

Coachella Valley Radio Control Club

PROPWASH

News Magazine

News and Info for Members and Friends



CVRC Club Member Court Moe with his Hand-Built Bonanza V35B Scale Model

Second Quarter 2019



The Airplane on the Cover....

Many RC flyers today have never built a wood-airframe, fabric covered and painted model. Let alone one that is an accurate scale replica of a specific full-size airplane, right down to a detailed interior. And spent 5 years doing it. But that's exactly what our member Court Moe did to build his V35B Bonanza. And he got a beautiful result.

Court started with a Top Flight balsa-and hardwood kit for the airframe and another kit for the interior, both bought in 1969. And a set of Robart pneumatic retractable landing gear. Court also bought a set of close-up photos of an actual V35B so he could accurately replicate it.

The biggest challenge in building, according to Court, was the conversion to electric power. The kit was set up for a nitro engine. Room had to be found for two 5-cell 4000 mah LiPo batteries, and access and cooling provisions had to be created. And the associated component placements to keep the center of gravity in the right place. Fortunately the wing was thick enough to house the batteries and a removable belly pan covers them nicely.

Court's notebook has 330 photos showing most of the building steps. The only non-scale item is the 3-blade prop...no look-alike to the full scale prop could be found.

Dan Metz made the first flight. It went fine until the canopy came off....major repair required. Since then, Court has flown the plane a half-dozen times. With so much effort invested in it, it's not a plane for casual fun. But it's high-fidelity scale and looks extremely realistic in the air.

Maybe now that the plane has flown several times, it's time to give it a place of honor as a static model. Court can answer "yes" to the oft-asked question of "has it flown?" That's fun. And it's an added dimension to a large and impressive model.

--- Ed

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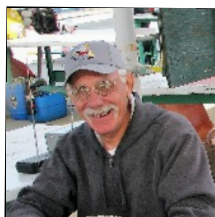
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Club General Info

This magazine is intended for both members and non-members. For those new to the area or new to the club, here are a few notes about our operation. We welcome visitors. We are proud of our family-friendly and gracious environment. Membership is open to all. Our facilities are described on the following pages. Contact any club officer for more information (See Board of Directors page).

Academy of Model Aeronautics (AMA) Chartered Club

Website: www.CVRCClub.com

AMA Club Status: Gold Leader Club

Seven-Member Board of Directors

Average Membership: 150 Members

Annual Dues \$150.00

AMA Membership: Required (or Canadian MAAC)

Guest Flyers (AMA/MAC Members): Yes, 3 times

Training Pilots Available: Yes (hourly fee)

Airfield: 89452 54th Ave., Thermal CA

Field Available: 7 Days/Week, All Year

Allowed Motor Types: All (Gas Turbines w/Waiver)

Float Flying: Lake Hemet, CA (Summertime)

Club Meetings: Last Tuesday, Sep - May

Meeting Location: Sloan's Restaurant, 81539 CA-111, Indio CA

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There is no commercial connection between CVRC Club and any organization, advertiser, manufacturer, merchant or individual that is mentioned, featured, depicted or described in Propwash.

All photos in Propwash are by the Editor unless otherwise noted.

Airfield and Facility



Runway 865' x 70', Fine-Textured Asphalt

Concrete Apron Areas

Ten Shade Covers

Shaded Spectator Area



Land Owner: US Government
Lease: Bureau of Reclamation
Sublease/Steward: CVRC Club
Improvements: all by CVRC Club

Field Address:

89452 54th Ave., Thermal CA

From West: Hwy 10E, Hwy 86S:

