



AMA Chapter #3798

# Chino Valley Model Aviators

## Official News Letter



June 25, 2017

Volume 20 Issue 6

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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**Don't worry about avoiding temptation. As you get older, it will avoid you.**

*Sir Winston Churchill*

Support Our Local Hobby Shop



The Safeway Center  
Prescott Valley, AZ

MAX & CINNIMON BANDY

THEY SUPPORT OUR CLUB

Please support them as well.

### FROSTY WELLS' 4 STROKE POWERED JAPANESE ZERO



Frosty's Zero is by Seagull Models. Powered by a four stroke Saito 120 engine with retracts. A great looking scale rendition and it flies quite scale like.

### Don Crowe's Profile Edge 540 ARF



Don Crowe's big gas powered Edge in a nice knife edge fly-by.



*Field Chatter from CVMA President, Michael Kidd: No Kidding!*

**Greetings Fellow Pilots,**  
 We had a great meeting Wednesday, if you did not attend, maybe you can next month. I sent an email on this but wanted to let everyone know here as well. [The field will be closed Monday June 26, 2017](#) to have the weeds that are popping up burned, tamped and smooth filled. We had this done last year and these weeds are coming up in new spots Kind of wondering when this will end, how do the seeds get under the black-top? [Anyway remember Monday the 26 of this month the field will be closed.](#)

We also amended the by-laws in regards to the due date on the club dues. It was voted in to have the dues expire on December 31. By doing this we will have better control of the gate code, which we change in January.

In addition, we decided that "new" joining members are prorated at \$6.25 per month for whatever number of months are left until the end of the year.

We also added two more categories to the membership, one being Active Military dues are free, they just need to be an AMA member, secondly, student dues are \$10 per year up to the age of 25 as long as they are full time students and an AMA member.

These changes should help make the club look better to the town of Chino Valley. When we get these changes in the bylaws I will send them out to everyone.

Last Tuesday there were a number of us chatting between flights and as usual all sorts of topics came up. Then someone said, "seems amazing, first

we complain it is cold, then we complain it is too windy now we complain it is too hot". I guess there is no way to please us old guys. I have to say, it was 80 degrees and it was just past 8:00am.

The breeze was basically a whisper or nonexistent so it did not help cool you down. It was hot standing in the sun at the flight line for 5-10 minutes. A few hearty souls were flying but also taking a breather in the shade.

As a reminder, July 4th is

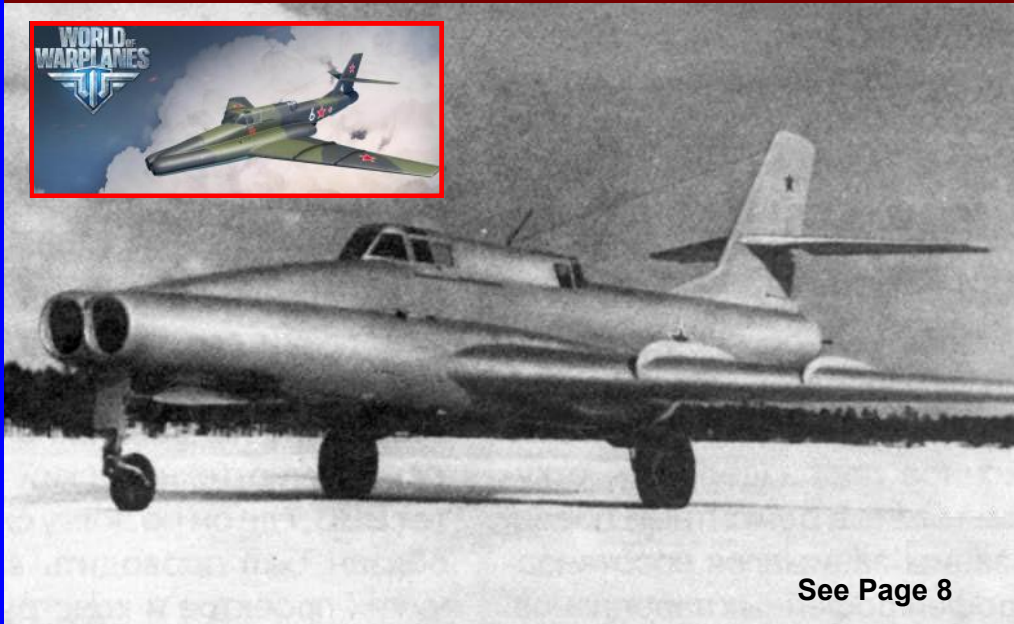
our "4th of July Fun Fly and watch the fire works pot luck". If you are planning to attend I will be sending out a food suggestion email. Hopefully this will make the meal one that is rounded out and not too lopsided. You know, too much of one item and not enough of the other food items.

