

Coachella Valley Radio Control Club

PROPWASH

Newsletter

News and Info for Members and Friends



Photo: George Krueger

Dan Metz' Beriev 103 Takes Off From Lake Hemet

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- **Desert Recreational District Learning Camps**
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August 2018

Airplane on the Cover.....



The Beriev BE-103 was designed by the Beriev Design Bureau in Russia and is manufactured in Russia by Komsomolsk Aircraft Production Assoc. (KnAAPO). It is a twin-engine amphibian using Continental 211 hp engines and Hartzel 3-blade propellers. It is FAA-certified (2003) and also certified in Russia, China, European Union and Brazil. It has a retractable tricycle landing gear but is intended for remote northern operations where rivers, lakes and streams provide most of the access. The blended-wing design utilizes large wing-root fairings that act as sponsons. The horizontal tail is a fully-pivoted flying-tail design.

The model was formerly owned by the Palm Springs Air Museum and used for display. It has been replaced by a very well detailed large Ercoupe model which can be seen in the Science Center.

Current owner Dan Metz has made the BE-103 model flight-worthy with twin-motor electric power and fully-functional controls, including the pivoted all-flying horizontal tail. Power is two 6-cell lithium-polymer batteries, each driving a 100-amp electronic speed control and Scorpion high-torque motor and 3-blade prop. No water-rudder is used; steering is via differential power on the motors. Model weight is 35 lbs. The in-flight and on-water handling characteristics are very good. The model is beautiful in the air. Watch for my new video to be posted.

— Ed.

Club General Info

This newsletter 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: 120 Members

Annual Dues \$150.00

AMA Membership: Required (or Canadian MAC)

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, company or individual that is mentioned, featured, depicted or described in Propwash.

All photos in Propwash are by the Editor unless noted with the photographer's name on the photo.

Coachella Valley Radio Control Club

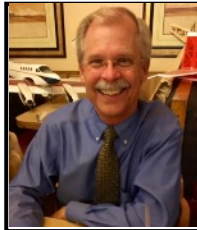
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Airfield and Facility



Runway 865' x 70', Fine-Textured Asphalt

Concrete Apron Areas

Ten Shade Covers

Shaded Spectator Area



Land Owner: US Government
Lease: Desert Recreation District
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.

President's Message



Please be thankful for what we have. Why, you ask?

We just learned that The Gilman Springs club shut down operations as of July 31st. They now have only 17 members and their rent had just been raised to 1000 dollars a month.

We learned that the Palomar club has lost their flying site to a college campus; they are now month to month.

The Kingman AZ. club has broken into 3 different factions. At one time two different clubs had their different names, complete with signage on the same property. It makes one shake your head at those interpersonal politics. Now I know why they stopped hosting their Jet Event.

We continue to get requests to host more and more new events. I have received calls to host another Jet Event for the Fall. I was called about hosting the Scale Masters National Championships in 2019. I also was called about hosting a regional Auction for area clubs to include Az. All of which have been given a firm "no." It's all too much, and not fair to lose more weekends to additional events.

That said, what we *are* considering is a *replacement* for one of our regular events. A desirable candidate is a Scale Qualifier Event, in place of IMAC. This is a lower-altitude event that involves no threat to full-scale airspace. The models are superb and would be wonderful for our club members to see. It's an exciting prospect and we're beginning to work on it now, probably for just after Thanksgiving. It will generate a profit for the club. So get your eyeballs and your cameras ready to see some world-class high-fidelity scale models, both on static display and in majestic flight! Qualifiers are AMA-sanctioned events and successful participants become eligible to go on to the Championship Scale Event later in the season.

In this issue you will see a photo synopsis of our runway resealing project. This necessary expenditure will prolong the life of our runway by at least 5 years, or more. In fact now that this major work has been completed we should only have to do a Class 1 seal next time.

President's Message, Cont.

We have just completed the Desert Rec District outreach programs, this has really placed us in very good standing with them for their promised replacement of our shade cloths. They have promised to include this line item in their budget. Thank you DRD!