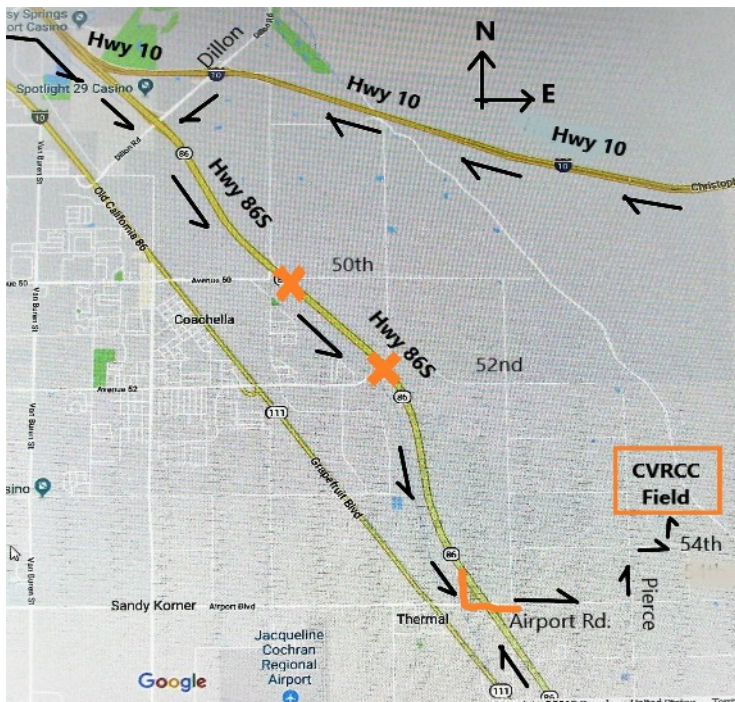
From East: Hwy 10W, Left on Dillon Rd, Left on 86S, **then:**

Left (east) on Airport Rd,

Left on Pierce,

Right on 54th,

Left at Gate.



From the Editor...

By George Krueger, Club Officer,
Treasurer and Magazine Editor



In this issue we've included coverage of the recent Jet Rally conducted by our neighboring club, the Hemet Model Masters. If you missed this event, you missed a good one! Attending these events always reveals some unique personal aspects and you'll see some notes on those. Hopefully our Hemet friends will see our coverage of their event and enjoy it too. They did a great job.

Our float flying at Lake Hemet has resumed. This lake in the pine forest is at 4000' elevation and it provides a pleasant break from the summer heat. Consider adding it to your flying routine. We operate from Camp 7, the Day Use campground.

See the President's Message for an update on FAA, AMA and MAAC regulatory actions. This is a process in-flux for awhile.

I've written an article on Controlled Airspace and tried to explain it in a simplified way. Modelers don't need to understand all of it, but we operate within the boundaries of Jackie Cochran Airport airspace so some understanding of their airspace, how it functions and why it's there is important.

We have received letters of gratitude for CVRCC's recent gifts to Wounded Warriors (\$1000) and Rebuilding America's Warriors (\$500). These gifts are made possible by the proceeds from our collection of annual events at our field. Thank you to all those who have supported or participated in those events. CVRCC is uniquely organized as a 501.c.3 charity organization and the gifts to WW and RAW fulfill part of our obligations.

The Desert Recreational District has been helpful with maintenance and clean-up at our field this year. Their help is appreciated. They have offered to progressively help with sunshade repairs, now needed on several of the shades. All of the shades are beyond their projected lifetimes.

Had an incident or accident with your model airplane recently? See the article on recognizing the Accident Chain. It might help prevent the next one!

President's Message By Dan Metz



This quarter has been marked by increased regulatory activity relative to recreational and commercial drones. At issue is how to operate them safely in the airspace shared with manned airplanes. Model airplanes are now lumped with drones under the FAA category of Unmanned Aerial Systems (UAS) and specific rules are emerging. One of those rules will require each flying site that lies within controlled airspace to obtain a Letter of Agreement (LOA) with the FAA as to perimeter, altitude limits and operating times.

To create some uniformity in these LOA's the AMA has requested all affected clubs to submit a summary of their desired parameters to them so the FAA can be approached with one voice. We did that on May 22, one of the first clubs to do so. We await further developments. In the meantime the FAA has advised us to continue registering our model aircraft and operate under current AMA safety guidelines and whatever local best practices we have developed. In the case of CVRCC, that includes staying below 800' and using "see, hear and avoid" methods to stay well clear of any manned aircraft in the area. We have never had an incident of interference with manned aircraft in our nearly 20 years of operations at our field.

