

# EL TORBELLINO

NEWSLETTER OF SAN DIEGO ORBITEERS FREE FLIGHT CLUB

MAY 2012



## *The Prez's Corner – Don Bartick*

Seems like I just wrote my piece for the ET. Must be having too much fun, for time sure shoots by. In a little over 2 weeks our Dual-clubs FF Bonanza will be underway. Hope many of you in Orbiteers land are planning to attend. I did receive calls as result of the blurb published in the May Model Aviation's contest calendar. We'll have 2 new faces competing this year after their own personal hiatus. Other than that, the arrangements are made. See you there.

I was very pleased to see Free Flight well represented in District X, Larry Tougas's article in the May issue of Model Aviation. Mainly the result of our good friend AVP Roger Willis. He highlighted the 2012 Southwest Regionals. Let's all use this venue to keep Free Flight in front the eyes of potential modelers who are thinking about returning to their modeling roots.

Our monthly contests/time trials are still well participated. I'm seeing new faces enjoying themselves. Is there an insurgence of interest in our sport? Appears so.

This is a wrap for now. See you at the meeting. Bring something for Show & Tell and an A-6 to fly. The entry fee for our monthly indoor contest session after the meeting is now \$2. There's big money to be had, so build an A-6 and come get your share of the bounty.

*Remember; today is the tomorrow you worried about yesterday.*



## **San Diego Orbiteers Monthly Meeting Friday, 13 April 2012**

Seven in attendance tonight, including: Don Bartick, Howard Haupt, Larry Miller, Mark Chomyn, Bob Overcash, John Hutchison, and John Merrill.

Meeting called to order at 7:28 p.m. by President Don Bartick.

Minutes of the last meeting approved as published.

**Treasurer's Report:** approved as published. For update, see elsewhere in the E.T.

**Officer's Report:** None  
**Contest Report:** None

**Old Business:** Don relayed that the plans for the Dual Club Annual contest are coming along, and we are pretty much ready to go. He asked that we just pray for good weather, and a good turn-out.

Also, the "new and improved" porta-potty, as reported in last month's E.T., is holding up nicely.

John Hutchison said that the "Jump Special" at the hotel in Perris will save you \$20.00 if you are staying there for the Scale Staffel contest April 28<sup>th</sup> and 29<sup>th</sup>. That will be the 1<sup>st</sup> of 3 contests for Scale Staffel this year.

John also reported that the use of the big gym at Grossmont College continues to be very popular for indoor flying the first Sunday of every month. Attendance in April was down a little from that of March, but all still had a great time.

**New Business:** None reported.

**Show & Tell:** Larry Miller is building a Martin Mauler for an upcoming scale contest, and hopes to have it done for the end of April contest in Perris. He has built a clever D.T. which features a small torsion spring for the stab, and brought in the bare-bones version to show how it works.

Mark Chomyn passed out plans for a Big Pussycat, which was designed by Dick Baxter.

Meeting was then adjourned at 8:04 p.m. Indoor flying ensued, with four members flying.

Respectfully submitted by John R. Merrill,  
Secretary

## 2012 ORBITEER FLYING SCHEDULE

**May 19/20 Dual Club FF Bonanza, Lost Hills CA**

Rotation Skipped: (Old Timer Rubber Stick "Small")

June 10 - Coupe  
Power, P-20, HLG & CLG

July 4<sup>TH</sup> - Walt Mooney Memorial Scale Contest

July 15 - P-30  
Power, P-20, HLG & CLG

Aug 19 - Old Timer Rubber Stick (Small)  
Power, P-20, HLG & CLG

Aug 25/26 Scale Staffel FAC Contest\* (2<sup>ND</sup> of 3)

Sept 16 - Coupe  
Power, P-20, HLG & CLG

Sept 21-23 US FF Championships, Lost Hills

\* **Non-Club Points Event**  
**Otay Field Weather (619) 661-8297**

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## ORBITEERS YEARLY MEMBERSHIP DUES

Junior - \$10  
Senior - \$15  
Open - \$25  
Family - \$30  
65+ - \$15  
Lifetime - \$250  
Non-Member Newsletter Subscription - \$15

### Submit Dues to Club Treasurer:

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## THE FINE PRINT THE FINE PRINT

El Torbellino is the official newsletter of the San Diego Orbiteers, an Academy of Model Aeronautics (AMA) Charter Club (#1113) and a California not for Profit Corporation. This newsletter is sent monthly to all paid members, selected exchange and magazine editors. Non-Members may subscribe at \$15.00 per year within the U.S.A., offshore price will be adjusted to reflect the postage required. Materials from El Torbellino may be reproduced on an unlimited

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## ORBITEER WEB SITE

[www.SanDiegoOrbiteers.com](http://www.SanDiegoOrbiteers.com)

Webmaster: Bob Beecroft

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## MONEY MATTERS - H.Haupt

April 2012

### Income:

Dues (3)	75.00
Decals (1)	5.00
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	\$ 80.00

### Expenses:

Apr. Newsletter	3.75
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	\$ 3.75

**Current Balance** ..... \$679.58

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## ON THE LIGHTER SIDE - H.Haupt

The flying contingent grew by one this month. Larry Miller took home the 1<sup>ST</sup> place cash this flying session.

