EL TORBELLINO

NEWSLETTER OF SAN DIEGO ORBITEERS FREE FLIGHT CLUB

JULY 2015

The Prez's Corner *– Don Bartick*

Our first monthly to be held at the SCAMP's Perris field was held June 28th. The field is very nice. The weather was exceptionally nice. The downside was the participation by the Orbiteers. There are members that would general participate but can't now because of the field location. Too far to drive. The upside to the field is that we attract local flyers and those that are in the LA area.

Must say that the 4th of July Walt Mooney event went off well. The Scale Staffel put on a very well run contest. The weather couldn't have been better. The only down side was the attendance. Although a couple of folks that normally would be there were either out of town or didn't have anything to fly in the contest.

Not much activity is on going with finding a new field in the San Diego area. I believe we're still getting over the shock of losing the old site. Should someone have some ideas for a new site, please contact a Board member.

The latest issue of the National Free Flight Digest has great coverage of the Dual-club FF Bonanza with neat pictures taking by Arline Bartick. The issue also has coverage of the San Valeers contest with pictures taking by Arline. She has a real knack of getting action shots. Last but not least is the addition of the Scale Staffel newsletters. The world got a real taste of San Diego free flight activity this time. Good for us.

That's a wrap for now.

Remember: "Destiny is no matter of chance. It is a matter of choice"
-William Jennings Bryan

SUPPLEMENTAL BOARD MINUTES
June 3, 2015 Board Meeting

The board vote, via email polling, is in favor of the Standard Class Catapult size for Indoor competition.

Rules:
STANDARD CLASS: maximum 12 inch wing span, projected chord not to exceed (NTE) 3 inches and the stab area NTE 50% of the projected wing area.

DOMESTIC TISSUE SUPPLIER - D.Scigliano

Here is a link to all the domestic tissue you will ever need:
www.papermart.com.

(ED – From the grey bar near the top of the screen pick "PAPER" and click on "Tissue Paper" from the drop down list. Lots of colors to choose from, go crazy on your next fun-fly model! Also a great site for other materials of use, such as various kinds of tape, or glass bottles and jars.)

Frank Allen's building table

BOARD OF TRUSTEES

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Newsletter Editor / Membership Cordinator
Howard Haupt ……..(858) 272-5656
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ORBITEERS MEMBERSHIP DUES

Annual Membership - $20
Lifetime Membership - $250
Non-Member Newsletter Subscription - $15
Junior Members 16 years old or younger - Free

Submit Dues to Club Treasurer:
Howard Haupt
3860 Ecochee Avenue
San Diego, CA 92117-4622

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 basis by other publications, but proper credit is requested.

ORBITEER WEB SITE

www.SanDiegoOrbiteers.com

Webmaster: Kathy McLaughlin

D.Bartick power launch

JUNE 28, 2015 OUTDOOR MONTHLY

COUPE

1. Mike Pykelny 360
2. John Hutchison 353
*. Ted Firsten 281
3. Mark Chomyn 210
4. Don Bartick DNF

Power Combined

*. Clint Brooks 360
1. Mike Pykelny 304
2. Don Bartick 253
3. Larry Miller 144

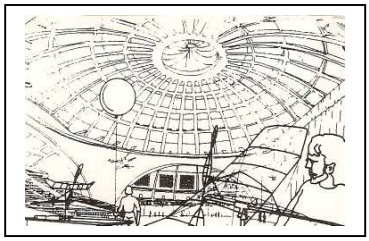
GLIDER

*. Stan Buddenbohm 248
1. Don Bartick 73
2. Mark Chomyn 65

* - Non-Orbiteer Members

Places are shown for Orbiteers to determine points.
However, non-Orbiteers were paid award money based on actual placing.