In the interest of developing a good relationship with the local full-scale pilots we have been attending the monthly meetings and some of the activities of the Experimental Aircraft Association at Jackie Cochran airport. Those pilots have all seen our field as they come and go to the northeast and have no problems with our presence there. Some have personally visited our field and watched the flying. Our location is casually known among the Jackie Cochran commercial operators (Ross Aviation, Signature, Desert Jet), and sometimes the charter pilots on layover drive out to watch our flying. It's a positive relationship we need to enhance. The FAA may seek opinions from these people in the process of creating our LOA.

In a related development, we have recently learned that our Canadian counterpart, the Model Aeronautics Association of Canada (MAAC) has received an exemption from the unmanned-aircraft rules recently added to the Canadian Aviation Regulations. This exemption is contingent on 15 points of compliance. Those points include MAAC obtaining a written agreement from Transport Canada for any flying sites that lie within controlled airspace. That agreement is to include operational boundaries, maximum altitudes and communication protocols to facilitate safe operations. Further points include maintaining MAAC membership in good standing, registering the aircraft, and complying with all MAAC and locally-developed guidelines. We congratulate MAAC in achieving this important exemption for model airplanes. We hope our AMA can do as well.

It is very important in these changing times that every CVRCC member stay compliant with all FAA, AMA and local rules and operate in a safe and sensible manner. The continued life of our flying field depends on it.

— **Dan**

Experimental Aircraft Association Pilot's Meeting

On Saturday June 15 Dan Metz and George Krueger joined the local EAA Chapter 1116 monthly meeting to keep them apprised of our presence near the Jackie Cochran airport and to brief them on our progress with getting FAA recognition for the airspace we need. Both Dan and George have joined the EAA to bolster our partnership with them. The meeting was quite productive, especially in shared experience in putting on public airplane-related events and generating profits for the sponsoring organizations. We share the airspace with Jackie Cochran full-scale pilots and have a mutual interest in making sure any new FAA rules regarding drones do not harm or impede our operations.

There is a further benefit in promoting and supporting each other's public events. The next Bermuda Dunes Airport Day will be January 25, 2020, and CVRCC will again have airplanes on display and information to pass out. This worked out well at the first event last January, and the next one will be even better. It's a close-to-home event with many interesting full-scale airplanes to see, and at a visitor-friendly airport where airplanes are taking off and landing quite close to the spectator area. The event is a joint effort by the EAA, the 99's Women Pilots and the Bermuda Dunes Airport staff. Plan now on participating or attending this fun event. It helps both CVRCC and the EAA.



Dan Metz addresses the members of EAA Chapter 1116 during a monthly meeting at Jackie Cochran airport.



One of the EAA members owns this vintage De Havilland Chipmunk. Fun to look at! The Chipmunk makes a good RC model subject.

The Hemet Jet Rally June 7-9, 2019

To return the support that Hemet Model Masters has always given to our Jet Jam, several CVRC Club members attended their very successful Jet Rally. Fifty five pilots were registered. Two flight lines were operated. Lunches and Saturday night dinners were available. An AMA-matching scholarship drive was conducted. Numerous raffle prizes and auction items were available. It was an enjoyable event. Congratulations to our neighboring club, the Hemet Model Masters!



Event Director Neal Smiley (center) welcomes the pilots and visitors and explains event procedures and safety rules. He also announces the Dennis Inbody Scholarship Drive. Dennis died at the early age of 51. His son Sam is at Neal's left. Dennis was a well-known and very helpful modeler. The AMA has promised to match all funds collected. As of Saturday evening more than \$20,000 total had been raised, helped in large measure by significant individual gifts.



Pilot briefing before flying on Saturday at the Hemet Jet Rally. 55 pilots registered, four were from CVRCC.



