EL TORBELLINO

NEWSLETTER OF SAN DIEGO ORBITEERS FREE FLIGHT CLUB

JANUARY 2020

Prez's Corner – Mark Chomyn

Happy New Year! Another year to perfect our building and flying skills. As I write this, we've already had our annual banquet and flown our first indoor and outdoor contests of 2020. The banquet was well attended. A great job of planning and organizing by Linda Piazza and Mike Pykelny with support from Don Bartick and John Hutchison. Our official photographer Arline Bartick was taking photos throughout the event so look for those in future editions of the ET and on the Orbiteer website. Many thanks to the Orbiteers and Scale Staffel members and guests who attended. We couldn't stay aloft without your support.

We were fortunate to have a special guest with us at the banquet this year. Long time member of the Orbiteers, Mr. Harry Steinmetz was in attendance. It was great to see Harry again and to share with all those in attendance a significant event in model aviation history. For all who have ever built and flown a P-30, we owe that pleasurable experience to two Orbiteers. Those Orbiteers are, John Oldenkamp and Harry Steinmetz, who collaborated in 1979 to develop the P-30 class model and who were given a special award by the National Free Flight Society (NFFS) in their ten best free flight models of 1979. Harry was humble in his reply to our recognition, but we know that it took both Orbiteers to make it happen.

As is usual at the banquet, award ribbons were given to the third through first place finishers in all the Orbiteers designated rotations of the indoor and outdoor flying sessions. The first-place finisher also received a very handsome trophy which was theirs to take home and display for a year. Overall winner for Orbiteer of the Year was Mike Jester. This award goes to the flyer who collect the greatest number of competition points for both the indoor and outdoor flying rotations. So, the winner of this award is no "one trick pony". You've got to be good across a fairly diverse spectrum of model categories. Congratulations Mike. And watch out. We're not going to take it easy on you for a repeat performance in 2020.

As I mentioned above, the first Orbiteer indoor and outdoor contests of 2020 are in the record book. I didn't make the indoor event but was able to get to the outdoor. We had a good turnout. With about a dozen flyers logged in on the AMA participant sign in sheet. Weather started out foggy and a bit chilly but the sun fully broke out around 10AM. Funny, but in some test flights in the light fog it seemed the air was more buoyant than when the fog lifted. As the contest moved on, there was a definite drift to the southwest and some flyers experienced the dreaded dunk in the canal west of the road. All-in-all though, a great day. Thanks to all those who competed.

As you know, the New Year is a time for those silly traditional resolutions. Well I have one which I intend to (try to) keep. I wind my motors without the benefit of using a blast tube or a torque meter. So, being cautious, I usually don't wind my motors to the maximum/optimum. If you read model books or magazines, even going back to the Zaic Annuals of the 1940's, articles in those publications on rubber motors and winding suggest you test wind a rubber motor (not in the model) until it breaks. You note that breaking point. And then wind that motor in your plane but to slightly below the maximum wind count that caused the break in the test

motor. So, I intend to do this for a P-30, Coupe and Oldtime/Nostalgia rubber motors and see where the breaking point occurs. If you see me getting better altitude in 2020. you'll know my resolution paid off.

Wishing you all thermals and maxes in 2020.
Mark

The photo below says it all.

2020 Southwest Regionals Report
-Don Bartick

Arline and I attended the Southwest Regionals January 18th – 20th in Eloy, AZ. This contest has been going on continuously for 69 years. We have been going to this contest for years. It has been well run and provides ample events in AMA, Nos and FAI over 3 days. It is a National and America Cup point event. Two Orbiteers and several SCAMPS and Perris fliers were in attendance, thereby showing good Southern California support. In fact, this group brought home several 1st Place awards.

Attendance was moderate in concert with today's contests. The weather was very flyable the 3 days. Temperatures migrated between the 50's to the 70's. The wind held under 7 MPH Saturday and Sunday. Monday started off with winds in the 8 to 13 MPH making flights risky for retrieval. We all thought that these conditions would hold, but to our surprise around 11:00am the front causing the conditions passed over and the winds subsided to less than 5 MPH. You never can tell what really will happen by trying to trust the weather reports. As such, the competition got underway in a fast pace to get events completed.