Results supplied by M.Chomyn



2015 INDOOR FLYING SCHEDULE

Aug 2 - CANCELLED

Sept 6 - Catapult Glider, Embryo*

Oct 4 - A-6, Phantom Flash*

Nov 1 - Penny Plane, No-Cal*

Dec 6 - Catapult Glider, Embryo*

***Non-ORBITEER Points Event**

2015 ORBITEER FLYING SCHEDULE

July 26 - **P-30**
Power & Glider

Aug 16 - **Old Time Nostalgia Rubber**
Power & Glider
(Aug. 30TH rain date)

Aug 22/23 Scale Staffel FAC Scale Contest*
(2 of 3)

Sept 21 - **Coupe**
Power & Glider
(No rain date)

Sept US FF Championships, Lost Hills*

Oct 18 - **P-30**
Power & Glider
(Oct. 25TH rain date)

Oct 21/25 WESTFAC V, Buckeye Az.*
Scale Staffel FAC Scale Contest*
(3 of 3)

Oct ??/?? SW FAI Champs, Boulder City, NV*

Nov 16 - **Old Time Nostalgia Rubber**
Power & Glider
(No rain date)

Dec 13 - Coupe
Power & Glider
(No rain date)

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

P-47 TEST BUILD - D.Scigliano

Here is a prototype Laser Cut Guillows P-47 I built for rubber power. Guillows is laser cutting all their old kits and using better quality balsa than what we grew up with.

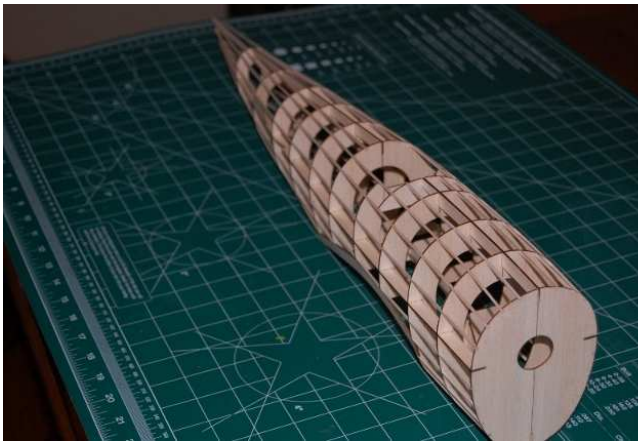
The first part is to re-draw the parts and have testers build the kit to make sure the parts all fit. Once that is complete Guillows is re-drawing all the new plans in CAD to correspond with the new accurate parts. The next series that should be coming to a hobby store near you will be the WWII 500 series.

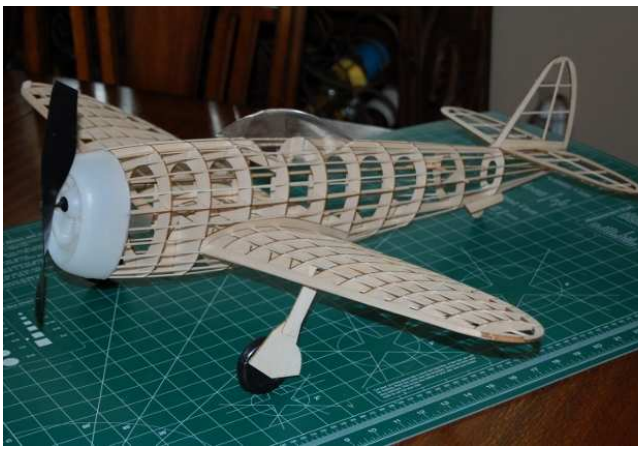
The P-47 was built per the plans with minor modifications such a removable nose block and linceased dihedral. I was not able to lighten the build since Guillows wanted to see the bones and that everything was an accurate fit. The laser cut wood was spot on and everything fit great. The weight of the sheets of balsa were around 7-8#, light enough to make this bird fly. I was able to build the bulk of the construction in a couple of days using white wood glue.