President Dan Metz presents a \$100 contribution from the CVRC Club to Sam Inbody (center) for the Scholarship fund.

Coachella Valley Radio Control Club

Hemet Jet Rally...

Overall views. Note: the BD-5 is 66% scale!



Coachella Valley Radio Control Club

Hemet Jet Rally...

Photos this page by Murray Ross.

See many more on his website [here](#).



Hemet Jet Rally.....

At the Hemet Model Masters Jet Rally in June 2019 I noted a young pilot operating his airplane from a chair and using both a hand-held transmitter and a pedal device for his feet. He didn't have the use of his left hand. He was doing a remarkably good job of flying his T-1 Mini turbine jet model, performing a large array of aerobatics and high-speed upright and inverted passes.



After he landed his model I spoke with him about personal aspects and his RC flying. He is Pablo Vargas, age 33, originally from Colombia in 2011. He works at Dart Aerospace in Vista, CA (north of San Diego) as a production and manufacturing engineer. He and his wife Manuvela live in Vista and they have a 2 1/2 year old son named Max. Pablo has been active in RC flying for 15 years, both airplanes and helicopters. Neal Smiley has been his mentor for jets and is the one who granted him his AMA turbine waiver..

In 2016 Pablo was hit by a car while riding his motorcycle. Not his fault but among the consequences was the loss of the use of his left arm and hand. Pablo is not easily discouraged and he has found many ways to work around this lifetime handicap and lead a very successful life. Creating a special foot-rig to operate the functions of the left RC transmitter control stick was one of those novel work-arounds.

The foot pedal unit is an extensive rework and adaptation of a unit made for computer flight simulators. It is a crossbar affair with a central pivot and left and right foot pedals. Rotating the crossbar emulates the rudder-pedal action in a full scale airplane and controls the transmitter rudder function. It is spring-centered. The pedals are further pivoted at their centers and operate like the accelerator pedal in a car. They control the transmitter throttle-function. Airplane aileron, elevator, flap and landing gear movements are operated by the right-hand control stick and switches on the Jeti DS-24 transmitter held in Pablo's lap. See the pictures for a better description. The Taranis transmitter on

Hemet Jet Rally....

the foot-pedal unit only broadcasts left-stick commands to the Jeti DS-24 transmitter. The DS-24 broadcasts all commands to, and receives fuel consumption telemetry from, the airplane.



Pablo has been flying jets with this foot-pedal unit for more than a year and he has grown quite confident with it. The models he flies are the BVM Bandit, the CARF Ultra-Flash and the Pacific RC Jets T-1 Mini.

During my interview with him, Pablo's appreciation for the help and accommodation that so many others have given him was apparent. One of his goals is to give back that same help to others, as he is best able. At the jet rally I noted that Pablo was giving some dual-control flight time to another pilot using Pablo's T-1 jet model. Favors like that are simply priceless.

--- Ed

Hemet Jet Rally...



Howard Hibbler (center) visits with Dan Metz and Rich Wilabee during the Jet Rally. Howard is a Riverside County Deputy Sheriff and an active RC modeler. He's a member of the Hemet Model Masters.

One of the benefits of attending and participating in regional modeling events is the reacquaintance with friends and associates we haven't seen in awhile. At the Jet Rally was Howard Hibbler, who had been assigned to cover our Jet Jam events in 2015 and 2016. We had obtained an exemption from the area-wide Temporary Flight Restriction that was associated with Presidential visits during both years. Howard remembered the Secret Service agents at our model field, their bomb-sniffing dog and the FAA people who monitored us (and had a good time!). Howard is very enthusiastic about RC flying and is a very good ambassador for the hobby. He makes sure everybody he works with knows about RC flying! We invited Howard to attend our next Jet Event in January. Howard is influential...he'll likely get several other pilots to participate also.

It was very good to see and talk with Howard again.

