

EL TORBELLINO

NEWSLETTER OF SAN DIEGO ORBITEERS FREE FLIGHT CLUB

November 2017



The Prez's Corner – Don Bartick

Appears we'll be back flying outdoors at Perris this month. Must say that it's really nice to have cool weather once again. The turnout for the Orbiteers/Scale Staffels Indoor contest was outstanding. A whole bunch of planes in the air at one time sure makes you feel real good. As for me, let me say I got a lot to learn. Look for pictures of the contest by Arline in this ET.

Talking about Arline's pictures. Those of you who subscribe to the National Free Flight Society just received a new issue of the Digest. Low and behold, Arline's photos adorn both the front and back cover. She really has a knack at taking action photos.

Just recently John Merrill received via our website a message from one of the original SD Orbiteers, Dan Keller. John reached out to the Board members to find out if any of us knew him. I didn't, but I shot off an email to learn more. Dan responded by saying he remembered a few of the earliest members such as: Jim Peterson, Tom Smith, Bob Beecroft, Rod Eschenburg, Nat Antonioli, Charley Primbs and a local DJ (Art Way). I forwarded the email to Bob Beecroft. He responded by recalling how he and Jim Peterson were playing on the parallel bars at their local elementary school talking about potential names for a FF club. Bob came up with the name "Orbiters" Jim said let's add another 'e' and make it 'Orbiteers'. The rest is history. Dan said he and Jim Peterson moved to Coos, OR in the early 70's. Jim perished at sea in 2012. Bob Beecroft is going to dig out some old history of the club and we'll share it from time to time.

That's a wrap for now.

Remember: "When the character of a man is not clear to, look at his friends"

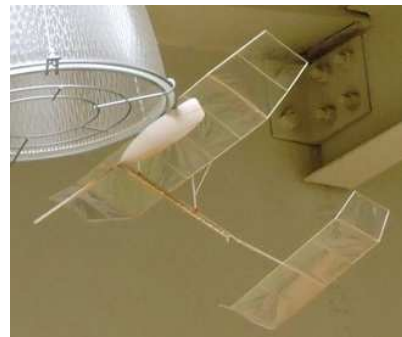
-Japanese Proverb



2017 COMBINED FLYING SCHEDULE

Dec 10 - **Coupe**

Power & Glider
(Dec 17TH rain date)



