EL TORBELLINO

NEWSLETTER OF SAN DIEGO ORBITEERS FREE FLIGHT CLUB

DECEMBER 2016

The Prez's Corner *– Don Bartick*

Here we are deep in the holiday season. Thanksgiving is behind us. Christmas, Chanukah and New Years to look forward to celebrating. With that in mind, Arline and I wish all of you a wonderful holiday season.

The Board will be meeting December 14th to finish out the year and set the competition calendar for next year. The awards luncheon banquet has been set for January 21st. Look for more information in the ET. Mark your calendar now and everyone show up.

The first big contest of the new year is the Southwest Regionals in Eloy, AZ. This is a favorite one for Arline and I. Been going for years to this one. It's well run and well attended. A fair amount of snow bird modelers make it. Even a large crowd of spectators will show up. The weather is normally clear but cold.

The participation at the both the Indoor and Outdoor contests were well attended this month. The competition at Perris is getting tougher with the Orange and LA county free flighters participating. Nothing like good competition to make you want to try harder.

On a sad note, we learned that long time Orbiteer and gas flyer Dick Zackman passed away. He dropped out of FF several years ago because of health issues that kept him from competing although he kept his membership in the Orbiteers. Some of us remember him flying with his buddy Joe Slavacek at our Otay Mesa field. They both flew gas powered planes from 1/2A to D size. Dick was a professional Sea Captain. I believe he had a small fleet of fishing boats at the time he retired. We called him Captain. Rest in peace.

That's a wrap for now.

Remember: "Discipline is the bridge between goals and accomplishment."

-Jim Rohn

ORBITEER & SCALE STAFFEL ANNUAL BANQUET - JAN 21TH

WHEN & WHERE:

Saturday, January 21TH at 1:00 pm

GIOVANNTI'S Restaurant
9353 Clairemont Mesa Blvd.

WHAT & COST:

Italian Buffet, which includes:
Salad, Spaghetti, Lasagna, Pizza,
Garlic Bread, and Beverage.
All you can eat for $15, tax & tip included.

Come one come all, bring your appetite.

THE PROGRAM:

Eat, Drink, and be Merry
Annual flying awards presentation
Show and tell, Raffle, donations are welcome
Sharing of tall tales mandatory

BOARD OF TRUSTEES

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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

NOVEMBER 2016 OUTDOOR MONTHLY
(November 20, 2016)

Nostalgia Rubber

1)	Mark Chomyn	293
2)	Mike Pykelny	275
3)	Clint Brooks	166
4)	Greg Hutchison	151
5)	John Hutchison	DNF

POWER

1)	Clint Brooks	481*
2)	Stan Buddenbolm	445
3)	Mike Pykelny	275

*Won in fly off

GLIDER

1)	Stan Buddenbolm	220
2)	Greg Hutchison	145
3)	Mark Chomyn	50

Photo's by Arline Bartick

Don Bartick


Greg Hutchison


John Hutchison


Mark Chomyn


Mike Pykelny


Clint Brooks


Stan Buddenbohm

NOVEMBER INDOOR MONTHLY 2016
(November 6, 2016)
CD: William Scott

CANARD (Wooden Propeller):
(Best three of six flights)

1)	Stan Buddenbohn	166	148	187 - 501
2)	C.M. Kim	132	134	142 – 408
3)	Richard Wood	46	47	90 – 183

CANARD (Plastic Propeller):
(Best three of six flights)

1)	John Hutchison	92	90	102 - 284
2)	Richard Wood	38	68	63 – 169
3)	Mark Chomyn	48	51	41 – 140
4)	Nick Panousis	32	32	30 - 94

PENNYPLANE:
(Best two of five flights)

1)	Greg Hutchison	208	273	- 481
2)	John Hutchison	216	242	- 458
3)	Richard Wood	210	220	- 430
4)	Don Bartick	134	197	- 331
5)	C.M. Kim	DNF		

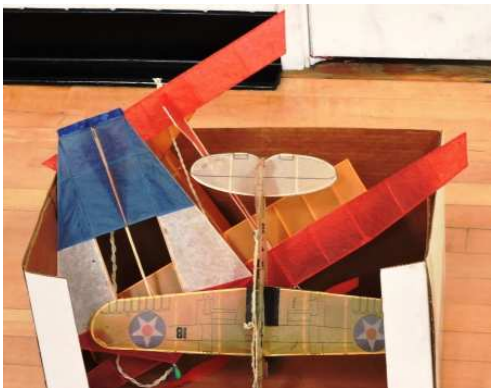
NO-CAL:
(Total of three flights)

