



AMA Chapter # AMA

Chino Valley Model Aviators Official News



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

Inside This Issue

- ⇒ President's Message 2
- ⇒ Mystery Cockpit 2
- ⇒ Safety Column 3
- ⇒ Field Flying 4 & 5
- ⇒ Nieuport 17 Story 6
- ⇒ WWI Air Combat 7
- ⇒ Inside the C/L Circle 8
- ⇒ Mystery Cockpit 9
- ⇒ Club Swap Meet 10
- ⇒ Nov. Club Meeting 11

Quote of the Month:

Diplomacy is the art of telling people to go to hell in such a way they ask for directions.

Sir Winston Churchill

In Memoriam Chuck Colwell



Chuck was past club president and avid supporter of our club. He was a Naval combat cameraman and had an outstanding career as a cinematographer in Hollywood. He will be greatly missed.

Dane O'Brien's Big AJ Aircraft Raven



Dane's Raven is powered by a DA 70cc gas engine with a cannister muffler.

Matt Hinshaw's Inverza 33



Hanger 9 Inverza 33 powered by the Evolution 33GX 33CC gas engine with 75 Inch Wingspan. This great flying Aerobat designed by the Godfather of 3D *Quique Somenzin*.



Bill Gilbert: CVMA President's Message



As the year winds down, this being the last newsletter of the year, it's a good time to reflect on the past year's activities.

The additional flying activities to complement our main RC flying have been well received:

1. We put on Indoor Flying at the Prescott High School Gym, which had a core group of participants. We were able to fly small helicopters and multi-copters, as well very lightweight models in wind-free conditions.

2. A control line circle was constructed at the flying field by a core group of CL enthusiasts. It sees regular use by the core group, with new participants being added as time goes on.

3. We also put on several Float Fly events at two local lakes: Willow and Lynx. The participation was very high, and the enjoyment was also great. We ended up having four Float Fly events this summer and into the fall.

At the same time that we are experiencing a growing, healthy club, we are striving to continue to improve it for the enjoyment and

convenience of our members. A concrete addition was made in the summer; a BBQ pad was added in front of the shed, enabling conveniently putting on BBQ grilled food events. Pancake breakfasts were added to several of our events. A BBQ concession for our large IMAC event, which generates considerable revenue, is now more pleasant to conduct.

We extended the concrete walkway in the pits to the west, with two additional large airplane starting stations. This walkway will dovetail with next year's planned cabana addition. All done in an effort to address our growth with more airplane assembly stations.

We hosted a very successful IMAC Event for the SW Region. It was well attended with some excellent flying.

Then the Annual Steve Crowe Memorial Fun Fly was held. Attendance was over 100 people, the BBQ grill concession and raffle prizes

generated considerable income for the club.

We added a second swap meet in the fall, with a pancake breakfast. It was enjoyed by many of the members and brought in some revenue for the club.

The Christmas Banquet was modified with input from the members; we were able to bring the price down a bit. Registration for the banquet was very good. As of this writing we are still to hold it, but it is sure to be a fun time!

We have a healthy vibrant club, with 147 members to date, and good finances. Many of our members participated in a Pledge Drive to raise funds for next year's planned cabana addition. With your participation and continued support for the club, we are sure to have another

great year of flying events. The new cabana should really add convenience to our field. Thank you for your continued support.

CVMA Flight Instructors

- > Al Marello-Basics
- > Jack Potter-Gliders

CVMA NEWSLETTER

AMA Chapter #3789
Published Monthly

President — *Bill Gilbert*



Vice President — *Mark Lipp*



Treasurer — *Don Crowe*



Secretary — *Bob Steffensen*



Safety Officer — *Rick Nichols*



At Large Member — *Dan Avilla*



At Large Member — *Dennis O'Connor*



Newsletter Editor — *Bob Shanks*



What Airplane Cockpit is This?



See Page 9

2021 — MARK YOUR CALENDARS

Dec 3 Annual Christmas Banquet



Hey, Where's the FAA?



BORN IN A BARN ?

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



SAFETY IS ALWAYS A CRITICAL ISSUE

As we approach the end of another year, it is always good to conduct a personal and general safety review. As winter comes we often use that time to build but this is also a perfect time for each flyer to go through all models and double check connections and other general wear and tear issues from a safety perspective.

The constant assemble and disassemble of a model at the field for flying and transportation can loosen wing attachments, loosen screws etc. What about the glue joints on heavily flown models? Engine mounting screws to the fire wall, the list can go on and on depending on the type of model and the propulsion used to fly it.