2017 INDOOR FLYING SCHEDULE

Dec 3 - Catapult Glider, Embryo*

***Non-ORBITEER Points Event**



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chomyn@roadrunner.com

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MPykelny@dslextrreme.com

Mike Jester(619) 575-1953

michaelhvester@gmail

Open Position(xxx) xxx-xxxx

yourname@volunteer

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hlhaupt1033@att.net

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Mark Chomyn(760) 753-7164

chomyn@roadrunner.com

Safety Officer & Field Marshall

Open Position(xxx) xxx-xxxx

yourname@volunteer

Web Master

Kathy McLaughlin.....(619) 303-0785

kamclaughlin1@cox.net

Newsletter Editor / Membership Coordinator

Howard Haupt(858) 272-5656

hlhaupt1033@att.net

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

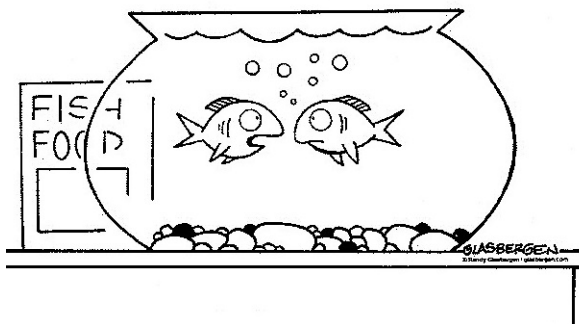
THE FINE PRINT THE FINE PRINT

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



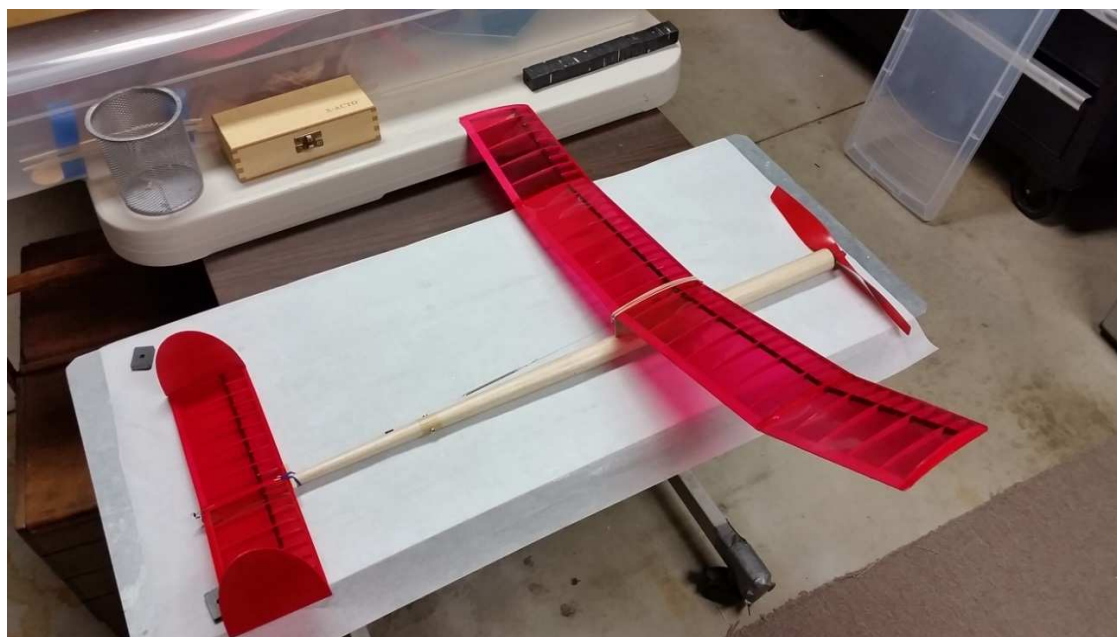
Any guess on how much rain we will get this winter?

P-30 Props

By Mike Jester



Occasionally at one of our P-30 contests, without me even asking, I am told by another flier which P-30 prop he prefers. Usually I am given the name of the prop, but no technical explanation why it is preferred. Let's delve into this subject a little further. First, immediately below is a picture of my recently completed Bob White P-30. I include this picture for readers who might not be familiar with the P-30 class of model airplane. Basically the model is limited to 30-inches maximum in any dimension and 40 grams minimum in weight. The maximum allowed weight of the lubricated rubber motor is 10 grams. My Bob White P-30 is my fifth P-30 model. I don't care for its V-dihedral tail and twin fins, but that is a different story. Initial trim flights of my Bob White P-30 on October 7, 2017 at Perris were promising. It is definitely visible in the weeds!



Bob White P-30

Unlike many free flight events, the P-30 rules are very strict when it comes to the type of prop that may be used on the model. This stems from the character and purpose of the event when it was created by the San Diego Orbiteers in the late 1970's. P-30 was supposed to be an entry level, outdoor rubber powered free flight event. So folding props, Montreal stops, and other sophisticated props and clutch mechanisms were off the table. Per the P-30 rules, the prop must meet the following qualifications:

1.4. The propeller shall be a commercially available plastic freewheeling propeller between 23 and 25 centimeters (9.05 and 9.84 inches) in diameter.

Only the following changes will be allowed:

1.4.1. Flashing may be removed.

1.4.2. Balancing by the addition of weight to one blade will be allowed.

1.4.3. Enlarging the hole of the propeller hub will be allowed in order to accept a larger diameter shaft and/or a bushing cut from metal tubing.