Well that's about it, Safe Flying and Lock the Gate if you are the last person to leave the field! *Mike Kidd*



**LIGHT YOUR AFTERBURNERS MEMBERS  
 BRING A PROJECT TO OUR NEXT MEETING**

**CAN YOU NAME THIS PLANE?**



See Page 8

**CVMA NEWSLETTER**

Published Monthly



AMA Chapter # 3798

- President — *Mike Kidd*
- Vice President — *Terry Steiner*
- Treasurer — *Don Crowe*
- Secretary — *Bob Steffensen*
- Safety Officer — *Charlie Gates*
- At Large Members — *Randy Meathrell, Jerry English, Larry Parker, Marc Robbins*
- Newsletter Editor — *Bob Shanks*
- Chief Flight Instructor — *Steve Shephard, & Marc Robbins*



## When United Airlines overbooks a flight...



### MARK YOUR CALENDARS

#### CVMA 2017 CLUB SCHEDULE

- July 4, 2017 Fun Fly, pot luck & Town fire works  
 Aug 26th, 2017 War Bird Races  
 Sept 29-30, 2017 Steve Crowe Fun Fly  
 Dec 1, 2017 Christmas Banquet



#### Club Meetings:

Third Wednesday of Each Month.  
 Time: 7pm.  
 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

Most of us already know the recent court ruling on "drone registration" was in favor of RC modelers, however the misuse of drones is still a safety and privacy issue and could still impact our hobby in the future depending on what the FAA decides to do or not do.

The news has had frequent reports of "drones" flying near aircraft, at sporting events without permission and there have been injuries. As a review, there have been at least 12 major incidents from one crashing on the White House lawn to a drone crashing into an Air Bus A320 in 2014.

Some untrained and ignorant non-modeler individual may eventually severely injure someone to the extent prompting the FAA or Congress to pass legislation restricting our hobby or leading to its ultimate slow demise.

Ok folks, I know that is the worst case scenario but the "drone issue" is still a serious safety issue. Check out this web site that reviews those 12 incidents: [http://www.techrepublic.com/article/12-drone-disasters-that-show-why-the-faa-](http://www.techrepublic.com/article/12-drone-disasters-that-show-why-the-faa-hates-drones/)

[hates-drones/](#) There are countless more incidents but these were serious past news stories.

Here a brief summary of the regulation and what has transpired for those not following the case closely:

*The FAA announced in December 2015 that it would require every person who wished to fly a drone in US airspace pay \$5 and provide their full name, address and email. Failure to do so could result in fines of up to \$27,500, as well as potential criminal penalties of up to three years in prison, and additional fines of up to \$250,000.*

John A. Taylor, a model aircraft enthusiast and insurance lawyer, beat the FAA and Department of Justice in a case challenging the legality of a December 2015 FAA rule requiring model aircraft to register like manned aircraft. The Court of Appeals for the District of Columbia ruled that the FAA's registration rule, as it applies to model aircraft, "directly violates [a] clear statutory prohibition."

The Court states in its decision: "The FAA's Registration Rule violates Section

336 of the FAA Modernization and Reform Act." The Court further vacated the registration rule to the extent this applies to model aircraft.

The FAA says it put the registration and operational regulations in place to ensure that drones are operated in a way that is safe and does not pose security and privacy threats. While their intentions appear good most modelers felt the regulation exceeded their authority. The FAA is in the process of considering options and response to the decision but an appeal appears to be unlikely at this time. (The FAA is unpredictable but hopefully this issue is dead.)

Drone's used appropriately have great value. According to a recent Arizona news report, on May 27th the Navajo County Sheriff's Office used an Unmanned Aerial Vehicle (UAV) to assist in locating a lost person in a forest area. It took just 45 minutes for Deputies to locate the missing person and get coordinates to his location after the UAV was deployed.

[Fly Safe Members](#)

# CVMA CLUB PILOTS AND THEIR FLYING MACHINES



Dan Avilla's Turbine Powered F-104



Don Crowe takes his gas powered profile Edge 540 off for a flight left, a very good flyer and aerobatic ship. Nice flying profile ARF Don.