1)	R.Wood Zero	59	55	57	–171
2)	J. Waterman Hutchison	38	61		- 99
3)	R.Wood Spitefire	21			- 21
4)	C.M. Kim P-40	17			- 17

Photo's by Arline Bartick


C.M. Kim: No-Cal P-40


John Hutchison: Canard



(More Indoor Photos on next page)

Nov Indoor from previous page
Photo's by Arline Bartick

Greg Hutchison: Canard

Mark Chomyn: Canard Prep

John Hutchison: Canard Launch

William Scott (foreground) & Mike Jester

Don Bartick (L) & Greg Hutchison (R)

Transportation box and models

C.M. Kim: No-Cal

Catapult Launched Gliders

By Mike Jester

Catapult launched gliders (CLGs) require special attention in both construction and trimming in order to fly well. This is due to their unusual flight envelope. CLGs are launched at high speeds well above 50 mph but then must glide at far lower speeds, for example, 2 - 10 mph.

Much has been written about trimming CLGs. You will sometimes read about zero-zero incidence. This is the supposed combination of incidence of the wing and the stab that will prevent looping and diving. The decalage, i.e. the difference between the angle of attack of the wing and stab, that normally produces a nice smooth glide in most model airplanes is often incompatible with a high speed launch. It will typically produce a loop during a full powered catapult launch.

The process of trimming a CLG, like trimming a rubber powered airplane, is very methodical. First make sure that your CLG will glide nicely with a gentle horizontal hand toss. The CG should be at the location indicated on the plan, typically about 50 percent of the wing chord aft of the LE of the wing. Sometimes a tiny bit of clay added to the nose will eliminate a stall. Then try a low power horizontal catapult launch. You might have to adjust the incidence of the stab or wing to prevent looping or diving. Sometimes a minor bend of the TE of the stab will do the trick. Then gradually increase the angle of elevation and/or vary the roll angle, during successive powered launches, but only make one change between launches. Further adjustments to the decalage in very minor amounts may be needed. If you adjust the incidence of your glider, you'll probably need to adjust the nose weight. A good catapult launch requires a precise predetermined combination of elevation angle, roll angle and degree of pull that varies for each glider. This combination is found by observing many test flights.

The Author Launching his CLG in Perris, California

Tiny amounts of fin skew (e.g. 1/100" - 1/64") are typically used on CLGs to help with the transition at apogee. Sometimes a small wedge is glued under the TE of the left wing panel. I am unsure of the function of this wedge. Stab tilt is very important in that it ensures a nice glide circle. Weight can be added to one wing tip to assist in the transition and glide circle size. Note that stab tilt and wing tip weight have no effect during the high speed portion of the flight.

I have broken my share of tail feathers on CLGs. To minimize this problem it is important to hold the launch handle so that it extends perpendicular to the stretched rubber. Also, make sure that the wrist of your hand that is holding the glider does not cock forward when you release the glider. Glue the stab and fin on top of the tail boom.

I am not an expert at CLGs by any stretch (pun intended). I recall that I could never get the first four indoor CLGs that I built to fly like they were supposed to fly. Finally I was able to get my fifth indoor CLG to fly pretty well. However, I did not know about right-right versus right-left flight patterns of CLGs. My fifth indoor glider flew right-left, and it was hard to keep it from hitting the walls of the gym. Better to go right-right indoors and right-left outdoors. This of course assumes that you are right handed.