As you know the AMA continues to fight for our right to fly model planes. I watched a subcommittee meeting on YouTube this week. During that video the very powerful Amazon and Google people were trying to convince the legislature that they, and they alone had the right to class G airspace. Class G is that layer of national airspace up to 400 feet altitude. The reason I mention this is for all of you to be ready to write to your representatives if you see a notice from the AMA or from your board. On one hand the government is trying to stimulate STEM, Science, Technology, Engineering and Math. On the other hand are the commercial drone operators who want that same airspace for their use. Lets hope we are governed by level headed people and that they understand our rights to fly models. After all, astronauts Neal Armstrong and Buzz Aldrin were modelers. Burt Rutan was a modeler. And so were numerous other notable people in aviation.

Let me conclude with a sincere thank you to those members who have make generous cash contributions to the club this year. These members wish to remain anonymous but their contributions are certainly visible: they've totaled several thousand dollars. We stand in appreciation of the pay-it-forward generosity of these members.

Fly safely, use a spotter/be a spotter, and have fun!

Dan

Thank You Notes

— Ed.

Special thanks to these people for their expertise, time, effort and expense in support of the club. Please forgive me if I have overlooked anyone:

Dan Metz — For endless hours at the field during the runway work, spread over many days and an irregular schedule. And for the drone photography and videos provided to the asphalt contractor in exchange for his discounted price. March and April 2018.

Rob Thomas — For supplying the model airplanes, gliders and model rockets we used in the Summer Camp project with the kids from the Desert Recreational District and also the Air Museum Family Day. And also for Rob's help at the field with new-pilot training and answering the endless equipment questions from all of us.

Dan Metz, Rich Wilabee, Joe Scuro, Scott Young, Courtney Young and George Krueger— For their help with the Desert Recreational District Summer Camps. This involved computer/simulator/video transport and setups, educational talks, airplane and rocket assembly, airplane and rocket flying, much coordination and many hours of donated time. July 2nd, July 23rd, July 26th.

Joe Scuro, Bob Kelly, Rich Wilabee, Ron Leader, Doug Dean and George Krueger— For their help at the Air Museum Family Day July 7th.

Alan Williamson, Rob Thomas, Dan Metz, Joe Scuro, and George Krueger - For organizing, setting up and manning our display booth at the Jackie Cochran Airshow May 5th.

Rick Bennett - For his article on P-factor, this issue.

Jim Burk, Murray Ross, George Muir, Dan Metz, George Krueger - For photographs, videos and editing. Numerous examples on our website and newsletters.

Rich Wilabee - For endless hours as Webmaster.

Bob Kelly - For his service to the club as Treasurer, recently retired.
George Krueger elected Treasurer 7/31/2018.

Financial Donors - For significant monetary gifts to the club. These people wish to remain anonymous but their gifts are very visible and appreciated.

Helpful Members - For your help at work parties, cleanup days, events and other occasions. Thanks for your service!

Runway Resurfacing

This extensive project was completed in stages in March and April by a contractor from Los Angeles. A substantial discount was negotiated by providing drone-photography to the contractor, for him to use in promoting his business. Club president Dan Metz piloted his personal drone for this work.

The photos show the various steps in the project. Weather and equipment problems both caused delays, but a fine result was achieved.