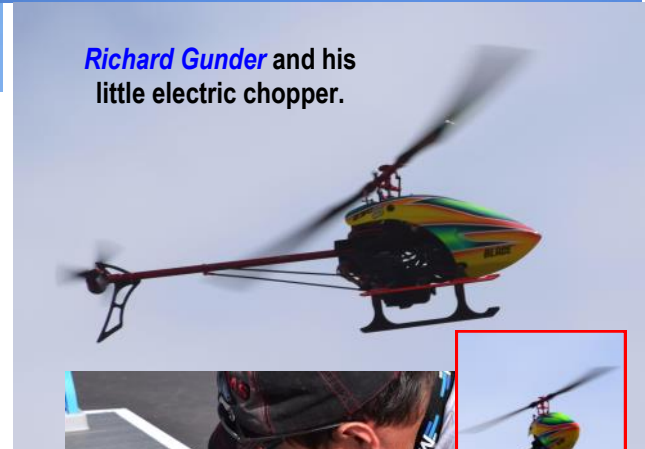
Thirty year old Baranoski pattern ship is flown by Gary Russell.



Dan Avilla's colorful Sukhoi in a knife edge fly-by.



Richard Gunder also flew his big electric T-28.



Richard Gunder and his little electric chopper.



Richard Gunder's Navy A-6 Intruder EDF.







# CVMA CLUB PILOTS AND THEIR FLYING MACHINES

**Bob Shanks** Twin Delta



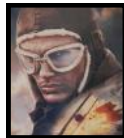
**Randy Wilder** takes off his Tracer, left, an old pattern ship design also flying by the pits above.



**John Stewart's** huge gas powered Sopwith Camel. **Steve Shephard** is assisting.



**Marc Robbins** EDF British Viper.



**Rick Nichols** nice glow powered Pete-N-Poke.

## Member Greg Darbelliehn's Work Shop



Check out the number of engines at his left, four complete shelves full of engines, about every size he could want for any type model he is building.

## WHAT'S THE DIFFERENCE BETWEEN LI-ION AND LI-PO BATTERIES?

Specifications	Li-Ion	Li-Po
Energy Density	High	Low and decreased cycle count compared to Li-Ion
Flexibility	Low	High, manufacturers are not bound by standard cell formats
Weight	Relatively heavier	Light
Capacity	Relatively Lower	Same volume Li-Po batteries' capacity is around two times of Li-Ion battery
Lifespan	Long	Long
Explosive risk	Higher	Improved safety - more resistant to overcharge; less chance for electrolyte leakage.
Charging	Relatively longer	Relatively shorter
Aging	Loses less than 0.1% per month	Lightly slower than Li-Ion
Price	Cheaper	Expensive

The performance of our batteries in RC basically depends on the quality of the power bank within the battery. There are two types of batteries commonly used by manufacturers who need batteries to power their devices. These batteries are the Li-Ion and Li-Po cells. Of course the best for RC is the Li-Po due to the high needs needed to power model aircraft and the fact Li-Po's are lighter.

One of the most frequently asked questions is, what is the difference between a Li-Ion and a Li-Po battery?

Li-Ion is short for Lithium Ion and Li-Po for Lithium Polymer, the -Po or -Ion ending refers to the internal cathode. A Li-Po battery has a polymer cathode and a solid electrolyte, while Li-Ion has a carbon cathode and a liquid electrolyte. Both are rechargeable, and in a sense they accomplish the same thing.

The Li-Ion battery development is much older than the Li-Po, nevertheless it's still popular due to the low price and maintenance. Li-Po is regarded as a more advanced battery with higher specifications and provides higher level of safety, hence commanding higher prices than Li-Ion batteries.

As battery customers are eager to have lighter and smaller sized power at their disposal; the limitation of Li-Ion batteries are becoming more apparent, manufacturers tend to use the modular, lighter and flatter shaped Li-Po batteries for their convenience. Besides that, the Li-Po battery is less explosive so there's no need to build in a protective integrated circuit inside the power bank of the battery, most Li-Ion batteries come installed with this circuit for safety. However, all lithium batteries must be handled properly for safety reasons due to the tremendous power packed into their cells (power banks).