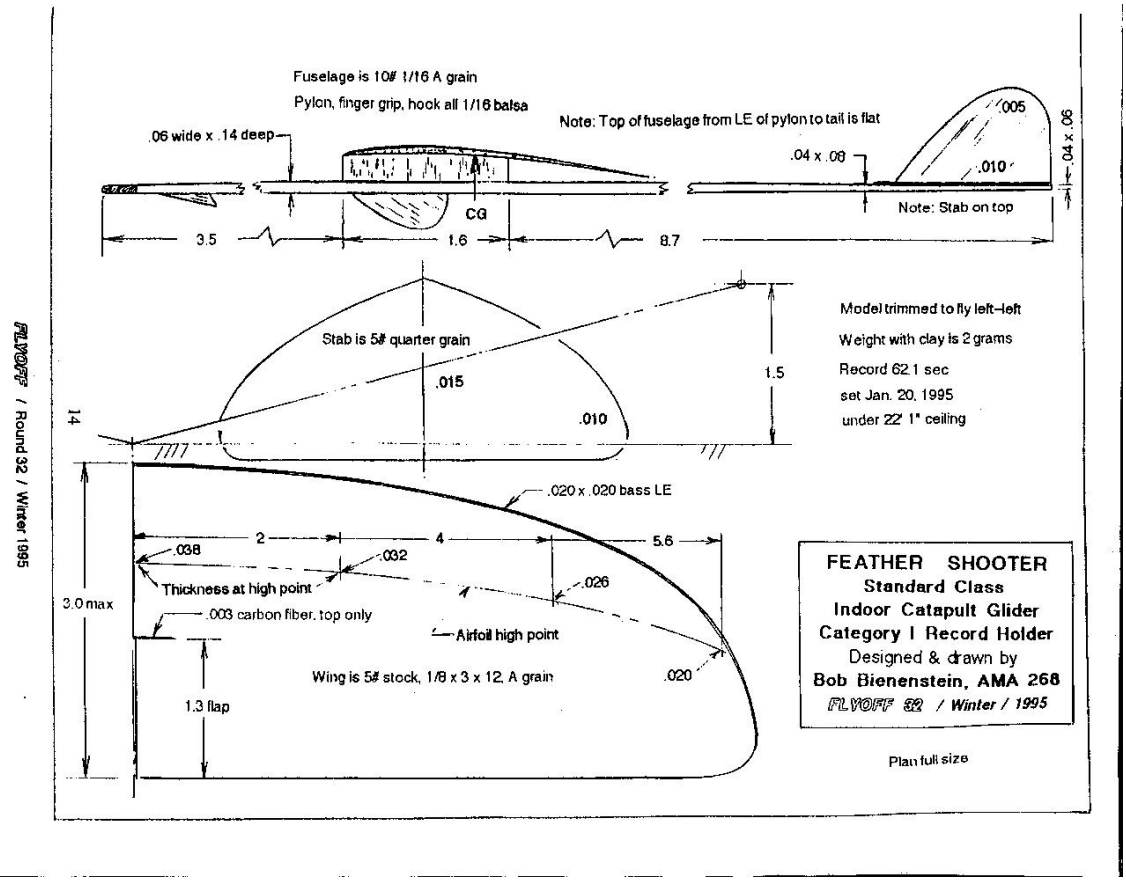
There are two types of transition for a CLG at apogee. In the conventional flight trajectory the CLG will roll about the longitudinal axis of its fuselage into a more or less horizontal attitude and commence its slow speed glide. In the "bunt" type of trajectory (sometimes used by world record holder Bill Gowen) the glider will not roll about the longitudinal axis of its fuselage but will instead pitch downward from a steeply inclined angle into a horizontal attitude and commence its slow speed glide. At least this is my understanding of how some of Bill's CLGs fly. I have not attempted to trim a CLG for a bunt type of flight pattern. In my opinion a bunt flight pattern is best suited for low ceiling indoor flying sites (Cat I).

AMA rules restrict the launching handle for the CLG event to a six inch dowel or similar device. There are no limits on the rubber. One year when I coached the Elastic Launched Glider event in Science Olympiad the only limitation on the “launch handle” was that it had to fit within a cube measuring one meter on each side. So my students used a long launch platform similar to a yardstick that was mounted on a camera tripod. The launch platform had a hook at the front for the rubber and a ruler scale on the top surface. The students were able to repeatedly launch their CLGs at predetermined elevation and roll angles, and launch forces that yielded excellent flights that transitioned just below the ceiling beams of the high school gym in which the competition was held.

The CLGs flown indoors and outdoors are very different in design and construction. In order to be competitive against accomplished fliers an indoor CLG flown in a Cat I site needs to weigh no more than 3 grams, and preferably, closer to 2 grams. This weight will allow flights to be achieved in which the glider descends less than one foot per second. I recently built my first CLG that weighed less than 3 grams. On its first powered launch in

the gym at the Grossmont College it disintegrated. The wing was not thick enough at its highest point and/or it needed carbon fiber reinforcement.