As for my flying, I came away with 1st place in P-30 Friday, 2nd place in Classic 1/2A on Sunday and 1st place in 1/2A on Monday. My E-36 attempt on Saturday didn't work out as well. I max'd out with no problem, but something went wrong on the 4th flight and the plane started to spiral in under power. By the time I realized what was going on, I was late responding. I used my remote engine shutoff to kill the engine, but didn't react to DT the plane before hitting the ground. The wing was damaged beyond field repair putting an end to this event for me.

For those of you out there in Orbiteers land, you should consider contests outside of Perris. They are worthy of the time and expense to challenge your Free Flight skills at other venues. Also a great opportunity to meet up and learn from very well respected Free Flight legends. With this in mind, the annual Dual-clubs FF Bonanza sponsored by the San Diego Orbiteers and Fresno Gas Model Club will be held May 16-17 at Lost Hills, CA. This is the 62nd annual for the Orbiteers and the 81st annual for the FGMC. The Lost Hills field is most likely the best flying field in the world. It is managed by the Lost Hills FF Model Airplane Association. The contest is well attended by other then the Orbiteers. This is unfortunate and I ask members to consider supporting your club's annual contest this year. You will be happy that you did.

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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:
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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 basis by other publications, but proper credit is requested.

ORBITEER WEB SITE

www.SanDiegoOrbiteers.com

Webmaster: Kathy McLaughlin

2019

OUTDOOR EVENTS – top three finishers

1. Old Time Rubber/Nostalgia Rubber

Mark Chomyn	6
Lance Powers	4
Mike Jester	2

2. Power

Don Bartick	6
Mike Pykelny	4
John Swain	2

3. Glider

Mike Pykelny	13
Greg Hutchison	6
Mike Jester	6

4. P-30

Don Bartick	14
Mike Jester	12
Lance Powers	10

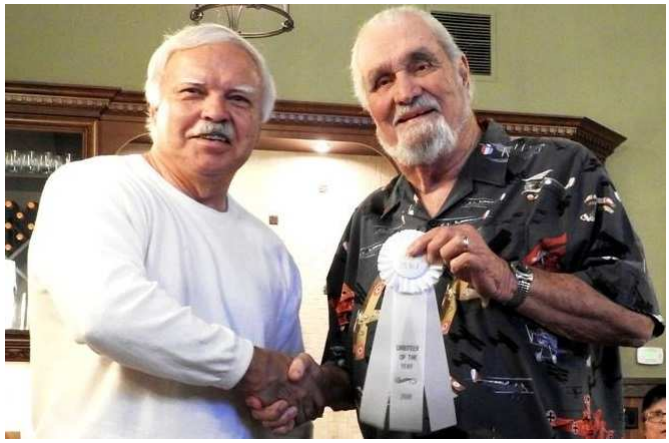
5. Coupe

Mike Jester	11
Mike Pykelny	8
Greg Hutchison	5

Top 3 outdoor point totals –
Mike Jester 31, Mike Pykelny 30**,** Don Bartick 21

2019 SDO Outdoor Champion – Mike Jester

Don Bartick – 1ST Outdoor Power



John Hutchison – 1ST Indoor P-18

2019

INDOOR EVENTS – top three finishers

1. A-6

Mike Jester	21
Don Bartick	17
Greg Hutchison	12

2. Limited Penny Plane

Greg Hutchison	12
Mike Jester	10

Rubber

John Alling	8

3. Catapult Launched Glider

Don Bartick	7
G. Hutchison	1
Mike Jester	1

4. P-18

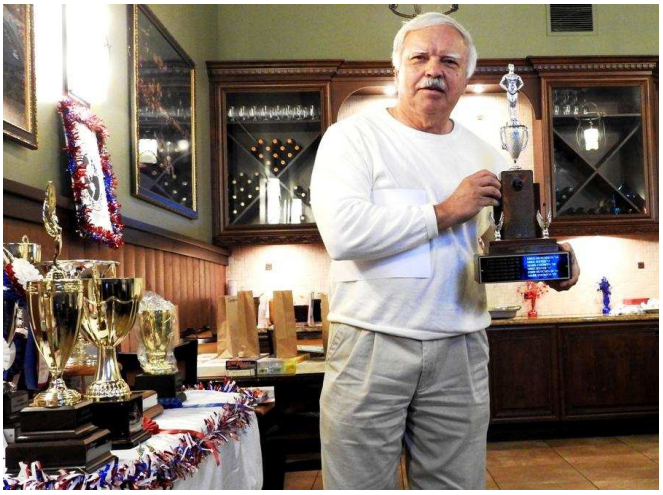
John Hutchison	38
Don Bartick	27
Mike Jester	18