— Ed

The Airspace Around Us.... By George Krueger, Editor



The newly-emerging FAA rules regarding drones and model airplanes, collectively known as Unmanned Aerial Systems (UAS) will require operators to have some knowledge of airspace types and usage rules. The eventual Letter of Agreement we will receive from the FAA will ensure the no-conflict operation of our models and our equipment with that of the existing full-scale airspace users.

So what is the airspace around Jackie Cochran named and what is its use?

Around the world, airspace from ground level to 60,000' has been categorized by usage type by the International Congress of Aviation Organizations (ICAO). FAA designations of USA-governed airspace are in harmony with ICAO rules. Airspace categories and usage rules are to provide separation between aircraft of different types and capabilities flying with different objectives along established routes. They also provide protectively-restricted operations around airports, military facilities, urbanized areas, national parks and other designated areas. They ensure that airplane types, airplane equipment, pilots, communications and ground facilities operating within a category are compatible. These categories and their governing rules evolve with operational experience and, especially recently, changing technology.

The categories of airspace are collectively known as “controlled airspace.” Making it up are categories A thru G. All categories have specific weather minimums (visibility, cloud clearance, ceilings), equipment requirements (radios, radar-identity transponders, precision altimeters, etc.) and communications requirements (with air traffic controllers (ATC), tower operators, other pilots, etc.).

For now it is enough for CVRCC members to know that Jackie Cochran airspace (within which is our club field) is Class E controlled airspace, from ground level to 3000'. The “control” is weather minimums for flight ops, a functioning radar transponder, and communications with regional ATC and other pilots operating in the area (there is no tower at Jackie Cochran). These requirements allow the operation of four instrument landing (and departure) systems at Cochran that permit round-the-clock safe operation in low weather and at night, even with our surrounding (unlighted) mountains. Also the equipment allows Cochran to be an alternate airport for much of the air traffic at Palm Springs International.

Our model operations have never created a conflict with any full-scale operations at Jackie Cochran in our 20-year history. We look forward to a Letter of Agreement that recognizes that fact.

— Beside being your news editor, George is an instrument-rated multi-engine pilot with nearly 2000 hours of private flying experience.

Three Strikes and You're Out – The Accident Chain

An often-observed scenario in full-scale aviation accidents is that the accident or incident was not the result of one single event. It was the culmination of several situations or events occurring in a string. Further, if any one of those events had not occurred, the accident would not have happened. The string of events, decisions and situations leading to the accident is now commonly referred-to as the “accident chain” in investigative reports, and we can be trained to recognize it as it forms.

Be it full-scale or model-scale, when we operate complex equipment in ways that depend on skill and judgement, we employ a process of preparations, decisions and procedures which, if not done properly, can lead to accidents and outright disasters.

We can all think of instances where we've had a sense of foreboding, where things were not going well. In our RC flying, maybe we left some needed parts at home, discovered a battery not charged, or found a loose or cracked structural joint at the field. Frustrated, we apply work-arounds, but they are annoying and take time, and the morning is half-gone already. Finally, we get to the flight line, make a hurried controls check, and take off into a stiff breeze that has come up from the north. In the air we discover that the airplane is somewhat out of trim. In the process of fighting that, we let the airplane fly further south than we intended, pushed by the wind. It's now borderline out of sight. Our turn to base leg is late and too shallow and the airplane disappears from view. We cut power, and the plane descends somewhere into the vineyards to the south, maybe to be found again, maybe not.

Is this accident the result of the single incident of a late turn to base leg? No, clearly not. It is the result of the chain of events that started before we ever left home. And the chain of succeeding events that added to frustration and delay, then caused us to mis-judge the wind and handle the airplane poorly.

Some experienced RC'ers have come to recognize an Accident Chain forming. They employ a “3 Strikes and You're Out” philosophy. When that 3rd thing goes wrong, whatever it is, that's the time to sit down and Not Fly. Or, if already flying, Land Now because it's time to break the Accident Chain.

A sense of the Accident Chain is one of the Attributes of a Good RC Pilot. Employ your own “Three Strikes and You're Out” rule! It can save your airplane and make everybody safer.