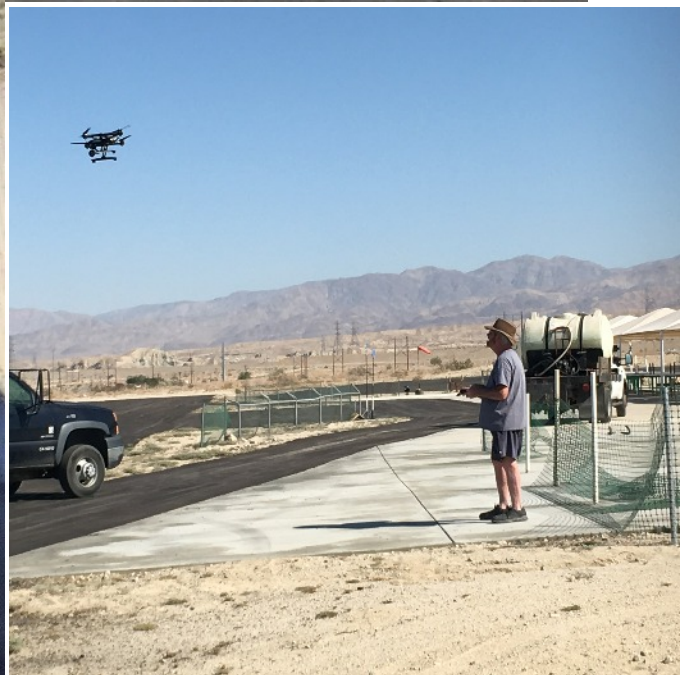
The photos are by Dan Metz and George Krueger.



Runway Resurfacing, Cont.



Runway Resurfacing, Cont.



Jackie Cochran Airshow



Photo: Desert Sun

CVRC Club and RiseUp Hobbytown shared the cost of one booth at this year's airshow on May 5th. The booth had about 50 visitors. Hobbytown sold around 70 raffle tickets. There were 30+ inquiries about RC planes, 20+ about RC cars. 20+ people wanted to know where we fly. At least 10 people already knew of our club. About 60 rack cards were given out. Overall attendance at the airshow was modest since it was the same weekend as the annual Chino airshow. See the Thank You notes for our Club participants.



Coachella Valley Radio Control Club



CVRC Club members are fortunate in many ways; one of them is being able to fly at Lake Hemet every day for the nominal price of an annual pass. The lake and campground are at 4000' and offer a pleasant reprieve from the summer heat. The lake operators welcome RC flying at Campground 7 (the Day Use camp) and are helpful if problems arise. Restrooms are available. A store at the lake entrance sells ice, beverages and snack-food.

Several club members fly weekly at the lake, usually Thursday mornings. Breezes are typically light between 7am - 10:30 am. Lunch is good at the Paradise Cafe along Hwy 74. Two gas stations are available at nearby Anza.

Come and join in the fun and variety of off-water flying! Lake fees are \$25/carload/day or \$125 for a 12-month pass. Club members often going are Dan Metz, Rich Wilabee, George Smith, Doug Dean, Murray Ross, Rob Thomas and George Krueger. See videos of fun at the lake on our website. Some selected photos are included below:



Lake Hemet Flying, Cont.



Air Museum Family Day



The Club sponsored a Family Day at the Palm Springs Air Museum on July 7th. Attendance was light, to be expected with so many residents away during the summer. But those who attended had a good time and learned something about airplanes. The photos depict some of the fun! We flew the model planes on the apron area in back of the museum. You'll recognize your fellow club members who helped with the event. See the Thank You notes for the names of the Club participants.



Air Museum Family Day, cont.



Coachella Valley Radio Control Club



The Desert Recreation District (from whom we lease our field) and CVRCC partnered together this summer to create two learning camps for applied science. The theme was “learn, build and fly.” The learning was provided by instructions from our club members. Building was of small gliders or rubber-powered model planes, or rockets, assisted by club members. Each child then got to fly the model he built, with club member help. The kids did remarkably well. We hope we gave them an experience they won’t forget, and perhaps some inspiration for their future. Ms. Barbara Adair coordinated for the DRD. See the Thank You notes for the names of the CVRC Club participants.