Part of a personal safety review should also be looking closely at the workshop. Some accidents often occur in the shop. Check tool placement and glues. Keeping as orderly and clean shop as possible is also a good safety practice. Keeping glues in a relative constant storage temperature is also a good idea.

Some of our coverings also begin to show wear and tear. For glow flyers it is a good idea to check the engine area for fuel spills. It is always a good idea to coat the inside of the engine area with coat of epoxy. When was the last time you recycled your transmitter battery?

We should also check closely control surface hook ups to servos and the control surface. What about landing gears, are they still solid and functional? Hard landings can slowly begin to loosen the gear and what looks like a fairly good landing can also be deceiving. The entire landing gear should be routinely checked.

For those flying mainly electric, it is a good idea to double check all LiPo batteries and insure the cells are balanced. Check for frayed wires on batteries.

More on a General Safety Review:

We do have a lot of new members so it is also important to make sure we all remember NO models are armed

under the cabana but in the appropriate pit area.

Show some courtesy as well if you have to run up a gas or glow engine. Part of safety is being able to hear every one in the pit area that is flying so also make sure everyone knows your intentions.

A good idea is also to have a spotter when the field is super busy. If you are going to test fly a new model let folks know this is a maiden flight and possibly have a spotter or a more experienced modeler assisting you. In some cases test fly the model when there is a pause in flying. Sometimes a test flight should be done when no one else is flying if possible. Again it always depends on the model and also your experience.

Never hesitate to ask for help, we have a very collegial and helpful members always willing to assist.

FLY SAFE IN 2022!

Dan Avilla's Turbine Powered Ultra Bandit



Club Members Flying Machines



Left, Jeremy Beck and Dane O'Brien are checking the radio used to fly Dane's two big gas powered planes, the Laser and the AJ Aircraft pictured on the front page.

Dane was using his buddy box setting helping Jeremy.



A parachute plane was flying off the ball fields near the field, Rick Nichols took this shot, against the blazing blue Arizona sky.

Gene LaFaille flying his control line Nobler



Shel Liebach and his nice electric King Twin.





Steve Zingali's Starship Enterprise

The Many Masterful Member Models!



Dan Avilla's turbine powered Ultra Bandit with gear and flaps down, coming in for a landing. Photo taken from C/L circle using an 18mm to 300mm zoom lens.



This is Rick Nichols with his first C/L airplane. A Cox Thimble Drone ready to fly, with fuel, battery, fuel bulb, Glo-plug clip, handle and lines. The fuselage was plastic and the wing was hollow aluminum. The 1953 price: \$19.95.



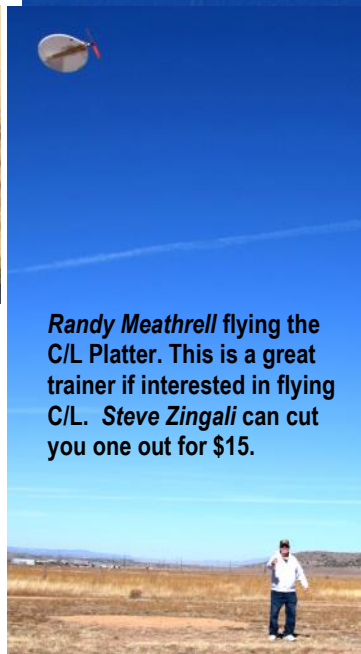
Dane O'Brien's Laser.



Shel Liebach's King Twin landing.



Shel's Tundra Cub with landing lights turned on.



Randy Meathrell flying the C/L Platter. This is a great trainer if interested in flying C/L. Steve Zingali can cut you one out for \$15.



Rick Nichols flying his C/L Nobler, note one cockeyed wheel, see photo below.



The Venerable WWI Nieuport 17

https://en.wikipedia.org/wiki/Nieuport_17

Editor's Note:

The first three paragraphs here are a fictional account penned by your editor that most likely could have taken place during WWI with all of the frequent air battles taking place between these fragile wooden and fabric covered aircraft.

I was badly shot up; my right wing was vibrating, and I had lost some of the supporting wires and fabric covering, I was barely flying! My tail section fabric was full of ground fire holes and the left-wing V strut was severely damaged and just barely attached to both of my shaky Nieuport 17's wings. My venerable fighter was barely air worthy as I limped back to allied lines and the safety of our aerodrome. The reliable Le Rhone 9-cylinder rotary engine was still running but sputtering badly. A fine spray of oil was alternatively coming out from the right side of the engine with each rotation and all over my wind screen and me! It was just a matter of time before I would lose my engine.