After reading all of the pro's and con's, and specifications of both battery types, you can see that there isn't much competition here. Although Li-Po batteries are sleeker and thinner, Li-Ion batteries have a higher energy density and cost less to manufacture. Therefore, don't pay too much attention on this just go for a branded battery which meets your requirements and for RC that is the Li-Po battery. Finally, with new chemicals like graphene being added to these batteries and other chemicals, who knows which will come out on top in the long run. Refer to the chart above to get a good overall comparison between Li-Ion and Li-Po batteries.

We use these batteries everyday in cell phones and other devices but more importantly for the purposes of this article, and those club members who fly electric RC, this article serves as a brief definition and comparison. Even the editor, who has flown electric for years, found this article informative. The main source of this article was adapted for use in our newsletter from the following web site:

<https://www.easyacc.com/media-center/what-is-the-difference-between-li-ion-and-li-po-power-banks/>



## Remembering Our WWII Heroes - Lest We Forget!



Just before Memorial Day last month this picture at right was being sent around via email and other web sites. Your editor thought it was worth repeating in our newsletter. Interesting that when the picture at right was set up, many of these individuals on the left in the color photo were still with us.

The exact date it was taken is not important, what is impressive is someone was able to assemble these WWII heroes who were still living for a memorable photograph highlighting the sacrifices made by what has been called the “*the greatest generation*”; indeed they were.

As of 2014, the VA estimates there were 22 million military veterans in the U.S. population. Adding these figures on veterans to the active personnel numbers serving as of 2014, 7.3 percent of all living Americans have served in the military at some point in their lives. This data is from the U.S. Department of Defense Manpower Data Center.



## Flight Maneuver of the Month: The Split S

### Editors Note:

Occasionally we will feature a flight maneuver of the month in our little news “rag”. I’m sure many of you already know how to do some of most basic flight maneuvers but if you are like me a nice review is nice.

We have new members as well so after mastering the basics of RC flying and when comfortable with whatever plane you are flying it’s nice to get about “5 mistakes high” and start practicing.

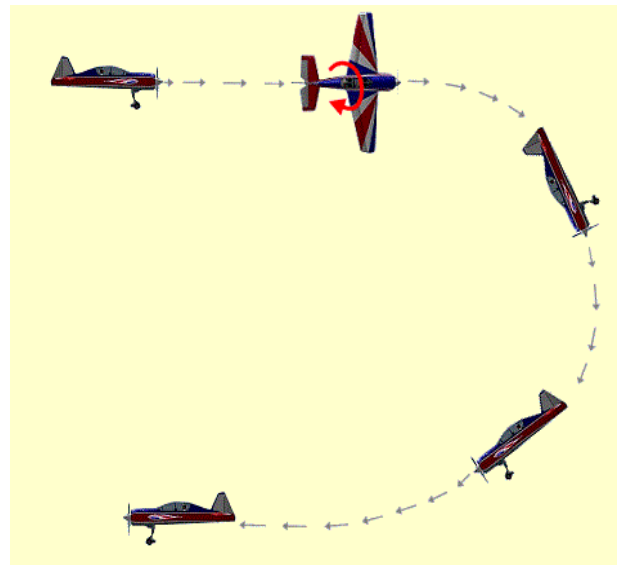
Make sure whatever plane you are flying has the power and is capable of aerobatic flight. Check with some of our long time members to assist you if you feel you need the help. This month is a relative easy one to master: the split S.

### How to fly the Split S Maneuver:

Starting with straight and level flight at a higher altitude, the airplane is rolled through 180 degrees at the start of the maneuver. Up elevator is applied as soon as the airplane is inverted, and the throttle reduced. The airplane then enters an 'inverted' dive and is flown towards the ground.

Keeping up elevator applied, the airplane is pulled out of the dive and returned to straight and level flight to exit the Split-S maneuver. No rolling out is necessary, as the airplane will already be the correct way up.

The Stik pictured at right is easy plane to fly and quite maneuverable and capable of most aerobatics.





## Name that Plane:

*Ilyushin Il-40*  
**NATO Name: Brawny**



Ilyushin Il-40 (NATO reporting name: *Brawny*) was a two-seat Soviet jet-engined armored ground-attack aircraft. The first prototype flew in 1953 and was very successful except when it fired its guns, as their combustion gasses disturbed the airflow into the engines and caused them to flameout or hiccup. Remedying this problem took over a year and involved the radical change of moving the engine air intakes all the way to the very front of the aircraft and repositioning the guns from the tip of the nose to the bottom of the fuselage, just behind the nose wheel. The aircraft, now resembling a double-barreled shotgun from the front, was ordered into production in 1955.