Desert Rec District-Airplanes

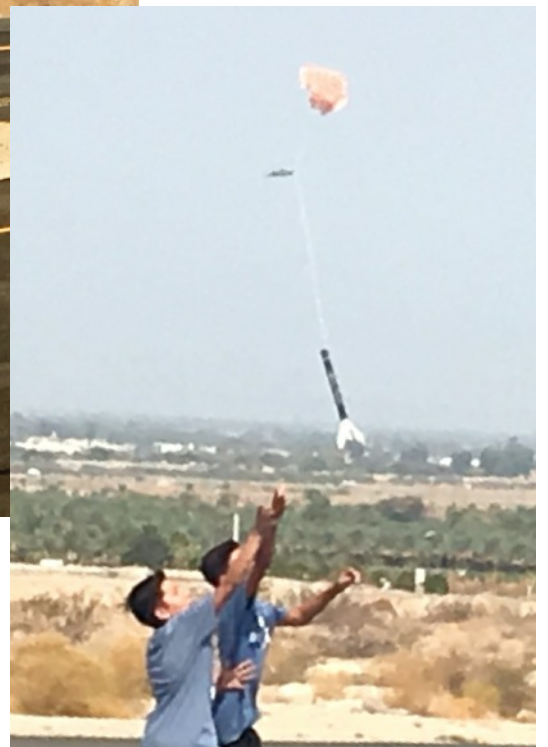


Coachella Valley Radio Control Club

Desert Rec District - Rockets



Coachella Valley Radio Control Club Desert Rec District - Rockets



Torque and P-factor

By Rick Bennett



Fortunately for me, my original flight instructor could explain things in very simple terms. Torque, he said, is the force that is trying to make the propeller stop and to have the airplane spin around the prop shaft at several thousand RPM! Silly as that sounds, I've remembered that for 60 years, and it is a reasonable description of how torque acts on an airplane.

When you are advancing the power on take off, torque is a force that is trying to pull your plane to the left. If you view of your plane from directly above, you will see that the prop shaft and the prop itself are slightly angled to the right. This is partly to compensate for the force of torque. Obviously, that applies to commercially produced planes. If you have a home-built, you are on your own.

P-Factor is a little more complex. All planes fly relative to their current air mass. You can see this clearly on any windy day as we watch airplanes crab into side-moving crosswinds.

When you pitch the nose up on your plane, you are increasing its angle-of-attack relative to its air mass. Take a look at a side profile of a prop and imagine pulling up the nose of the plane. This will increase the angle-of-attack of the prop as it moves ahead. It will also become apparent that the descending blade of the prop is taking a bigger bite of the air than the ascending blade. In other words, as you increase the angle-of-attack of a plane, the right side of the prop is creating more thrust than the left side. Again, this will tend to pull the plane to the left as you rotate on take off.

As the power is being applied early in a take off roll, torque is a force that is pulling the plane to the left. At the point where the plane is rotating (pitching up) to become airborne, P-Factor is a force trying to pull the plane to the left.

In RC flying, these forces are so small that many pilots may not even be aware. Experienced pilots will compensate for torque and P-Factor without thinking about it. If a less-experienced pilot yanks his plane into the air prematurely and into a very high nose-up attitude, P-Factor will be at its maximum. This can result in a flight that looks like a crescent-moon from the runway ending in a crash to the left.

Lots of factors apply to directional control on take off: cross winds, unwanted nose-wheel steering, and the curve of the runway are just a few. Now that you understand the effects of torque and P-Factor, it might be interesting to note in the future how many accidents result from the airplane losing control to the left. Being aware of these factors and being ready to compensate might help you in keeping your own airplane out of the dirt on the left side of the runway!

----- Rick Bennett is a retired Boeing 767 captain and an instructor in full-scale power planes and gliders. The RC airplanes he enjoys most are sailplanes.

Safety and Safekeeping... — Ed.

These notes are largely from my training guide, see our website.