— Ed

Coachella Valley Radio Control Club

Lake Hemet Flying, Most Thursday Mornings



Personal Safety and Common Sense



Best to not let an urgent situations happen in the first place. And prudent to be prepared for it if it does. And perhaps life-saving to handle it correctly when it does!.

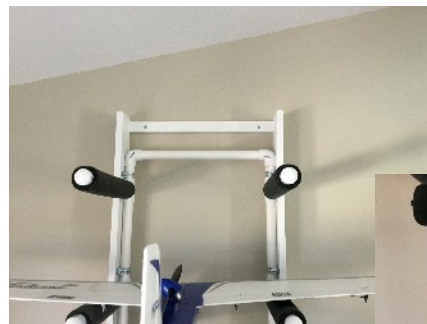
Here are some helpful points from our senior members who've "been thru the mill" on this.

- Always have a first-aid kit, ample water and a charged cell phone with you. A snake bite kit is also recommended.
- Always wear suitable shoes, outerwear, hat and sunscreen. Skip the flip-flops.
- If alone at the field, close the entry gate behind you. Don't lock it, but leave it looking like it is (first responders will need to get in). An apparently-locked gate will discourage anyone who doesn't belong at our field, and we have had some of those.
- Note our field address: 89452 54th Ave, Thermal. Give to 911 operators.
- Call 911 first, deal with your emergency as they are on their way to you..
- If you sense problems with your model in flight, call out early. Get extra eyes on it. Have your spotter help you with it. Hopefully you've arranged your transmitter switches in the standard way so someone else can take control if need be.
- Make a mental note of landmarks where a crash or flyaway occurs. Your helper should do it too. This will target your search area to something reasonable.
- Put some high-visibility color on your model, top and bottom.. Everything disappears against the desert floor. Your super-scale color scheme won't help you find your model.
- Do not trek out on the desert alone. Announce your plan. And take your hat, cell phone, water and snake bite kit. Check in frequently. Do not expend yourself physically.
- Do not drive a vehicle out on the desert floor, even 4-wheel drive. The surface crust will not support a vehicle. A commercial winch retrieval will cost you several hundred dollars (some of us have paid it).
- Apply caution and common sense. A model airplane is not worth your life.

Aircraft Storage



Our member Tom Freeborn created a novel set of model airplane storage racks from 3/4" PVC pipe and 1x4" wood stiffeners. The photos are self explanatory. A pipe cutter makes clean, precise cuts in the pipe. Parts are press-fitted together, no glue. The 1x4" wood stiffeners add rigidity, attach with clamps. Stabilize against the wall with two small brackets. Pipe cushions are segments of foam pipe insulation. Be sure the top shelf is within your reach. Modify to fit your own situation. Thanks Tom!



Coachella Valley Radio Control Club

Safety and Training: Safety Rules

An AMA Chartered Club requirement is that club safety rules be periodically reviewed, and at least once annually. Here they are. **Read them!**