Only five production aircraft had been completed before the entire program was canceled in early 1956 when the VVS discarded its close air-support doctrine in favor of tactical nuclear weapons on the battlefield. Sergey Ilyushin had begun design studies during 1950–51 for a jet-engined ground-attack aircraft possessing better performance characteristics than was possible with piston-engined aircraft. By the end of 1951 the Ilyushin design bureau had prepared a technical proposal for a two-seat armored aircraft using two Mikulin AM-5 axial-flow turbojets rated at 2,150 kgf (4,740 lbf) at maximum power (without afterburner) and 2,700 kgf (5,952 lbf) with afterburner. In January 1952 Ilyushin sent this proposal to the government, which was quickly accepted, and he was directed to design and build one prototype.

The Il-40 had wings set low on the fuselage, swept back at an angle of 35°, and a tricycle undercarriage. The two AM-5 engines were in pods adjacent to the fuselage. As was traditional for Ilyushin ground-attack aircraft, the core of Il-40's structure was a load-bearing armored shell that protected both crew positions, six fuel tanks and part of the radio and electrical equipment. The thickness of the shell ranged from 3 to 8 mm (0.12 to 0.31 in) in thickness. The armored bulkhead protecting the pilot from the front was 10 mm (0.39 in) thick. The cockpit glazing was also bulletproof and the pilot was given an 8 mm (0.31 in) armored headrest to protect him against shells fired from above and behind. The gunner was protected by armor 4–10 mm (0.16–0.39 in) thick. The total weight of the armored shell and the bulletproof glass was 1,918 kg (4,228 lb). Ejection seats were provided for both crewmembers. Three perforated airbrakes were fitted on the rear fuselage, one on each side and one underneath, to enhance the aircraft's maneuverability during a dive.

The initial armament was six 23 mm Nudelman-Rikhter NR-23 autocannon mounted in the nose, three on each side, each with 150 rounds, with their muzzles protruding into the slipstream. One NR-23 was mounted in a remotely-controlled Il-K10 tail barbette with 200 rounds. It had a maximum elevation of 55°, a maximum depression of 40° and could traverse 60° to either side. The Il-K10 could traverse at a rate of 42° per second and elevate at a rate of 38° per second. Four small bomb bays were fitted in the wings with a maximum capacity of 100 kg (220 lb) each. Alternatively, four bomb racks could be fitted under the wings that could carry bombs up to 500 kg (1,100 lb), 82 mm (3.2 in) TRS-82 or 132 mm (5.2 in) TRS-132 rockets, or drop tanks with a total capacity of 1,100 litres (290 US gal). The normal bombload was 400 kg (880 lb), but 1,000 kg (2,200 lb) could be carried at overload. Under overloaded conditions, a maximum of twelve TRS-82 or eight TRS-132 rockets could be carried. Two cameras were fitted in the rear fuselage for day and night damage-assessment photos.

First flown on 7 March 1953, flight tests revealed no serious shortcomings in the air. The operational CG was too far aft, but this was only a minor problem when landing, taking off and taxiing, especially when coupled with the rather short wheelbase. The biggest problem proved to be the guns and their effect on the engines. During the first aerial test of the cannons at the end of March 1953 the muzzle in July 1953 as stipulated and a special commission was appointed to conduct the trials on 31 December 1953. After the manufacturer's trials were successfully concluded in January 1954 the aircraft was turned over and the State acceptance trials lasted from 21 January to 15 March 1954. The tests were generally successful with the Il-40 proving to be easy to fly, maneuverable enough to be a handful for the MiG-15bis and MiG-17 fighters opposing it and considerably superior to the piston-engined Ilyushin Il-10M ground-attack aircraft then in service. However flight tests did reveal blast gas ingestion when firing in a sideslip by the engine on the side opposite the sideslip. Several solutions were evaluated to cure the problem, but Ilyushin pushed for the more radical solution of extending the air intakes for the engines all the way to the nose of the aircraft and moving the guns to the bottom of the nose, behind the air intakes.