- **An accident can ruin a great flying day.....do not let one happen!**
- Using a spotter prevents accidents. **Use a spotter, be a spotter.** Have him stand beside you if 3 or more airplanes are flying.
- In general, **fly one-mistake-high and well west of the runway.** It will save your model and provide a safety margin for the spectators.
- **Our “dead line” is the west edge of the runway,** except for takeoffs and landings. Don't fly closer.
- Except briefly in turns, **don't allow your airplane to be pointed at people.**
- You most affect everyone else's safety when you are the pilot flying. **A poorly-skilled pilot is a danger. Anything you do to increase your own skills also increases everyone's safety.**
- Random flying won't make you much better. **Striving for precision does increase pilot skills.** Set yourself some attainable goals and PRACTICE. Dead-level straight flight and turns, arrow-straight climbs, perfect-circle loops. **Replace “Sloppy” with “Deliberate.”**
- **Learn to use that rudder.** It's not just for ground steering.
- **Numerous YouTube videos teach elementary precise flying and beginning aerobatics that will raise your skill level.** Watch them, analyze them, practice on your simulator. Then practice at the field, starting 2 mistakes high and oriented somewhat away from the crowd. Get a senior pilot to help you. Make all your flying very deliberate. **I highly recommend the YouTube video “Becoming a Better Pilot...Flying Smooth.”**
- **Ask any of the club senior pilots to demonstrate things for you** and talk you thru new procedures or maneuvers. They don't know what you need unless you ask. Don't be afraid to struggle at first, everyone does that. Accurate flying can exist even at the beginner level. We've seen 12 year-olds do it; you can too!
- **Our club objective is to have fun and learn, in safe ways for the pilots and safekeeping ways for everyone else at the field.**

Coachella Valley Radio Control Club

COACHELLA VALLEY R/C CLUB

THE PLACE TO GO!



Rise Up Hobbytown in Palm Desert is the place to go for equipment, parts, repairs, instruction and service. Please consider them as a first choice for your hobby needs. They are frequent sponsors of our Club events, community actions and charities. We are fortunate to have a viable hobby supplier in our area. Rise Up needs to be commercially successful to keep their doors open. Let's help them do that!

If you're new to the area or to Rise Up Hobbytown, here are info and directions:



77583 El Duna Court, Suite H (next to Desert Polymer Flooring), Palm Desert, CA

Directions: Hwy10, turn North on Washington St., Left at stoplight for Del Webb/Las Montanas Rd., follow street to intersection at Rise Up Hobbytown / Desert Polymer parking lot.



Editor's Memo

By George Krueger



One of my observations about modern-day children is that many of them do not get exposed to how we actually apply the science and math we teach them. Hence a low interest in math and science. Your club took some small steps to rectify that situation this summer. We organized Learn, Build and Fly programs for the Desert Recreational District, one program with small gliders for little kids and another with rockets for the bigger kids. And we did a summer Family Day for parents and kids at the Palm Springs Air Museum. All the programs were successful and fun. All of us who participated got as much out of it as the kids! More programs are upcoming; we encourage you to participate!

Several members have expressed regret that they can't participate in much of the work the club has to do. Various reasons: time, distance, physical abilities, part-time residency, other commitments and so forth. To help move the club forward, several members have made financial gifts instead. Since both manpower and money are necessary for our needs and projects, these financial gifts are appreciated. If you find yourself able to do this, see any club officer. Our club is a 501C(3) operation so your gift may qualify as a tax deduction.

Club meetings resume the last Tuesday in September at Sloan's Restaurant in Indio. The Fall and Winter programs will be on the agenda. Dan's President's Message mentions the Scale Model Qualifier Event which will take the place of IMAC. We will not be adding to the total number of events.

There has been discussion over the summer of FAA-approved model airplane and recreational-drone operations as long as they are governed by FAA-recognized community-based organizations. How to become "FAA-recognized" is still being developed but it appears that certain very-well-organized clubs would qualify. So far, CVRC Club meets all the requirements we know about, including being a 501C(3) operation, a rare thing among model airplane clubs. We will watch these developments closely. You may be requested to write a letter or two if political pressure is needed.

The Idyllwild fire spared everything around Lake Hemet and the road to it, so our retreat from the summer heat is intact. This issue of the newsletter portrays some of the flying fun there. We are fortunate to have a nice mountain lake flying site relatively close by and available all year. Most clubs don't have anything like it. Let's count our blessings!