Top 3 indoor point totals –
Don Bartick 53, John Hutchison 51, Mike Jester 50

2019 SDO Indoor Champion – Don Bartick

Combined Indoor & Outdoor Top 3 point totals –
Mike Jester 81, Don Bartick 74, John Hutchison 55

2019 Orbiteer of the Year – Mike Jester



Mark Chomyn – 1ST Old Timer Rubber / Nostalgia

Mike Pykelny – 1ST Outdoor Glider

Mike Jester – 2019 Orbiteer of the Year

Modifying the Guillow's SKY STREAK Beginner's Stick Model

By Mike Jester

Many of us have encountered pre-teenagers that we would like to encourage to join our hobby. I hope to eventually introduce my young grandson to rubber powered free flight. The best way to entice beginners into taking on free flight as a hobby is for them to build their own model that will fly reasonably well indoors or outdoors. The model should be a quick build and it needs to be durable so that it can withstand many crashes. I am not a fan of the AMA Delta Dart for a number of reasons. If you want to build a stick and tissue beginner's model the Squirrel is probably a better choice. In my youth I flew the SLEEK STREEK model from North Pacific. It had landing gear and you could buy it for twenty-five cents. There was a less expensive model costing only fifteen cents that did not have landing gear and was slightly smaller. It was the SKY STREAK model from Guillow's. It was sold as a single model airplane kit in a plastic bag with instructions printed on the bag. The SKY STREAK model is a better choice for beginners because you cannot ROG off of grass and the weight and drag of landing gear inhibits flight duration. Also, getting a rubber powered model to ROG off a gym floor can be a tricky proposition. Remember, a young girl or boy will be delighted with a flight lasting 15 seconds or more, especially if they build the model themselves.

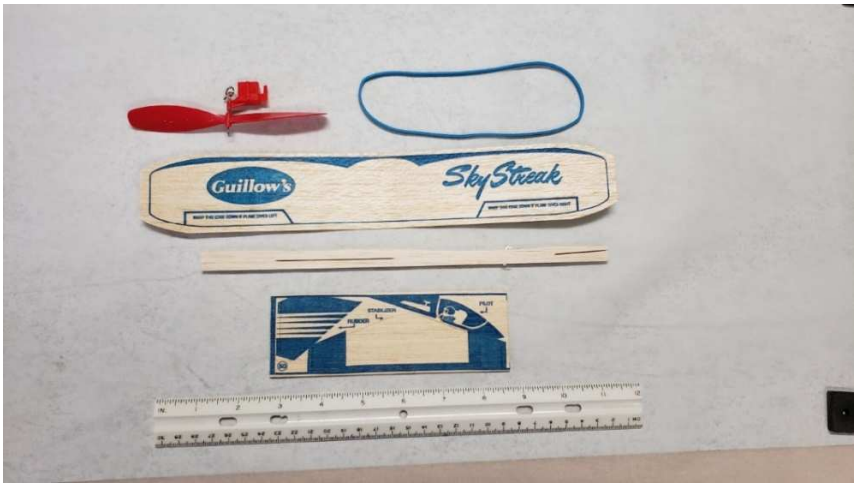
Fully Assembled Modified SKY STREAK Model

In this article I will describe a few simple modifications to the Guillow's SKY STREAK model that will significantly improve its performance. You can buy a pack of two SKY STREAK models from Amazon for $7.10. At $3.05 per unit, this model now retails for roughly twenty times what it sold for in the early 1960's. Wow that is really a lot of inflation! According to information I found on the Internet, there was also a SKY STREAK Guillow's stick model with landing gear that sold for twenty-nine cents in 1969. However, my recollection of the SKY STREAK model that was widely sold during the 1960's was similar to the current version without landing gear. I recently opened up one of the kits in a modern SKY STREAK twin pack that was in my garage inventory. This is a slide-together model, with no gluing required, except for the modifications to the wing described hereafter which were not part of the original kit instructions.