I had taken out at least two of the German fighters on this flight over Verdun. My lower wing's single spar, being weak was barely attached. Our group was jumped by a flight of six huns, they were no doubt following German Ace Oswald Boelcke's (pronounced bowl-key) methods of air combat, the first systematic analysis of air combat techniques. As I shook and oscillated badly, a red blur was coming at me closing fast, the plane was a Fokker tri-wing, a red one was something I had not seen before. He circled my damaged Nieuport and then pulled up alongside me, I figured I was soon to be shot down.

He was a gentleman's pilot and simply gave me a thumbs up and disappeared into the low hanging clouds. I barely made it back to allied lines and just as I neared the field the engine died. I crash landed on the edge of the field with my Nieuport badly shot up but I was somehow miraculously uninjured and alive.

Nieuport 17

This is an interesting WWI plane to model. Here's little history taken from a variety of sources as well as Wikipedia. The Nieuport was 9-cylinder rotary engine of 110 horsepower. The airframe, therefore, could reach speeds of 110 miles per hour and fielded an endurance of nearly two hours while being able to fight at altitudes reaching 17,400 feet. Rate-of-climb was listed at 9,800 feet within 12 minutes.

It was also ordered by the Royal Flying Corps and Royal Naval Air Service, as it was superior to any British fighter available at that time. In 1917 the type was one of the few machines which allowed British squadrons to fight-back during so-called 'Bloody April' of WWI. Historians have found it difficult to identify how many of each Nieuport type were operated by the RFC as its surviving records tend to only specify, they were flying the Nieuport.

The plane was powered by a 9-cylinder rotary engine of 110 horsepower. The airframe, therefore, could reach speeds of 110 miles per hour and fielded an endurance of nearly two hours while being able to fight at altitudes reaching 17,400 feet. Rate-of-climb was listed at 9,800 feet within 12 minutes.

The type 17 was a slightly larger development of the earlier Nieuport 11, and had a more powerful engine, larger wings, and a more refined structure in general. Constructed of wood as were most aircraft of the time, the wing arrangement was unusual. The upper wing had a normal two-spar structure, but the lower wing only had one, an arrangement called a "sesquiplane" or "one and a half plane." The design was originally intended to keep the lower drag of a monoplane but have the structural strength of a biplane.

While the smaller lower wing did improve the pilot's downward visibility, it was weak due to its single spar construction and it unfortunately would sometimes fail in flight due to the structure twisting under high loads, such as in a dive at high speed.

The Nieuport 17 had outstanding maneuverability, and an excellent rate of climb. Unfortunately, the narrow lower wing, marking it as a "sesquiplane" design with literally "one-and-a-half wings". The lower wing was weak due to its single spar construction, and had a disconcerting tendency to disintegrate in sustained dives at high speed.



Interested in Building the Nieuport 17?
You can order one from Maxford USA here:

<http://www.maxfordusa.com/electroniccarproducts.aspx>
Nieuport-17 WWI EP 60" ARF

German Ace Oswald Boelcke's Systematic Analysis of Air Combat Techniques Developed in WWI

https://en.wikipedia.org/wiki/Talk%3AOswald_Boelcke https://military.wikia.org/wiki/Oswald_Boelcke

Try to secure advantages before attacking. If possible, keep the sun behind you.

This is one of the rules that has shifted over time, but target acquisition in World War I was done almost exclusively through pilots simply scanning the skies. For that reason, Boelcke recommended the pilot keep the sun at their backs when heading into enemy territory or when deciding on an angle of attack against an unwary enemy pilot. This would blind the adversary to the threat until the German pilot was already letting loose with his first machine gun burst. These days now, it does work a little different since targets are generally acquired via radar and other sensors. Still, Boelcke would certainly recommend hiding the approach and only engaging with the advantage.



Always carry through an attack when you have started it.

This one was far from hard and fast, but it was aimed at a particular shortcoming of young pilots. While Boelcke would allow for the occasional need to bug out (more on that in a later rule), he worried for new pilots who would see an enemy and attack, but then would turn and run after the first burst. That allowed the enemy to get a good bead on the fleeing German and shoot them down. Instead, he recommended, only engage if you're certain you can succeed and then stick with the fight unless you lose all advantage and have no other options left to fight. In more modern terms, "Finish the fight."