### April 13, 2012 Results

1) Larry Miller	82	80	-	162	sec.
2) Don Bartick	73	68	-	141	
3) John Merrill	70	67	-	137	
4) Mark Chomyn	60	63	-	123	

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## April 2012 Club Contest By Larry Miller

Our original date of April 15<sup>th</sup> for P-30 and Power was postponed 1 week to permit our club members to attend and support a Lost Hills contest. As it turned out, the weather before and during the April 15<sup>th</sup> was poor in both Sand Diego and Lost Hills.

Our local weather forecast for our April 22<sup>nd</sup> was promising. However, Sunday morning

began with poor visibility and was cool and misty.

Flying activity was slow to get started even though the drift was light. No one was sure what the weather would be. It turned out to be calm most of the morning with cool and variable breezes starting around 11AM. The lift was good at times but not easy to pick.

John Merrill and Steve Shepersky were two new P-30 competitors. John had a new One Night 28 model that proved to be competitive. He logged 2 maxes which made for a successful and memorable day for John. John is always happy and laughs easily. On Sunday he was all smiles and really happy and pleased with his performance. Congratulations John!

Steve enjoys flying and building all types of models and currently favors P-30 and OT rubber. His P-30 was well trimmed and flew well. He just missed lift on a couple of flights.

Sunday's competition in P-30 was strong and down to the wire as 8 contestants posted 11 maxes out of 24 possible flight attempts. That's 45 % Maxes.

After 8 flyers completed three flights, 2 flyers remained perfect and required a going for a fourth max. John Hutchison and Mark Chomyn each made a max on their 4th flight. A final tie-breaker flight using 500 winds each was agreed upon. When the final 2 models came to rest and the watches stopped, John H. had a 3 sec lead and won the event. It was great flying by John and Mark and made for an exciting finish to our monthly feature event. Don Bartick had a strong finish of 2 maxes to place 3<sup>rd</sup>.

Power had 4 flyers. It was good to see D. Bartick flying gas and keeping the pressure on the Electric Flyers. Gas or Electric – Just come out and fly!



Monthly Club Monthly_April_22_2012							
CD: Larry Miller							
Event: P-30	Design	1	2	3	extra	extra	Total
John Hutchison	Pierat	120	120	120	120	158	638
Mark Chomyn	Hot Box	120	120	120	120	155	635
Don Bartick	Tail High	88	120	120	0	0	328
John Merrill	One Night 28	120	61	120	0	0	301
John O	Pierat	75	120	62	0	0	257
Steve Shepersky		74	66	67	0	0	207
Larry Miller	Own Design	85	110	0	0	0	195
Mike Pykelny	Pirate	52	48	88	0	0	188
	Modified Parts7	120	57	58	0	0	235
Event: Power	Design	1	2	3		Total	Total
Mike Pykelny	Ebox	120	116	83		0	319
J Oldenkamp	JeweBox E36	115	67	120		0	302
Don Bartick	Privy Boy	102	33	135		0	270
L Miller	E-Pearl 280	55	114	86		0	255
SDO Monthly_April_22_2012							



The following taken from: AMA Insider – Bimonthly Newsletter for Club Officers and Leader members

## **TIPS & TRICKS**

### **Unclog your CA Tips**

Those tips that come with your jar of CA clog much too easily, right? To keep them ready to use, get a small plastic bottle with a tight lid and fill it partway with acetone, available from the home center. Make sure that the bottle/container is impervious to the acetone, just to be safe.

Now, when you're done with your building/repair project for the day, drop that tip into the acetone until your next session. Any dried CA will be dissolved by then. When you need to retrieve one, use some needle nose pliers or a dental pick with a hook to extract it from the jar. Drain any leftover acetone from the tip and let it air dry for a few minutes before use. Remember to use a plastic jar to reduce breakage, and follow all the safety warnings on the container of acetone.

After you've built up a supply of them from successive purchases of CA, you can swap them out midway through a building session to keep things moving.

—Wing Busters Model Airplane Club, Massachusetts

### **RapidDry**

Maybe it's just me, but every time I buy CA kicker, the spray nozzles becomes a "stream" nozzle after a few uses. That mystical smelling stuff has a habit of evaporating right through the bottle too.

I have found an easy solution to this problem. My wife uses a fingernail polish dryer called RapidDry. This is in a two-ounce spray bottle. The pump and composition of the bottle work great with kicker. I wouldn't be surprised if the stuff in the bottle works as well as kicker too. All I get are the empties.