When it comes time to select a prop for your P-30 model you need to pay attention to the above restrictions. The words and numbers “commercially available plastic propeller . . . between . . . 9.05 and 9.84 inches . . . in diameter” pretty much limit you to four props that are available for purchase, each of which will be discussed individually hereafter. The term “freewheeling” and the other limitations on modifying the plastic prop eliminate a folder. “Flashing” is the tiny excess of plastic around the outlines of the blades and the hub. It can be removed with a sharp cutting tool, but I don’t recall seeing any flashing on my P-30 props. I balance my P-30 props by applying a suitable amount of tape on the end of the lighter blade. Scraping of P-30 prop blades is not allowed. Drilling out the hole through the hub can be useful if you decide to use a Struck clutch, which is discussed in my article on freewheeling clutches that appeared in last month’s edition of this newsletter. Note that many types of freewheeling clutches are not allowed under the P-30 rules, such as the Garami clutch and the Nason clutch, because they would necessitate prohibited modifications to the plastic propeller.

The 9 ½ inch grey plastic Peck prop is widely used in the P-30 class. I think it got its name because it was sold by Peck-Polymers for many years. If you inspect one closely, you will see “Japan” molded into the same. You can still buy this prop from Volare Products for \$1.75. Be careful because the P/D of the Peck prop may be undesirably low and/or the blades may be unequally pitched. This prop is used on Don DeLoach’s Polecat P-30.



9 ½ Inch Peck Prop



Many people say that the 9 ½ inch red or yellow plastic Czech prop is the best prop for a P-30 model. It is also known as the Ikara prop. Notice the squared off blade tips. This prop can be purchased from Volare Products for \$2.50. Stan Buddenbohm recommends this P-30 prop. His Air Shark P-30 with this prop can easily max in dead air.



9 ½ Inch Czech Prop

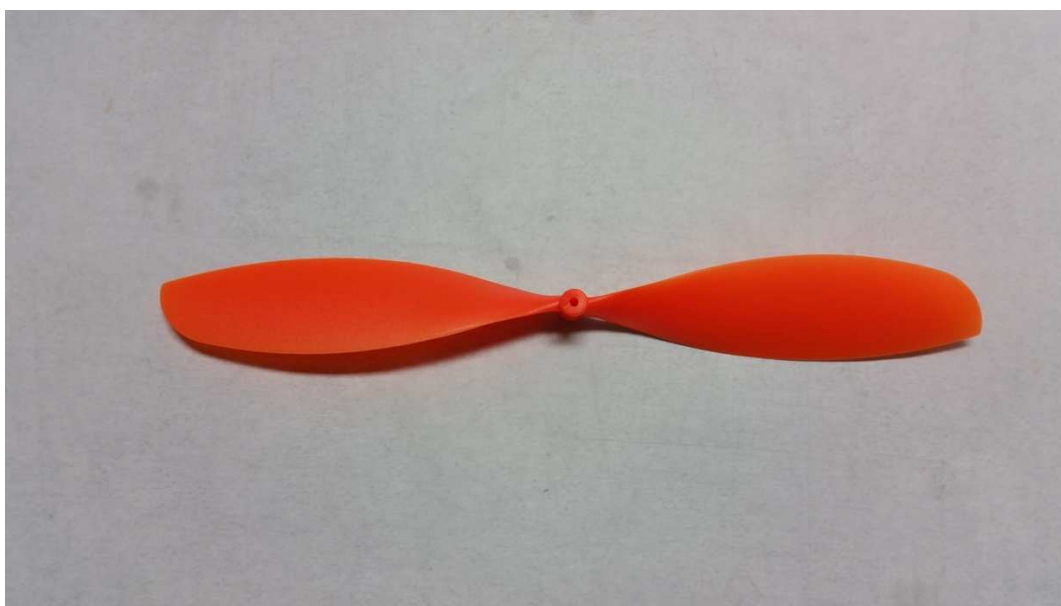
The 9 ½ inch GizmoGeezer prop assembly includes a prop that is similar to the grey plastic Peck-Prop. Orv Olm, the owner of the GizmoGeezer business, used to re-pitch the blades of this prop to produce a more favorable 1.25 P/D ratio. Long ago it was settled that re-pitching by the manufacturer does not violate the P-30 rules. I think Orv has gotten a new supplier of props so he may not have to re-pitch them anymore. The new props appear to have the same blade shape as the Peck prop but have a slightly rough surface texture. The GizmoGeezer prop assembly includes a very clever and sophisticated clutch mechanism. It relies on a coil spring and a helically threaded sleeve that axially moves a conical drive spinner clear of the roots of the prop blades when the tension on the rubber motor falls below a predetermined level. Other than possible re-pitching, the prop in the GizmoGeezer prop assembly has no physical modifications. The mechanical design of the GizmoGeezer prop assembly offers the additional advantages of 1) reliable freewheeling; 2) precise thrust line adjustments; and 3) the avoidance of any need to braid rubber motors to eliminate bunching and CG shifting. Clink Brooks prefers to use the GizmoGeezer prop assembly in his P-30 models because of these advantages. You can normally purchase a 9 ½ inch GizmoGeezer prop assembly from Volare Products for \$15.00 but right now they seem to be out of stock. Note that it is not suitable for P-30 models with a narrow fuselage, like the Pirate. This is because the cylindrical clevis that holds the front end of the rubber motor may rub against the inside of the fuselage when sufficient down thrust is dialed into the adjustable thrust bearing.