Indoor CLGs are sometimes configured as "flappers." A good example is the Feather Shooter shown in the plan reproduced hereafter. In a flapper the aft half section of each side of the wing is not connected to the wing pylon. The wing is typically made of A-grain balsa wood with the aft sections sanded very thin (e.g. 0.020") so that they deflect to a flat shape at high speed and then return to a curved shape at low speed. Thus the flapper effectively has a zero-zero incidence at high speed and does not loop. The wing returns to an efficient airfoil shape at low speed to produce a nice glide. Very thin plastic foam is sometimes used for the aft deflecting sections instead of balsa wood. Flappers are very advanced and not a good design choice for the novice. Temporarily attaching the wing pylon to the fuselage may help in correctly locating the CG and adjusting the incidence of the main wing.



Feather Shooter - An Indoor Flapper CLG

CLGs launched in very high indoor sites, and CLGs launched outdoors, are typically not flappers. Flappers are very delicate and are difficult to launch more than 30 feet up. Once the wing of a CLG begins to flutter at high speed, it cannot be launched any higher, regardless of how hard one pulls back on the rubber. Outdoor CLGs are much more robust in construction and may weigh 20 grams or more. They are designed to achieve great heights and hopefully pick up thermals while gliding. An expert like world record holder Stan Buddenbohm can easily launch an outdoor CLG higher than 100 feet. He can regularly achieve max after max (120 seconds) with his outdoor CLGs. Some outdoor CLGs are trimmed to achieve maximum altitude when launched. Others are trimmed so that they have more decalage and will glide better. These two options, as is typical in free flight, present the flier with a tradeoff decision.

I spray paint the underside of my outdoor CLGs with black floral spray to increase their visibility during flight. I paint the top side with bright red floral spray paint to help me locate my outdoor CLGs on the ground. Some outdoor CLGs have a DT to avoid flying away in a thermal. You can still lose a CLG even if the DT operates perfectly. I lost my best CLG to Mexico a year or two ago when flying the same at the Orbiteers' old Otay Mesa flying field. I still remember its tail feathers being cocked up at 60 degrees while it was flopping around like a fish out of water, and rising in altitude at the same time!

Those who are new to building and flying CLGs need to read Stan Buddenbohm's article "Catapult Glider Transition for the Novice" published in the January 2016 edition of Free Flight Quarterly. It provides an excellent tutorial on the trimming process.

In my opinion CLGs are the most difficult free flight models to trim, but also, some of the most rewarding models to fly. Every three months we fly CLG as an event at our San Diego Orbiteers indoor contests at Grossmont College. Each monthly outdoor contest sponsored by the San Diego Orbiteers has glider as an event and you may fly either a CLG or a hand launched glider (HLG). Come join us and watch the fascinating flights of CLGs.

Orbiteers
SAN DIEGO

2017 Southwest Regionals January 14-16

FAI

FAI Event Schedule

Saturday Jan. 14 Events	Sunday Jan. 15 Events	Monday Jan. 16 Events
F1A	F1G	reserve day
F1B	F1H	
F1C /F1P	F1J	
F1Q	F1S	

Awards through 3rd place, plus perpetual awards for winners of F1A, F1B, F1C/F1P, F1G, F1H, F1J, F1Q, & F1S.

