a week, night and day since 1964 to keep a constant vigil on North Korean activities along the Demilitarized Zone. Missions were not canceled except during the very worst weather. When one aircraft returned to base another was already on guard along the DMZ. As soon as they landed, maintenance crews begin preparing them for the next flight.

The Mohawk provided early warning on enemy activity using a variety of imagery equipment such as still and infrared photography as well as side-looking airborne radar. With the deployment of the Mohawk's replacement, the ARL (Airborne Reconnaissance Low), the OV-1D Mohawk was retired from the Army inventory by the 3rd MI Battalion, 501st MI Brigade, INSCOM, Camp Humphreys, Korea, Sept. 21, 1996.



The OV-1 Mohawk had been developed in the tradition of what was known as "corps reconnaissance" in World War I, employing recon airplanes that could hold their own in air combat if necessary. Back in 1954, the Army had concluded it needed a battlefield reconnaissance plane with more capability than the Cessna L-19 Bird Dog.

The type specification called for a lightweight two-seat airplane powered by twin turboprops, capable of short takeoff and landing from small, unprepared strips or Navy escort carriers.



Our Flying Fields Beginnings: A Brief Photographic History

Thanks to member **Tom Wells**, we have a really nice historical record of our field in a series of photographs as the field began to take shape. Some of the key photos below were taken in February and March of 2001 during initial construction.

We have to applaud the membership group from that era for all their hard work. Here's just a few key people from that era, some are no longer members: **Chuck Colwell, Tom Wells, Rich Kocar, Lloyd Young, Frank Melanson and Len Pyka**. This is just a few of many who helped.

The newest additions to our cabana area is due to **Jay Riddle** and his hard work and major efforts and club support to help us get our main cabana additions funded and completed. Our very spacious and large hanger across from the parking area is due to **Jay Riddle's** vision for our club's future as well including the metal assembly tables.

The inset photo at right shows the field during our IMAC event from the same perspective as the original dirt runway photo **Tom Wells** took, we've come a long way members. A **big thank you to Tom Wells** and his historical record keeping. Also a big thank you to **Chuck Colwell** who was also a very key mover and shaker in 2001 and still a current member.



Main runway in 2001

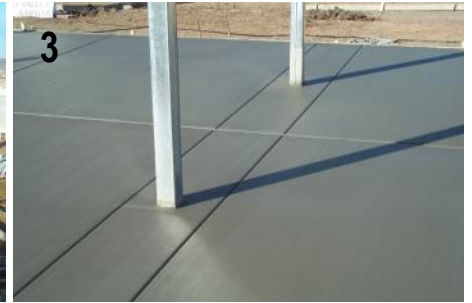
August 2020 IMAC



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2



3



4



5



6



7

The numbered photos from top left to right shows the progression of our field during its initial build in 2001 to its look now at our IMAC event held in August below.



Photo taken during our 2020 IMAC event held August 28 & 29th showing all the Cabana additions and large aircraft assembly areas we now have.



Our Jay Riddle Hanger across the parking area and also visible in the distance in photo at right.



OCTOBER GENERAL MEMBERSHIP CLUB MEETING AT THE FIELD OCT. 31



The General Membership meeting for October 21, 2020 opened at 10:00am at the flying field with Pledge of Allegiance.

Club membership stands at 139. There were 39 members present and guest **Les Barry**. Minutes of September 26, 2020 meeting were unanimously approved by members.

President's Agenda

Treasurer **Harold Ellis** presented the Treasurer's report. The total of all accounts is \$15048. The report was approved unanimously. Hats and T-shirts are selling well and remain in stock.

President **Bill Gilbert** thanked former members Marvin Jones and George Smith for their donations of RC models and accessories. Dan Avila has directions to son Chad's home for you to look at the remaining gear. We had realized several thousand dollars from the sale for the club. We may want to send a thank you note to them.

The current board has agreed to be nominated for another year of service. No additional nominations have been received to date. The members voted by acclamation to elect the existing Board for another year of service.

Events: The October 24 Build & Fly went well

along with the sausage and pancake breakfast... thanks to all for a great event. **Gary Cosentino** was 1st, **Rick Nichols** 2nd and **Riley Harley** was 3rd. Congrats guys! The Christmas Party is December 4th at Goods from the Garden in the Gateway Mall.

We have enjoyed the outdoor at the field for meetings this year. We have been looking at venues and the Senior Center in China has sufficient space for us to meet when the weather gets colder. Next month we will meet there on the November 19th. It is near the intersection of Butterfield and Road 1 West. Specific address will be provided with the meeting announcement. Secretary **Bob Steffensen** encouraged members to get their reservations in for the Christmas Party. We are about halfway to the 30 minimum that we need. The venue is Goods from the Garden in Gateway Mall. If you know where Valley Hobby is near the main entrance to the Mall, the venue is across the round-a-about from the main entrance.

A "Long Range Planning Committee" (LRPC) has been established to help identify and prioritize club improvements. Presently a high priority project is concrete work to extend the sidewalk, pad and install additional run up stations on the West end; a concrete pad in front of the shed door; and a concrete pad with tie downs for the porta potty. If you have any inputs for maintenance or improvements, please contact the LRPC members:

dougmbc@live.com, **Doug McBride**-
bigchinodon@gmail.com, **Don Crowe**-
jflipp@aol.com, **Mark Lipp**-

Safety Officer **Rick Nichols** provided a review of the operation of the Fire-Crash Cart and fire-fighting technics, assisted by **Dan Avila** and **Jack Potter**. All members need to be able to operate the cart. Get on the fire immediately, the fire is the priority, not salvaging the crash! Able bodied members should follow on foot or vehicle to assist.

VP **Doug McBride** stated that a work day would occur before flying on Saturday the 8th of November. Project is to remove the railroad ties between the cabana and the vehicle stops.

Member Comments

Larry Parker said that he had experienced some interference problems with his cell phone and transmitter leading to control problems. He recommended that you leave your cell phone in your vehicle while flying.

We took a break at 10:40 and resumed at 10:50. **Don Crowe** brought donuts and cookies for treats. Thanks **Don!**

Planes and Projects

Don Ferguson showed us his "scrounged" P40 War Hawk; **Randy Meathrell** brought his Raiden glider with equipped with a variometer that displays attitude on his TX and his C/L Flite Streak; **Don Crowe** displayed his Smoothie Excel with Tom's Print Shop graphics; **Dave Domzalski** had a nice V22 Osprey that he demonstrated after the meeting; and **John Riese** showed us his recently completed Calvin Mini-Stick.

Door Prize/Raffle

Greg Flowers won the door prize consisting of the proverbial glue, gyro and Velcro straps; the raffle for the Space Walker was won by **Harold Ellis**.

We adjourned about 11:03am.



Don's Smoothie



John's Mini Stick.



Dave's V22 Osprey



Don's P-40



Randy's Radian with a Variometer



Randy's Flite Streak

Door Prize & Raffle Winners



Harold Ellis

Raffle prize this month was a Space Walker won by Harold Ellis. Greg won the Door Prize.



Greg Flowers