(Continued Next Page)



9 ½ Inch GizmoGeezer Prop Assembly

Finally, a new-comer on the block is the 9 ½ inch orange Chinese prop. Notice the scimitar blade shape. This prop can be purchased from Volare Products for \$2.00. I use the orange Chinese prop on my Pirate P-30 and consistently get good flights with it.



9 ½ Inch Chinese Prop

(Continued Next Page)

A series of articles in the Free Flight Quarterly magazine set forth a very in-depth technical analysis of each of the commonly used P-30 props. As I recall, they were indecisive as to which is the best one for competition. This is not surprising in view of the fact that three of the best P-30 fliers in the world, mentioned by name above, each use a different kind of plastic prop on their high performance P-30 models.

There are probably other commercial plastic props that are legal for the P-30 event. I have some suitably sized green and blue commercial plastic props in my inventory that appear to be identical in shape to the grey Peck prop. Plastic props are injection molded out of thermoplastic material on a mass production basis. Tolerances are not very tight. The mold tooling wears out over time, but stays in use. For example, a dozen 9 ½ inch grey plastic Peck props bought at the same time from the same source may all have different weights and slightly different pitches. The two blades on an individual prop may have different pitches, leading to inefficiency and vibration. Therefore, I recommend that you measure the pitch at 75% of R, P/D, and weight of each 9 ½ inch plastic prop in your inventory. Then decide which one you want to use on your model based on which of them has: 1) equally pitched blades; 2) a P/D closest to 1.25; 3) the lowest weight, in that order of importance. The pitch, chord and camber of the blade at each point along its radius and the shape of the blade outline may be less important than factors 1 - 3. Over time, let your stopwatch tell you which P-30 prop is the best one for your model.



John Hutchison holding his Pirate P-30 equipped with the Czech prop

I hope to see you at the next P-30 contest in Perris!





FROM THE WORKENCH - J.Merrill

If you read last month's newsletter, you may recall I started building a model called 'The Lark', originally by Jetco, but produced by Shive Specialties in PA.

Unfortunately I tend to build at a somewhat glacial speed, so it hasn't come too far. I did get top and bottom of the wing and stab covered, as well as the lower half of the fuselage. Nose plug is done too. Those always seem to be a hang up for me.

With any luck, I may have this done by next summer!

Your turn, let us know what's on your workbench!

Past Building Projects Featured Here



There is room here for your latest build project. Take some pictures and send them to the El Torbellino.

Orbiteers
ORBITAL ENGINEERS

NOVEMBER INDOOR MONTHLY 2017

(November 11, 2017)

CD: William Scott

Penny Plane:

(Best two of five flights)

1) John Alling	240	317	-	557
2) Mike Jester	256	277	-	533
3) Richard Wood	165	209	-	374
4) John Hutchison	183	103	-	286
5) Don Bartick	81	62	-	143

No-Cal:

(Total of three flights)

1) Richard Wood	Spitfire	66	70	60	-	196
2) Mike Jester	Pilatus Porter	57	56	53	-	166
3) Walter Ainslie	P-40	47	48	60	-	155

Photos by Arline Bartick





By William Garvey

William Garvey is Editor-in-Chief of Business & Commercial Aviation. Join the conversation at: AviationWeek.com/IBA william.garvey@aviationweek.com

COMMENTARY

Search Partyer

A good-looker from Down Under

There's an undeniable attraction to mobile machines built ugly for a special purpose. Think battle tank, harbor tug, tunnel mole, chemical tanker and garbage trucks of every stripe. Now add to this group of mechanical unseemlies the bug-eyed Seeker.