Continued Next Page

Guillow's SKY STREAK Twin Pack

The contents of the SKY STREAK kit are shown in the picture below. The blue colorized wing, stab, fin and pilot are all made of 1/32-inch sheet balsa wood. I estimate that these parts in the kit I opened had a density of 8-10 pounds per cubic foot. The rectangular sheet of balsa wood that contains the stab, fin and pilot is die cut and I had no trouble pushing out these parts. The pilot gets inserted into a groove in the top of the stick fuselage above the wing. You can leave it off to avoid any odd rudder effect it might impart, but your youngster might object because the pilot makes the model "look cool."



Stock SKY STREAK Kit Parts

The stick fuselage has some taper and roughly measures 7/16-inch x 3/16-inch x 10 ½-inches. The cross-section of the stick fuselage is way more than is needed for a model this size. I estimate the stick fuselage in the kit I opened was made of balsa wood having a density of 12 – 14 pounds per cubic foot. The rear hook is already installed. Experienced adult fliers would be tempted to recreate all of the balsa wood parts with much lighter wood and a smaller cross-section stick fuselage but I recommend against this. The youngster should be able to open the kit and slide the parts together with minimal adult supervision. The completed SKY STREAK model will be relatively heavy, but very durable.

The twelve-inch span sheet balsa wood wing comes pre-formed with minimal dihedral. Each wing tip is only raised 3/8-inches. Some simple cuts and some CA glue will create a polyhedral wing that gives much better roll stability and lessens any tendency for the model to spiral into the ground if upset by turbulence. This modification should be done by the adult unless you trust your beginner with an Xacto knife and a bottle of CA glue. On each wing tip make a mark on the LE that is 2 3/8-inches from the straight end of the wing. Make another mark on the TE of each wing tip that is 2 1/2-inches from the straight end of the wing. (NOTE: these dimensions were later changed as explained below). Connect the marks with a line that extends across the chord of the wing using a soft tip black pen.

Cut off the right outer wing section with an Xacto knife. Score the other black line and lift up the left outer wing section. On a building board hold the left inner wing section flat and raise the left wing tip one inch off the building board. Run a bead of CA along the top of the scored joint. After that glue has cured, slide the center wing section through the wing slot in the stick fuselage before gluing the other wing tip section in place. You can't slide angular joints glued with CA through the wing slot in the stick fuselage.

Skewed Wing Tip Section Joint for Increased Dihedral and Washout

In similar fashion, glue the right wing tip section in place with the same amount of dihedral. You will need to keep the stick fuselage off the building board so that the right inner wing section can be held flat against the building board. The skewed joints in the modified wing produce washout on each wing tip. The span of the modified wing is now slightly less than the original 12-inch span but the flight performance will be improved. Check the finished wing for warps and remove any that are detected.

The wing slot in the stick fuselage is exactly in line with the straight bottom edge of that part, and thus the wing is set to zero degrees of incidence. The wing slot is considerably longer than the chord of the wing. This allows the wing to be moved fore and aft during trimming to get the optimum CG that will eliminate any stall or dive. Wisely, Guillow's cut the slit in the rear end of the fuselage so that the stab has negative two degrees of incidence. The stock SKY STREAK model appears to have a reasonable amount of decalage.

The prop assembly includes a 5-inch red molded plastic prop and a molded bearing box that slips over the front end of the stick fuselage. According to my measurements, the bearing box has a molded-in thrust bearing on its underside that yields 5 degrees of down thrust and 2 degrees of right thrust. The prop shaft and its hook are made of .049-inch wire – more than double the needed diameter. Ditto for the rear hook. Don't bother replacing them to save weight as this would be way too much work for your youngster

who is not trying to get a sixty second flight. I do recommend tightening the prop hook and the rear hook to lessen the chances of losing your rubber motor. On a good flight this model will run out of turns and when that happens the motor will usually come off the front hook and then the rear hook. The prop assembly that was in the kit I opened weighed a hefty 3.84 grams. The prop was way out of balance. I recommend that you have your youngster add adhesive tape to the rear side of the tip of the lighter blade to get the prop reasonably balanced. Scraping the heavy blade is too dangerous and too tedious for your youngster.