Fire only at close range, and only when your opponent is properly in your sights.

This was another rule squarely aimed at a common mistake by rookies. Overeager pilots would fire from hundreds of yards away, giving away their position with little chance of a hit. (Aerial marksmanship is famously difficult, even in World War I, the shooter and the target are moving in different directions at dozens or even hundreds of miles an hour.) Boelcke insisted that pilots wait until 100 meters or so, about 110 yards, before firing if at all possible. This helped in two ways. First, the attack pilot would only give away their position when there was a chance of success. But two, it hedged against the common problem of aviation guns jamming. So withholding fire until it was most likely to hit the enemy reduced the chances of a jam on a mission because the pilot fired less overall.

Always keep your eye on your opponent, and never let yourself be deceived by ruses.

This one may feel obvious: Always keep your eye on your enemy. But American pilots, following their British counterparts, had learned to fake their deaths in the air by seemingly going into an irrecoverable spin during combat when they needed to bug out. Boelcke wanted to make sure his pilots were ready for this and other tricks, and so he recommended that they always watch their enemy, even if the foe seemed dead or doomed.

In any form of attack it is essential to assail your enemy from behind.

Again, rookie pilots would do stupid stuff, like attack an enemy flying from one side to the other, or coming head-on, both attack angles that were extremely challenging for even a veteran pilot to accomplish. So Boelcke directed his younger pilots to always focus on getting behind their enemy and attacking from there. There was one exception featured in the next rule.



If your opponent dives on you, do not try to evade his onslaught, but fly to meet it.

No need to try to navigate to the enemy's rear if they've already gotten the jump on you. Instead, treat it like an "ambush near" on the ground and immediately turn to face the threat and shoot at it. Then, if at all possible, get to the enemy's rear. Rookie pilots had often made the mistake of running from their enemy instead. If they weren't close to enemy lines, this resulted in them shedding altitude and pointing away from their attacker, allowing the attacker a series of free and easy shots at the fleeing pilot.

When over the enemy's lines never forget your own line of retreat.

This is the exception to a number of the rules above. Yes, you should always try to finish the fight against an enemy, whether you initiated the fight or were responding after they attacked you. But, you should always know which way to go if you have to run. If the guns jam, if the engine fails, if you're hit with a potentially mortal wound, you have to know which way help is.

Attack on principle in groups of four or six. When the fight breaks up into a series of single combats, take care that several do not go for the same opponent.

This one was aimed at younger squadron leaders. Basically, try to fly in groups whenever possible so that pilots can support each other. But, when fighting one group against another, be sure that you have each enemy plane on the run. If you're matched man-to-man, but two of your pilots accidentally go after the same target, then there's an enemy plane free to go after one German after another. Instead, the pilots should be aware of where each other are, and they should coordinate their attacks as best as possible to keep the enemy on their back foot. Boelcke would employ these rules and his own skills to achieve 40 aerial victories, rising to the position of the top fighter pilot in the world. But he died in a crash on Oct. 28, 1916. **One of his students would, eventually, greatly surpass Boelcke's number of aerial victories. The "Red Baron" would achieve 80 victories before dying in aerial combat on April 21, 1918, while chasing an enemy pilot over hostile enemy lines.**

Editors Note: These techniques have lived on and are still in use today in some fashion depending on the aircraft's mission.

FROM INSIDE THE CIRCLE

By Randy Meathrell

The Control Line Circle is getting plenty of use with the fine weather we are enjoying. Most of the flying has been done by *Randy Meathrell* and *Rick Nichols*.

We have both been flying our Foam Electric Platter models since they are easy to repair. We have had quite a few members stop by while the flying has been happening, and all visitors are encouraged to join the fun and fly a Foam Platter.

So far the *Z-man* (*Steve Zingali*), *Don Ferguson*, *Bob Shanks*, *Terry Steiner* and *Dan Avilla* have all survived 30 second flights without crashing.

We had a distinguished guest even come out and try the C/L Flying. Club President *Bill Gilbert* flew for a 30 second challenge and made a perfect landing. (photo at right) Rick threatened to cut his shirt tail off but Bill gave him "that presidential" look. 😊

I gave him a demo with loops and inverted flying and he even landed safely. Bill said it was fun but he will stick with R/C. We enjoyed having you at the circle Bill. Come back any time.

Now Picture This

From 180 Mph jets to a C/L Foam Platter in one day. Dan Avila YOU ARE THE MAN! I invite any cub member to stop by the club circle and give Control Line flying a try.