SOUTHWEST REGIONALS 2017 ELOY MODEL AIRPLANE CHAMPIONSHIPS

AMA
ACADEMY OF MODEL AERONAUTICS

FLYING ACES CLUB

AMA / FAC Event Schedule

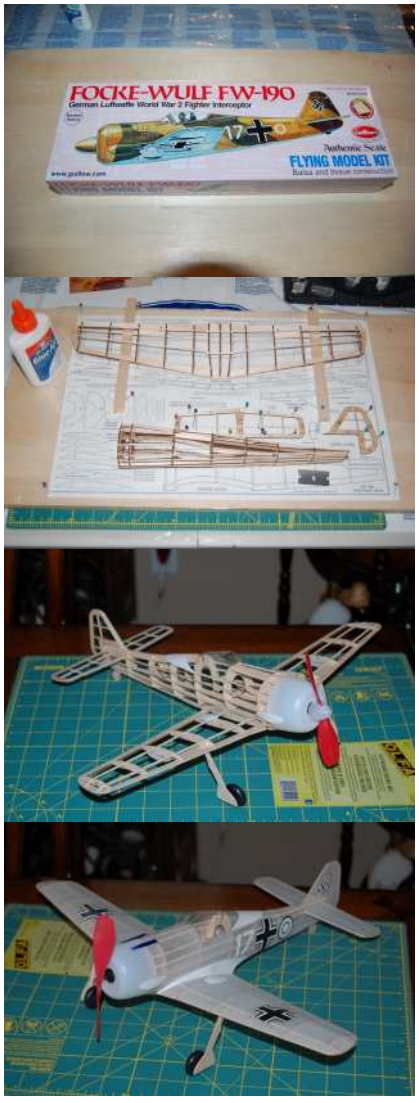
Jan 14 Saturday 8am~4pm		Jan 15 Sunday 8am~4pm		Jan 16 Monday 8am~2pm	
A Gas	Junior Event	C Gas	Junior Event	1/2A Gas	Junior Event
D Gas	1/4A Nostalgia	Classic 1/2A Gas	Cat Glider	B Gas	A1 Towline
Classic AB Gas	Small Rub. Fuse	C Nos	Large Nostalgia. Rub.	Classic CD Gas	Electric A&B Comb.
1/2A Nostalgia	Large Rub. Stk	OT Gas Fuse	Moffett Rub	Early 1/2A Nos.	Class Open Tow
B Nostalgia	Small Nostalgia Rub	Large Rub. Fuse.	Jimmie Allen	A Nos	Mulvihill Rub
OT Gas Pylon	P-30	Small Rub. Stick	High Start Glider	.020 Replica	
HL Glider	E36 Electric	Dawn Unlimited Rubber 7:30~7:45		FAC Jet Catapult	FAC Embryo
FAC WW II Combat Mass Launch 10am		FAC Greve/Thompson Mass Launch 10am		FAC Modern Civilian Mass Launch 10am	
FAC WW I Combat Mass Launch 12am		Twin Pusher Mass Launch 11am			

See SWR web site for more information

http://aalmps.com/17info.htm

SCALE TEST BUILD – D.Scigliano

Here is another build I have just finished, the Guillows 500 series laser cut Focke Wulf FW-150. I am building the entire 500 series for Guillows to make sure the parts are going together as designed so changes can be made if needed. This series has always done well for Guillows, but as we all know they were not the best models to build. The nice art work on the box and sold everywhere make them attractive to most new modelers. Most beginners don't want to build a Stringless Wonder or AMA kit, nope they want a WWII fighter plane. Of course the artwork on the box, who could resist. Well I am here to tell that the new laser cut kits and quality of wood is some of the best I have seen with model kits. No more having to cut the notches in the formers and ribs, Guillows has done that for you. These laser cut kits go together fast, about 2 days using white glue. No CA glue here …… Since I am building these kits for Guillows I am not able to modify the kit except for making the landing gear removable. Don't expect Guillows to change their designs and I am OK with that. I know there are builders who wish Guillows would lose the plastic cowlings, but why? These kits are versatile so the plastic cowlings work great for micro RC and electric free flight, just not rubber friendly. I am trying to get Guillows to supply these kits with better rubber and the 6 inch red props since the 5 inch is to short, but I doubt we will see that happen. I covered the plane with the supplied tissue attaching with 50/50 Elmers glue. The fuselage was covered with wet tissue, just 2 pieces for a wrinkle free finish. I decided not to paint her since that would add weight and once again I had to use the supplied tissue. I brushed on 2 coats of Aerogloss dope and one coat of full strength dope to where the decals would go. The decals are waterslide and have to be applied to a smooth glossy surface. All built and trimmed for flight she weighs 24 grams, not bad for a Guillows kit. I did have to add some clay to the front with a little down thrust. I first used the supplied rubber band and 5 inch prop. She actually flew pretty good for 10 seconds and had a nice glide in. I then swapped the 5 inch prop out for the Guillows 6 inch prop and she flew better …… I then added tan rubber and was able to get 45 seconds flights once again not bad. The landing gear is removable so I would not cause any damage during flights and highly recommend not flying with the gear down unless you have a nice grass field. I am building the laser cut Ruffe and hope to have it done soon.



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

WHAT'S HAPPENING - December 2016

Dec. 4 - **Indoor Flying**, Grossmont College (Upper Gym), 7:30 am to 11:30 am.
Feature Event: **Catapult Glider,** Other Event: **Embryo**

Dec. 11 - **Orbiteer Outdoor Monthly,**
SCAMPS Field, Perris CA, 8:00 am.
Feature Event: **Coupe** Other Events: **Power & Glider**

Dec. 14 - **Orbiteer Board Meeting, 6:00 pm.**
Mark Chomyn residence, 1685 Cottage Glen Ct, Encinitas CA 92024