The blue rubber band included in the kit is totally unacceptable as a rubber motor for this small model. It is a 6 ½ inch loop of very thick (.125-inch x .060-inch) and barely stretchable poor-quality rubber. It weighed 1.74 grams in the kit I opened. It is way too thick and way too short when compared to the hook-to-hook distance of approximately 7 1/8-inches. You would probably have difficulty winding in more than about 300 turns into the stock blue rubber motor. I initially tried a 14-inch loop of .083-inch TSS rubber – 1.5 grams, for outdoor flying. This turned out to be too small of a cross-section, as explained below. Of course, don't forget to lube the rubber motor before winding the same.

The first SKY STREAK model that I recently built (pictured above) had an air frame weight (without prop assembly or rubber) of 5.88 grams. Adding the 3.84 grams of weight of the 5-inch prop assembly yielded an all-up weight (without rubber motor) of 9.75 grams. That's about what a decent Peanut model weighs but it typically has a wing with an airfoil shape, and not a flat wing like the SKY STREAK which will produce less lift for the same area.

I put in a few flights at my local park with my modified SKY STREAK model with the pilot on board. The first time I tried to fly a modified SKY STREAK it continuously spiraled to the right into the ground. This behavior did not seem to be due to a wing warp. Adding Gurney flaps to the underside of the TE of the right wing sections did not cure the problem. It occurred to me that the model had too much right thrust. Also, the model would not climb with a .083-inch TSS rubber gram motor. I was able to take out the right thrust in the red Nylon bear box with a set of pliers. But this type of plastic has a memory, so the right thrust was going to return. Therefore, I put in some left rudder. I got a weak but consistent climb with a .093-inch 1.75-gram TSS rubber motor – 14 inches long. The flight lasted about 30 seconds but the model barely turned to the right. It landed across the street that borders the park, and was run over by a car. Well that was no great loss. The SKY STREAK model is durable, but not durable enough to withstand being run over by a car.

SKY STREAK Flown at My Local Park

The next morning, I quickly assembled another Sky Streak in the same fashion except I changed the skew dimensions to 2 1/2 inches on the LE and 2 9/16 inches on the TE to give less wash out on the wing tip sections. This time the stock bearing box had zero degrees of side thrust but the same 5 degrees of down thrust. Back at the park amazingly no trim adjustments were needed this time around. The CG was at about 40% and there was no stall and no dive. So, it was not necessary to move the wing forward or rearward in the wing slot. The model climbed nicely in a wide left circle with a .102-inch 1.75-gram TSS rubber motor – 13 ½ inches long. The best flight was with 1275 turns and lasted 41 seconds. A flight this long would have seemed like several minutes to a youngster. My SKY STREAK model probably climbed to 50-75 feet in altitude. But the model ran out of turns while still in the air and it glided rather poorly, probably due to excessive wing loading. I tried a .100-inch 2.2-gram TSS rubber motor – 15 inches long. On a single flight with 1500 turns the time aloft was 47 seconds with the model again landing dead stick. The 5 degrees of down thrust allow you to launch the model with very high torque without resulting in a power stall. With the length of the .100-inch rubber motor is already over twice the 7 1/8-inch hook-to-hook distance I fear that trying a rubber motor any longer would lead to rubber motor bunching and CG shifting and/or prop locking problems. Any youngster would be delighted with a 45+ flight. If you were serious about consistently getting one minute plus flights with a SKY STREAK you would probably need to use lighter balsa wood, a smaller motor stick, and smaller diameter music wire. In addition, the prop would need to be scraped to make it a lot lighter, and re-pitched to a higher pitch. With such changes you could use a .093-inch or thinner width rubber motor. But such modifications are unnecessary for a beginner.

I was pleasantly surprised by the stable flight characteristics of the modified SKY STREAK model in spite of its small size. I was impressed with its ability to consistently achieve flights over 30 seconds with a relatively heavy, but very durable, airframe. Flying the model with the sheet balsa wood pilot inserted did not seem to create any yaw instability. The SKY STREAK model is definitely a good choice for introducing an 8 – 12-year-old boy or girl to rubber powered free flight. I hope some of you have the opportunity of guiding a youngster through the process of building and trimming this model as their first exposure to our hobby.