CVRC CLUB SAFETY RULES

1. A SPOTTER MUST be used
2. You must SCREAM OUT A WARNING LIKE "HEADS UP" if your plane is out of control.
3. AMA rules always apply
4. Always give way to full size aircraft. They have the right of way.
5. It is STRONGLY recommended that you are not the only one at the field for your safety.
6. Any flying that creates a hazard to other pilots or spectators is not allowed.
7. Range test all your aircraft prior to flying and double check the radio and control surfaces are set up the correct way.
8. When starting planes, they MUST be restrained in some manner. If on the tables use the wing hold-backs at the ends of the tables and/or make sure someone has a firm grip on the plane. Make use of the starting tables that are available to the North or South of the pit area if you feel it would be safer in your situation.
9. Carry your plane to and from the pit area to the flight line if the engine is running. Larger aircraft must be restrained by the tail while moving to and from the flight line. On return no taxiing past the pilot tations or the yellow lines on the taxi ways. It is suggested you kill your engine at that point. If your engine is still running hold the airplane by the tail and physically move it to where you plan to shut it down.
10. Traffic direction will be determined by the windsock. Takeoffs and landings are into the wind.
11. Pilots and spotters must be in the pilot box when flying.
12. Always check that the runway is clear and announce in a clear loud voice when taking off and landing.
13. Dead stick landings take precedence over takeoffs. If dead stick yell out to let other pilots know you need the runway.
14. A person or persons on the runway suspends all traffic except a dead stick landing. Call out loud and clear when entering the runway and when the runway is clear.
15. Helicopter and Quad flights are allowed on the Heli Pad area only, unless being flown for demonstration.
16. If other pilots are flying no hovering over the runway and keep your aerobatics for the ends of the runway.
17. Gliders should try to stay out of the Northwest Sky.
18. First Person View (FPV) is only allowed with a spotter. The aircraft must remain in visible view. FAA rules apply, as we are on Federal land.
19. If you are going to do a Maiden Flight or you feel you need to do some testing with no other planes in the air, announce your intentions. All pilots are required to stand down for 5 or 10 minutes while you do your test flight.
20. It is suggested that you set up your transmitter the same as those who you will be asking for help.
21. Electric planes should have a switch set up for throttle cut.
22. If you are not qualified to be a spotter who can take control of the airplane at least be ready to yell out if there is a problem.
23. Alcohol is forbidden, and no smoking in the pit area.
24. Children are not permitted beyond the spectator area unless under direct supervision of an adult or flight instructor.
25. Every member is a Safety Officer and has the right to ground an unsafe airplane or member who is flying in an unsafe manner. This action will be reported to a Board Member.
26. When in doubt of any rule, please ask!

Coachella Valley Radio Control Club

RiseUp Hobbytown, Our Local Hobby Shop

Erin and Rob Thomas spend much time, effort and money supporting our flying events and activities. Rob has almost single-handedly taken over all training. And he is the constant source of information for us all. They deserve our business in return. They stock many of the parts we need or can get them faster than we can. Some of our regular flyers have never been seen in this shop. Without our business the shop won't exist, and we will have lost an important resource. Please make them your first stop for hobby needs!

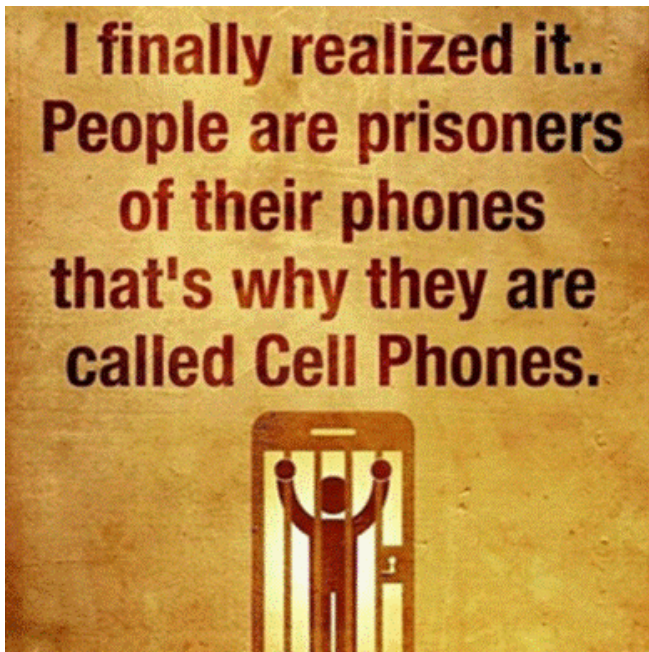


77583 El Duna Ct. Suite H, Palm Desert, CA

Directions: Hwy 10, N on Washington St., L at stoplight for Las Montanas, follow to end into parking lot for Desert Polymer and RiseUp Hobby.



To Leave You With a Smile....



There are times when my greatest accomplishment is just keeping my mouth shut.