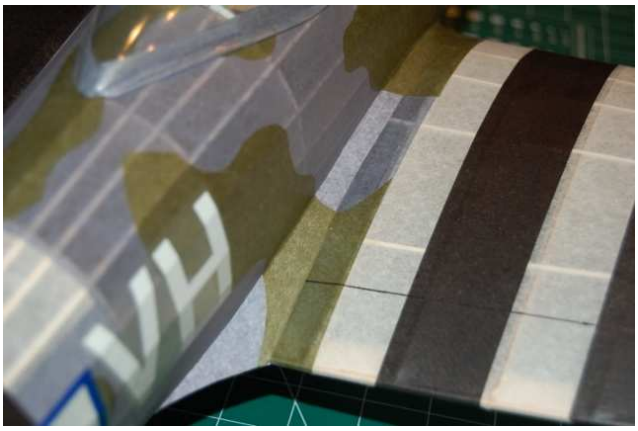
The landing gear is removable and so is the nose block. I did not use paint on this build, I use colored domestic tissue covering in wet large sections. I first laid down white tissue trim, then the grey tissue, followed by green tissue. The green tissue was glued down with a glue stick, and then shrunk nice and tight. Also used black tissue for the invasion stripes and cockpit cowl. After the covering was complete I coated the tissue with 2 coats of Aerogloss dope. The plastic cowl was covered with two pieces of domestic red tissue and glued to the front of the fuselage.

Final weight of the build is 80-90 grams, should be good flyer with rubber but will require nose weight. As soon as we find a new flying field I would like to get her trimmed and pictures taken for Guillows.

Pictures follow:

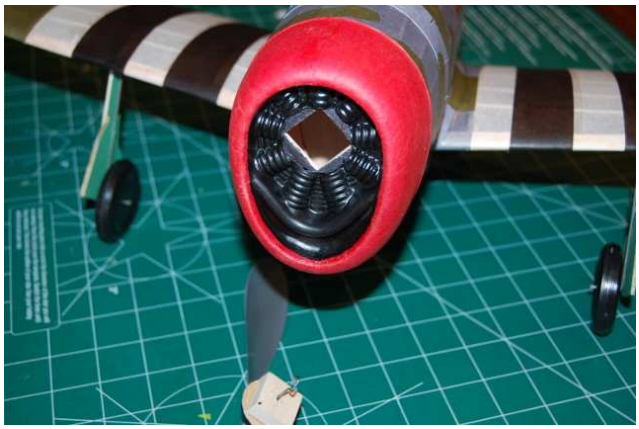




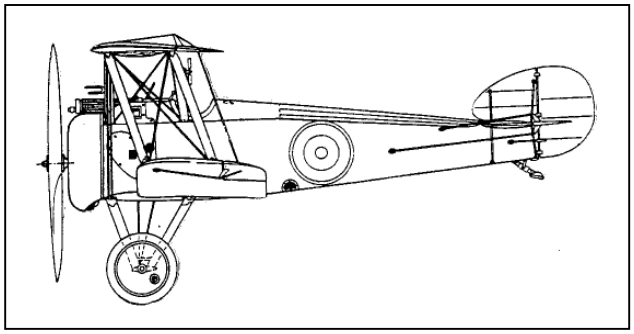


(P-47 Pictures Continued Next Page)

(P-47 Pictures from previous page)



(July 4TH Pictures Continued from next page)



JULY 4TH WALT MOONEY SCALE CONTEST

Contest held at SCAMPS field in Perris, CA. Photos by Arline Bartick.

More pictures for the July 4TH Scale Contest on the previous page.

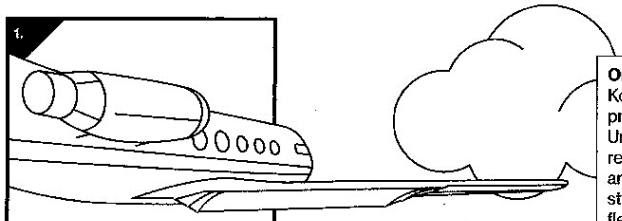
Innovation

Wing Flexors

Form and function
The company makes a wing flap with an internal skeleton that twists its shape in response to changes in flying conditions, increasing an airplane's efficiency.