The change in position of the guns and the extension of the air intakes, which looked "uncannily like a double-barreled shotgun," allowed the nose wheel to be moved forward to lengthen the wheelbase. The guns were mounted behind the nose wheel well and a special shield was added to protect the gun barrels from debris thrown up by the nose wheel; it was mechanically linked to the nose wheel and extended when it did. Other changes included the replacement of the original AM-5F engines by the Tumansky RD-9V, an improved version of the AM-5F, the normal bombload was increased to 1,000 kg and 1,400 kg (3,100 lb) in overloaded condition, and a rearview mirror was added to allow the pilot to better observe the rear upper hemisphere.

The Il-40P prototype first flew on 14 February 1955 and began State acceptance trials on 12 October 1955. The changes had resolved all the problems suffered by the earlier design and an order for a first batch of forty production machines was placed.





## Ray Stone's 1911 Curtiss



# June General Meeting Highlights

General Membership meeting of June 21, 2017 opened by President **Mike Kidd** at 7:00pm and began with Pledge of Allegiance.

The Club membership is now 125 fully paid. Sign in roster showed 26 members were in attendance tonight, including guest/new member (by end of meeting!) **Clyde Olive**. Welcome aboard Clyde! Minutes of previous meeting were approved miraculously unanimously...with no corrections.

### President's Agenda

Thanks to **Marc Robbins** who advertised our old mower and Steve Shephard who meet a lady at field and helped load mower on her trailer.

Treasurer **Don Crowe** has proposed two changes in membership dues administration to wit: Proposal #1...dues will be due by December 31st each year to facilitate uniform changing of gate code. New members will be prorated at a rate of 1/12 annual dues for the remainder of year. Members late for submitting dues will pay in full for year. Pro-

posal #2 was active duty military memberships will be free and full time college students membership dues will be \$10. Both proposals to change By Laws accordingly, were approved unanimously by members present.

**Steve Shepherd** reported he had request for bids out for completing paving of the remaining East end of runway. Propane tanks for grills need to be filled before the July event. **Don Crowe** will accomplish this task. The water tank will be refilled at a cost of \$75. The field will be closed on Monday June 26th for runway sealing. The sealing work was previously approved at a cost of \$1000. Planning for Build and Fly event in October is well underway.

**Don Crowe** sent out contest rules to all by email for the club Build and Fly Challenge and response has been good...many models are taking shape in member workshops. If you need another set of rules contact your editor or **Don Crowe**.

### Member Comments

**Eric van Elberg** said that he regularly disposes of fire extinguisher contents and says that potassium chloride is a super weed killer and he would be happy to apply on field weeds. Officers and members said: "go for it Eric". Sweets for July meeting will be provided by **Eric Van Elberg**.

### Officer Reports

Treasurer **Don Crowe** presented his report which was approved unanimously. Chief Flight Instructor **Marc Robbins** was not present. Member **Steve Shepherd** said he knew of on new student that Marc was working with.

Safety Officer **Charley Gates** was not present. Member **Steve Shepherd** noted a near head on over the field when someone failed to sound off intentions to do a low pass in reverse of the usual flight pattern. Always announce your intentions pilots!

Event info briefly discussed for the 4th of July cook out/pot luck at

the field. Bring a chair for fireworks watching. Email will be out before the event with additional details.

We broke at 7:42pm for goodies provided by **Pam Kidd**. Thanks the home made treats! We resumed the meeting at about 8:00pm. Show and Tell:

**Don Crowe** showed us fuselage of his RQ7 Shadow he is building for Build and Fly; **Randy Meathrell** displayed his FMS Zero warbird complete with hat and tee shirt; and **Chris Myhre** demonstrated the Sheriff Department's hand built Tactical Scout Robot for use with law enforcement operations.

### Door Prize/Raffle

**Jerry Lang** won the door prize consisting of glue, battery checker and A/C recovery bag; **Mike Goedeker** took home the nice Tower Hobby's Uproar. We adjourned at 8:20pm

Respectfully,  
**Bob Steffensen** Club Secretary



**Randy Meathrell** brought his nice looking foam electric powered Japanese Zero with retracts and scale looking pilot. He has yet to test fly the Zero. Randy had his cool "Zero cap" and "Zero T-shirt" on as well.



**Chris Myhre** brought his Sheriff Department's RC search vehicle with lights and TV to use in unsafe areas. Members can be seen on the TV behind Chris via the onboard camera.



**Don Crowe** is building a 76" span RQ7 for the CVMA Build and Fly Challenge contest. He brought the fuselage skeleton.



**Jerry Lang** won the door prize a aircraft recovery bag, glue and battery tester