—Russ Whitford, [www.slopeflyer.com](http://www.slopeflyer.com)



BY GRAHAM WARWICK

Senior Editor-Technology

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## COMMENTARY

# Super Electric

## Is superconducting electric propulsion practical?

**M**ention superconductivity in the context of aircraft propulsion and the skeptics come out in force. But NASA is convinced this technology—still exotic to aerospace—can reduce the fuel consumption and noise of future aircraft.

The agency believes turboelectric distributed propulsion (TeDP)—gas turbines generating electricity to power many small fans embedded in the airframe—can meet its aggressive goals for a 2035-timeframe airliner, slashing fuel burn 60% from today's Boeing 737s and 777s.

NASA argues cryogenic superconducting components are essential to achieve the efficiencies required to make TeDP viable, but the concept's feasibility may be boosted by a new study suggesting a workable aircraft could be designed around today's room-temperature electrical systems.

Superconducting systems generate far higher magnetic fields than conventional electrical machines, substantially reducing volume and increasing power density. This is essential for aircraft, but means components—generators, motors, inverter/rectifiers and transmission lines—must be cryogenically cooled to minimize losses.

"Superconducting is needed. We have to shrink the size and go after the losses," says Gerald Brown, an engineer at NASA Glenn. "If losses are more than 7% from the engine to the fan, we may be out of business."

For a 45-kw (60,000-hp) TeDP system powering a 300-seat hybrid wing-body airliner, NASA puts losses at 12% for ambient-temperature electrics, reducing to 2.1% with superconductivity. "TeDP at room temperature will not likely save fuel," he says.

But superconducting TeDP is beyond the state of the art. "We have to go beyond today's superconducting motors," which have superconductor DC windings on the rotor only. The power density needed requires cryogenic superconductor AC windings on the stator also.

"Superconducting doesn't like AC," says Brown. To minimize losses, winding filaments must be made smaller. "Most superconducting materials cannot get to the small diameters needed to make a viable machine for aircraft," he says. "But we see one way to go: magnesium diboride seems amenable to making fine filaments suitable for aircraft."

NASA is targeting a five-fold reduction in weight and low AC losses in fully superconducting generators and motors. Advanced Magnet Lab is developing a sizing model and will test a fine-filament stator segment to mea-

sure the losses. "We think there is a path to a fully superconducting machine," says Brown.

While liquid hydrogen can be carried to cool the superconductors, NASA is working with Creare Engineering Services to develop a flight-weight cryocooler weighing 5 lb./hp-input, down from today's 30 lb./hp. "Cryocoolers exist on spacecraft, but only at a few watts and we need several kilowatts," he says, adding: "We see a way to reach the specific power required."

To minimize distribution losses, AC rectifiers, DC transmission lines and DC inverters must also be cooled. Room-temperature inverters are around 97% efficient, but NASA is working with Mtech Laboratories on cryogenic inverters with 99.5% efficiency including cryocooler.

NASA is not alone. "There are things driving superconductivity outside aerospace," says Brown. "Utilities are deploying superconducting transmission lines" and the technology could reduce wind-turbine size and power navy warships.

Small advanced-design house ESAero, meanwhile, has produced a 150-seat airliner concept for NASA with liquid hydrogen-cooled superconducting TeDP—fans embedded in an inboard "split wing" driven by turbo-generators mounted mid-span. Now it has reworked the design (pictured) around room-temperature electrics.

"Our main interest was, could we even get the design to close, and the answer is yes," says ESAero President Andrew Gibson. Performance is about equal to today's 737-700, far short of NASA's goals, but the study suggests TeDP could be made to work without pushing the envelope to extremes on superconductivity.

Past studies of turboelectric power concluded it would take motor power densities higher than 10 hp/lb. to make a design work. Current technology is around 4-5 hp/lb. "Technology is not even close to 10 hp/lb., but it appears we do not need that kind of power to close an aircraft," says Ben Schiltgen, ESAero's propulsion system architect. ☛

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## WHAT'S HAPPENING - MAY 2012

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May 6 - Indoor Fun Fly, Grossmont College, 7:00 – 11:30 am.

May 11 - Orbiteer Monthly Meeting at Scripps Ranch Community Center,  
11885 Cypress Canyon Road, Meeting starts at 7:00 pm.  
Indoor fun fly featuring A-6 one design.

May 19/20 **DUAL-CLUBS FREE FLIGHT BONANZA**, Lost Hills CA, See attached flyer.  
San Diego Orbiteers and Fresno Gas Modelers Annual Contest

June 3 - Indoor Fun Fly, Grossmont College, 7:00 am.

June 8 - **No Meeting in June**

June 10 - Orbiteer Outdoor Monthly, Otay Mesa, 8:00 am.