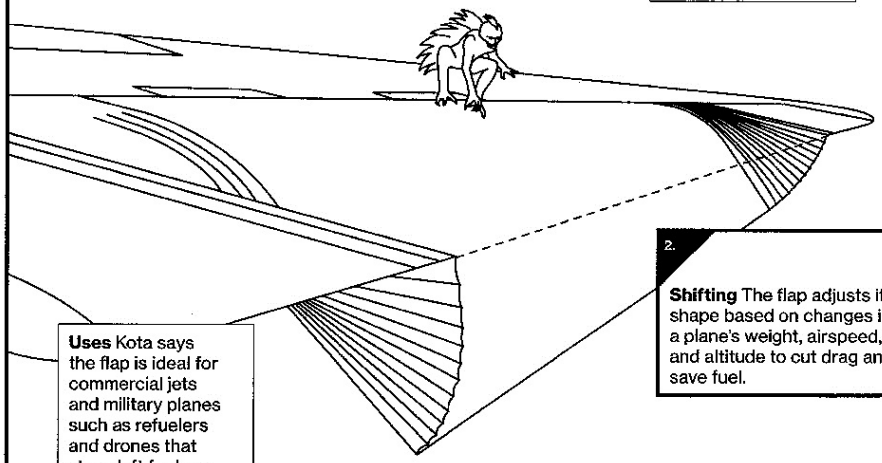
Innovator Sridhar Kota
Age 55
Founder of FlexSys, a 12-person aerospace and automotive design firm in Ann Arbor, Mich.

1.



Molding Unlike conventional hinged flaps, FlexSys's form a seamless edge with the wing, eliminating a major source of aircraft noise.

Origins In 1995, Kota, an engineering professor at the University of Michigan, read a magazine article about the strength of nature's flexible shapes, such as trees that bend in the wind. He sketched a design for a flexible wing at his dining table, then founded FlexSys in 2001 with backing from the U.S. Air Force.



2.

Shifting The flap adjusts its shape based on changes in a plane's weight, airspeed, and altitude to cut drag and save fuel.

Uses Kota says the flap is ideal for commercial jets and military planes such as refuelers and drones that stay aloft for long periods. Retrofitting an existing plane might cost less than $1 million.

Savings FlexSys says its flap cuts fuel use by 4 percent to 12 percent. That's not insignificant: This year the International Air Transport Association estimates that the industry's fuel costs will total $212 billion.

Funding The Air Force and NASA have put more than $40 million into FlexSys's research contracts and flight testing.

Next Steps
On Nov. 6, FlexSys's backers began testing its flap on a Gulfstream III business jet at Edwards Air Force Base in Southern California. Commercial flyers may see the flap on planes in 6 to 10 years, says Fay Collier, manager of NASA's Environmentally Responsible Aviation Project. Kota says he's in talks with aircraft makers to incorporate the design. —*Peter Robison*

THERMALS

By Mike Jester

Launching your model airplane into a thermal constitutes the holy grail of our hobby in terms of competitive success. Skill in consistently achieving this kind of launching is just as important to winning times as optimum trim, construction, rubber motor and winding. Even an airplane that can only fly for one minute in "dead air" can beat the best airplane if the flier of the former picks the "right air" or his airplane flies into it due to pure luck. Of course, I don't mean to discount the importance of good design, minimum weight, sufficient airframe strength, proper CG, correct decalage, optimum thrust settings, etc.

My first exposure to competitive outdoor rubber powered free flight occurred about ten years ago. John Hutchison invited me to come down to the club's former Otay Mesa flying field and observe one of the club's monthly competitions. I believe the featured event that day was P - 30. Two things struck me during my visit. One was the immense size of the 10 gram rubber motors compared to the 2 gram rubber motors of the indoor Science Olympiad Wright Stuff models I had been working with. The second was the waving of cattails by various fliers to detect thermals. It seemed intuitive to me that ambient hot air should rise sporadically and that your airplane would fly higher and longer if you could launch it into a thermal.

Over the years I have heard constant chatter at contests about catching good air or catching bad air. Perhaps I have fallen into the trap of attributing many of my poor flights to the alleged location of my airplane on the "back side of a thermal."