We have electric foam Platters available with timers set to 30 seconds so come on out for a FREE introductory flight. If you would like to have a C/L trainer and try your hand at this fun activity, Steve Zingali can cut a foam platter out for you for \$15 so don't worry about crashes they repair easily often with a little tape right at the field so another flight can be made.



Photo by Harold Ellis



Mystery Cockpit: F-16V Block 70 "Viper"

<https://www.airforce-technology.com/projects/f-16v-viper-fighting-falcon-multi-role-fighter/>

The F-16 Fighting Falcon 'Viper' is one of the iconic fourth-generation fighter jets which is in service not only with the United States of America's Air Force but is also flying in 28 other countries. The first single-engine supersonic multirole F-16 flew on January 20, 1974, and since then has seen combat in several parts of the world. The F-16 is also one of the most versatile fighters and has undergone several changes over the last four decades to remain one of the workhorses of many air forces even now. Over 4,500 F-16 have been produced to-date.



The company is offering the newest, most advanced and powerful version of the fighter - the F-16V Block 70. The F-16V Block 70 has several structural and capability upgrades and is fitted with the APG-83 Active Electronically Scanned Array (AESA) radar with a new avionics architecture. The Block 70 software further enhances capabilities through an advanced datalink, precision GPS navigation, SNIPER Targeting Pod, Advanced Weapons and Automatic Ground Collision Avoidance System.

The F-16V Block 70 has Center Pedestal Display (CPD) to provide tactical imagery to pilots on a high-resolution 6"x 8" screen which ensures full advantage of AESA and targeting pod data. The CPD is also compatible with the Night Vision Imaging System. Its Automatic Ground Collision Avoidance System (Auto GCAS) can prevent crashes and save the lives of pilots.

With a combat range of 4,220 km, the F-16 has nine hardpoints for carrying weapons. There is one at each wingtip, three under each wing while one is under the fuselage. The F-16 also has a 20 mm M61A1 Vulcan cannon for close range combat.

The F-16V's advanced glass cockpit incorporates an upgraded mission computer and state-of-the-art avionics, including color multi-function displays, a large high-resolution center pedestal display (CPD), helmet-mounted cueing system, and a high-volume, high-speed data bus.

The CPD enhances situational awareness of the crew by supporting real-time processing and imaging of flight safety data. The F-16 Viper is also equipped with an upgraded, programmable displays generator, a Link-16 theatre data link, identification friend or foe (IFF) and HF/UHF/VHF radio communications.

The single, high-performance, modular mission computer (MMC) on the F-16V is a replacement of the three original computers. It provides higher computing power to the avionics and weapon systems, while offering improved situational awareness, air-to-air strike performances, accurate targeting, and information capabilities. The gigabit ethernet-based architecture enables the control of electronic warfare displays and avionics systems of the aircraft.

"The Viper configuration is available as a new production aircraft, while a components upgrade is also being offered to the existing F-16 versions." The advanced fighter jet is also fitted with precision GPS navigation and automated ground collision avoidance system (AGCAS), which provides the pilot with alerts of imminent collision with the ground, and controls the aircraft to avoid a collision in case of pilot's unresponsiveness to visual cues.

An F-16V can be armed with a range of air-to-air missiles (AAMs), including AIM-9 Sidewinder, Magic II and ASRAAM short-range AAMs, as well as AIM-7, Sky Flash, and AIM-120 medium-range AAMs.

The fighter jet is powered by a single Pratt & Whitney F100-PW-229 or a General Electric F110-GE-129 turbofan engine. The F100-PW-229 develops a thrust of 29,100lb, whereas the F110-GE-129 generates a power of 29,500lb. The power-plant provides the aircraft with a maximum speed of Mach 2 and a range of 1,740 nautical miles.

The Viper fighter is equipped with upgraded electronic warfare equipment and modern threat warning systems, including jammers, threat warning receivers, electronic countermeasures equipment pods, as well as chaff and infrared flare dispensers to defend the most dangerous threats in complex battlefield scenarios.

The US Air Force (USAF) awarded a foreign military sales (FMS) contract to Lockheed Martin for the upgrade of 134 F-16 aircraft to the F-16V configuration in November 2016.



Chino Valley Model Aviators November 2021 Swap Meet

Lots of RC equipment, parts and kits were displayed, cold early morning swap meet. There was also some flying taking place as well.

This was a large turnout, more so than we have had in the past. Thanks to all who helped, cooked, served and brought out items for sale or barter.