Orbiteers - Indoor Contest Results - January 5, 2020

A-6

Flier	Best 2 of 5 flights		Total	Rank
Mike Jester	209	207	416	1
John Hutchison	203	193	396	2
Greg Hutchison	188	202	390	3
Don Bartick	159	153	312	4
Jose Cetina#	142	143	285	5
Nick Panousis	114	124	238	6

Junior SDO club member

Orbiteers - Indoor Contest Results - January 5, 2020 Picture Page Photos by Arline Bartick

January 2020 Flight Line

San Diego Orbiteers - Outdoor Contest Results - January 12, 2020 - Perris, CA

P-30

Flier	3 flights			fly-off	Total	Rank
Don Bartick	120	120	120		360	1
Mike Jester	120	82	120		322	2
Mike Pykelny	60	52	120		232	3
Clint Brooks*	112	DNF	DNF		112	4
Stan Buddenbohm*	88	DNF	DNF		88	5

Power - E-36

Flier	3 flights			fly-off	Total	Rank
Mike Pykelny	66	120	120		306	1
Lee Hines*	26	42	120		188	2
Stan Buddenbohm*	67	DNF	120		187	3

Hand Launched Glider (90 second max)

Flier	Total of 6 flights						Total	Rank
Tim Batiuk*	80	90	90	90	90	90	530	1
Stan Buddenbohm*	48	86	90	90	58	90	462	2
Clint Brooks*	54	DNF	DNF	DNF	DNF	DNF	54	3

Catapult Launched Glider (90 second max)

Flier	Total of 6 flights						Total	Rank
Tim Batiuk*	90	90	54	90	90	90	504	1
Stan Buddenbohm*	90	36	74	88	90	90	468	2
Mike Pykelny	57	46	90	46	77	25	341	3
John Swain	48	39	57	43	90	DNF	277	4
Mike Jester	27	32	28	40	11	18	156	5

Towline/Bungee (90 second max)

Flier	3 flights			Total	Rank
Tim Batiuk* (TL)	90	90	69	249	1

* not a member of the San Diego Orbiteers

San Diego Orbiteers - Outdoor Contest Results - January 12, 2020 - Perris, CA

Picture Page - Photos by Arline Bartick

2020 Contest Schedule

	Indoor (Grossmont College Gym)	
Date	**Orbiteers**	**Scale Staffel**
Jan 5	**A6**	**Phantom Flash**
Feb 2	**Catapult Launched Glider**	**No-Cal**
Mar 1	**P-18**	**Embryo**
Apr 5	**Limited Penny Plane**	**Phantom Flash**
May 3	**A6**	**No-Cal**
Jun 7	**Catapult Launched Glider**	**Embryo**
Jul 5	**P-18**	**Phantom Flash**
Aug 2	**Limited Penny Plane**	**No-Cal**
Sep 6	**A6**	**Embryo**
Oct 4	**Catapult Launched Glider**	**Phantom Flash**
Nov 1	**P-18**	**No-Cal, Canard One-Design (Wrisley Zephyr)**
Dec 6	**Limited Penny Plane**	**Embryo**

2020 Contest Schedule

		Outdoor (all contests at Perris, CA unless otherwise noted)	
Date	**Rain Date**	**Orbiteers**	**Scale Staffel**
Jan 12	**Jan 26**	**P-30 / Glider / Power**	
Feb 16	**Feb 23**	**Coupe / Glider / Power**	
Mar 22	**Mar 29**	**OT/NOS Rubber / Glider / Power**	
Apr 19	**Apr 26**	**P-30* / Glider / Power** **(*Extra award for 1st place with a Hot Box)**	
May 16-17		**Dual Club - Lost Hills, CA**	
May 24	**May 31**	**Coupe / Glider / Power**	
Jun 14	**Jun 28**	**OT/NOS Rubber / Glider / Power**	
July/August		**Summer Heat Break**	
Sep 20	**Sep 27**	**P-30 / Glider / Power**	
Oct 18	**Oct 25**	**Coupe / Glider / Power**	
Nov 15	**Nov 29**	**OT/NOS Rubber / Glider / Power**	
Dec 13	**Dec 20**	**Make Up Date**	

SAN DIEGO ORBITEERS
Howard L. Haupt / Editor
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WHAT'S HAPPENING - February 2020

Feb. 2, 2020 - **Indoor Flying**
Grossmont College (Upper Gym), 7:30 am to 11:30 pm.
Feature Events: **Catapult Launch Glider & No-Cal**

Feb. 16, 2020 - **Orbiteer Outdoor Monthly**
SCAMPS Field, Perris CA, 8:00 am.
Feature Event: **Coupe**
Other Events: **E36, Power & HLG/Catapult Launch Glider**