It can be difficult to detect a thermal before launching, but fairly easy to observe its effect if your airplane flies into one after launching. This may occur during the climb phase, the cruise phase and/or the glide phase. You may see a pronounced bump in the altitude of your airplane during any of these phases. In the case of a so-called "boomer" you will see your airplane continue to climb for a significant duration, even after the motor run has been completed. In such a case, without a reliable DT, you run a real risk of losing your airplane after if flies OOS.

Before addressing methods of detecting a thermal, I will describe some of its physical attributes in layman's terms. According to a detailed scientific analysis in an article recently published in Free Flight Quarterly, a thermal consists of a large column of heated air that can rise hundreds or even thousands of feet. It is fed by a number of small columns of heated air that are arranged like the roots of a tree. The large column of heated air usually doesn't form until about 150 - 300 feet in altitude. The roots may only be 50 - 100 feet in diameter at ground level. The air is heated a degree or two above the surrounding air by the ground as it is warmed by the sun. If there is sufficient humidity, the water vapor in the air can be heated by the sun and this can also contribute to the formation of a thermal. Outside the roots of the thermal a ring of downdraft is formed, because air is drawn from this region into the roots. This is the dreaded back side of the thermal or "bad air" that can suck your airplane downwardly and significantly shorten its flight. You can inadvertently launch your airplane into a downdraft or it can fly into one.

Early in the morning there is cooler air near the ground forming an inversion layer. The sun has not yet heated the ground which has cooled overnight. As the sun begins to heat the ground the adjacent air is gradually heated. Moisture and/or dew will begin to evaporate contributing to the formation of thermals as the morning progresses. A light breeze will not impair the formation of thermals and indeed will aid in their detection. Once the breeze begins to build to a significant velocity, the formation of thermals can be impaired. The roots bend downwind and their ends are lifted off the ground. Strong winds will destroy thermals completely due to the fact that the turbulence causes the hot and cold air to mix. In my experience, as noon approaches and the wind speed builds to over 8 - 10 mph your chances of gaining the benefit of a thermal are significantly reduced, if not completely eliminated.

Detecting the presence of a thermal before launching is a tricky business. The three indicators are: 1) a small rise in temperature: 2) a change in wind strength; and 3) a change in wind direction. Some fliers look to see if the seedlings from cattails rise in the air. They are very light and may rise even without a thermal. How do you rub a cattail and hold a fully wound F1G? Supposedly some fliers use bubble machines, but I have never seen them used at any contest. Some fliers look for a momentary rise in a long Mylar plastic streamer on end of a pole erected at the field. Others try to sense a momentary shift in the breeze on their face or by observing a wind vane.

Serious competitors use a sensitive electronic thermometer with a digital display that can detect and indicate a minute change in air temperature. They also use an electronic air speed detector that can detect and digitally display a sudden change in wind velocity. They will typically observe a Mylar streamer or wind vane to detect a shift in wind direction. The key thing to look for is a drop in wind strength as air is drawn against the prevailing wind into a thermal approaching from upwind. This golden moment will be confirmed by a momentary rapid increase in temperature as the hotter air in the thermal passes over the temperature sensor.

I have seen world record holder Stan Buddenbohm use a small hand held air speed and air temperature detector. He regularly gets maxes on all his CLG contest flights, which is not possible without catching good air. I ordered a COZYSWAN GM816 "digital anemometer air wind speed scale gauge meter thermometer" from Amazon like Stan's detector (cost $16.55). I placed my order at the beginning of May and the unit still has not arrived at my house. Oh well, I guess this inexpensive little device (pictured below) was too good to be true.

Another technique for detecting a thermal is to watch for the moment when a seasoned expert launches his airplane, and to launch your airplane when he launches, taking care not to interfere with the expert's launch. You must be patient as experts will sometimes wait five or more minutes with a fully wound airplane in hand before launching.