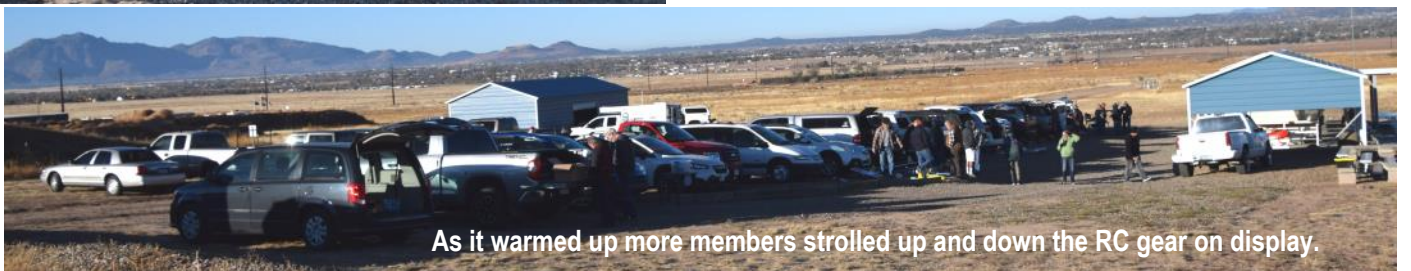
Mark & Jane Lipp with Harold Ellis served up a \$4 pancake & Sausage breakfast for members.



Pancake breakfast area.



Gary Cosentino's tuned pipe stick.



As it warmed up more members strolled up and down the RC gear on display.

Club General Membership Meeting for November

The General Membership meeting on Saturday November 27, 2021 opened at the flying field about 10am with the Pledge of Allegiance.

Club membership stands at 140. Members present for meeting were 28 by sign in. Actual present was likely more. New member **Gene Prist** join us as well.

Minutes of the October meeting were unanimously approved by members.

President's Agenda

Treasurer **Don Crowe** presented the Treasurer's report. After audit of accounts... there was some additional funds found. Members unanimously approved the Treasurer's report.

President **Bill Gilbert** updated members on the expansion plans. Present plans will cost about \$25K. Pledge drive has produced more than \$15K. Thank you! Your pledges will be called by January. We should start building in the first quarter of 2022. VP Mark Lipp is working the plans with Chino Valley city planners. A grant though AMA has been requested to offset the cost for Phase I. VP **Mark Lipp** has

opened bidding on a nice scale Eindexer that he has donate for the projects planned.

We are reviewing requirements to qualify the CVMA as an AMA Leader's Club that may provide some extra benefits for us.

The Board is reviewing the flight training we provide in an effort to reduce costs of maintaining flight equipment. After a brief introduction for the proposal...several questions were raised. The Board once again discussed and offered members for approval and input our flight training.

President **Bill Gilbert** met with U.S. Forest Services representatives about flying at Lynx Lake. Some visitors to the Lake have questioned the noise and possible disturbance of nesting eagles. We will invite the Rep to brief us on do's and don'ts before the next float fly.

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. Until that is done, please do not lean on the fence, it will not support you and it damages the fence.

The January meeting will be held at the CV Senior Center if the weather does not cooperate for a meeting at the field.

Safety Officer **Rick Nichols** said that **Harold Ellis** has not been flying much, so there have not been any safety issues at the field. 😊 Fly safe members.

Member Comments

Lloyd Oliver asked if we had ever considered "multi-year" club memberships. **Randy Meathrell** offered members orientation to control line flying with the "Platter" a relatively resilient flyer for novices. We took a break about 10:50am for cookies provided by **Rick Nichols**. We resumed about 11:05am for Pilot Projects.

Planes and Projects

Steve Stock showed his recently created Dead Simple Delta and **Terry Steiner** talked and showed his build in progress Sig Dewy Bird control line aircraft. **Randy Meathrell** showed his C/L Platters and invited anyone wanting to try their hand at control line flying to come over to the C/L circle for a 30 second timed flight.

Door Prize/Raffle

Marc Nelissen won the door prize with the proverbial glue and small file set. **Chris Gibson** won the Tundra in the monthly raffle.

A motion was approved to adjourn about 11:08am. Respectfully, **Bob Steffensen** Club Secretary



This was member **Charlie Gates** last meeting. He is moving to Colorado to be nearer family. He thanked everyone for the friendships.



Randy Meathrell showed his control line Platters.



Raffle and Door Prize Winners

<p>Chris Gibson</p> 	<p>Marc Nelissen</p> 
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