This article just scratches the surface of the subject of thermals and free flight. For more information, see "Thermals and Picking Lift" by Paul Rossiter, published in Free Flight Quarterly, Issue No. 55, April 2015.

FLYING ACES
SQUADRON 41

SCALE STAFFEL SAN DIEGO

San Diego Scale Staffel

August 2014: Outdoor Flying Contest

Saturday and Sunday, AUGUST 22 and 23, 2014, 7 a.m. to 12:30 p.m.

Scamps Flying Field, Perris CA

Pilot's Meeting: 8 a.m. on both days

Lunch is at the flier option for both days

Events Prizes

Awards for first to third place. First place trophies for WWI and WWII Combat. *

Fees

$8 for contest including entry for one event, $3 for each additional event, $20 maximum to cover contest entry and 5 to 11 events

Contest Directors

John Hutchison
johnhutchison1@cox.net
phone (619) 303-0785

Awards Presentation

Immediately following the contest's final gun on Sunday

Hotel Accommodations

Red Lion
480 S. Redlands Ave, 92570
(Less than 2 miles from the flying field)
(951) 943-5577

Hampton Inn & Suites
12611 Memorial Way,
Moreno Valley, CA 92154
(Less than 12 miles from the flying field)
(951) 571-7788

FAC Single Model Events

Fly any event on either day, but all flights for a given event must be flown on the same day

1. FAC Rubber Scale
2. FAC Power Scale (90 second max)
3. FAC Embryo Endurance (ROG)
4. FAC Jimmie Allen (ROG)
5. FAC 2-Bit(+1) Rubber, 1/2 Wakefield(ROG)
6. FAC Phantom Flash (ROG)
7. FAC Golden Age Civil Scale
8. FAC Jumbo Scale

Mass Launch Events

Saturday

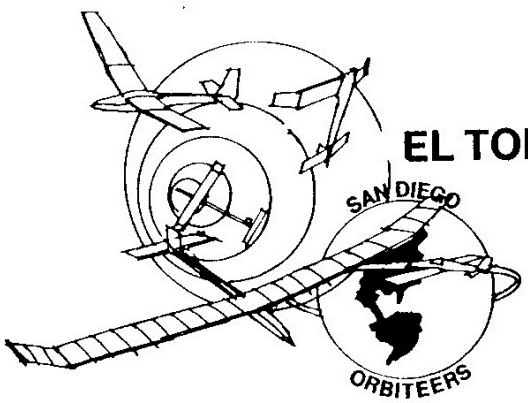
9. FAC World War 1 Combat:
   Wind at 8:20 a.m., Launch at 8:30 a.m.
10. FAC World War II Combat:
    Wind at 9:20 a.m., Launch at 9:30 a.m.

Sunday

11. Double Trouble (Twins)
    Wind at 8:20 a.m., Launch at 8:30 a.m.
12. FAC Greve/Thompson Race:
    Wind at 9:20 a.m., Launch at 9:30 a.m.

*Earn points towards your GRAND CHAMPIONSHIP. This contest's scores coupled with those of the later Scale Staffel contest held in 2014 will determine our annual Grand Champion. The trophy will be presented after the last event of 2014 to the flier who garners the most 1st to 3rd place points in all of the 2014 Scale Staffel contests.

SAN DIEGO ORBITEERS
Howard L. Haupt / Editor
3860 Ecochee Avenue
San Diego, California 92117-4266



WHAT'S HAPPENING - JULY / AUGUST 2015

(-Note- Re=Scheduled Date)

July 26 **Orbiteer Outdoor Monthly,**
SCAMPS Field, Perris CA., 8:00 am.
Feature Event: **P-30** Other Events: **Power & Glider**

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Aug. 16 **Orbiteer Outdoor Monthly,**
SCAMPS Field, Perris CA., 8:00 am.
Feature Event: **Old Time Nostalgia Ruber** Other Events: **Power & Glider**

Aug. 22/23 **Scale Staffel FAC Scale Contest**, 2ND in a series of 3 contests.
SCAMPS Field, Perris CA., 7:00 am.
See enclosed contest flyer for full details.