Designed for seeing rather than being seen, the aircraft is as practical as its visage is, well, unusual. The two-place pusher has a wraparound windscreen reminiscent of the Bell 47 and large side windows. The high wing gives those within unobstructed views of what's below. A taildragger, it can operate out of small, unimproved fields. Intended to linger, it stalls at 58 kt and can remain aloft for 5.5 hr.

As its name suggests, the Seeker's purpose is to go find things. And its design certainly facilitates that for its pilot and observer, with its 270-deg. field of view. Further, because its gear is conventional and its engine is in back, when Seeker is equipped with an electro-optical infrared sensor, the ball can hang from the center of the aircraft's belly, clear of ground debris, unobstructed and in air unaffected by engine heat or emissions.

Depending on the sensor package selected, the information entering the cockpit and possibly being transmitted to personnel on the ground can be comprehensive, exacting, extensive and in real time.

Seems like it's just the thing for pipeline, power line or border patrols as well as search and rescue, airborne law enforcement, special ops, wildlife protection and a host of other missions.

Clever design, but hardly new. In fact, the Seeker is 25 years old. So why have we not heard about it?

First, because Don Adams, a longtime fixture at Hervey Bay Airport (the airport road is named in his honor) in Queensland, Australia, developed it there, which is to say the Seeker evolved in a pretty remote part of the world. Two, Adams's Seabird Aviation never managed to attract the investment necessary to



SEEKER AIRCRAFT

really make a go of it. At one point, he even licensed production to an outfit in Yemen, which built a few but that petered out. Altogether, only 15 to 20 Seekers were built (no one is sure of the exact number) and operated in Australia, Jordan, Azerbaijan, Africa, the United Arab Emirates and the U.S., among others.

However, Seabird was acquired in 2014 by Seeker Aircraft America, a subsidiary of CSI Aviation, an Albuquerque, New Mexico, outfit that arranges charters for federal agencies and operates a fleet of King Airs for medevac and other missions.

Ed Lundeen, an Eclipse Aerospace executive who was installed last year as Seeker's president, says his immediate goal is "to build some momentum" for the program. To that end, he volunteered a Seeker to help law enforcement and emergency management officials assess damage after Hurricane Harvey slammed Texas.

Further, in addition to offering the

Seeker A model, powered by a 168-hp Lycoming, the company developed the Seeker A2, powered by a 210-hp Lycoming. And last year it obtained an FAA Part 23 Normal Category Type Certificate, allowing the aircraft to be sold to commercial operators.

Priced at \$449,500 for the A and \$484,500 for the A2, Lundeen says operators get a lot for their money, noting that "the ISR package costs more than the aircraft." All intelligence, surveillance and reconnaissance equipment is extra and can be acquired and installed by Seeker or by the buyer.

The aircraft continue to be produced in Australia and then shipped in standard containers (with wings removed) to a port of the buyer's choosing. Lundeen says it takes just 2-3 hr. to reinstall the wings.

Although production of the similar-looking Edgley Optica halted years ago, Lundeen says the Seeker competes for business with old Cessna singles and helicopters but that his aircraft's simple systems and low operating costs of \$55-75 per hour (depending on avgas pricing) are unbeatable.

As for competition from commercial drones, he believes those aircraft present little threat since they have limited range, short endurance and heavy airspace restrictions and pose privacy concerns—not to mention that their operators have only screen views of what the airborne sensors or cameras see. Seeker crews, by comparison, can fly pretty much anywhere, operate up to 15,000 ft., adapt to changing conditions, sightings and opportunities, and track for hundreds of miles, then land, refuel and continue.

That versatility, he believes, will sell Seekers—a lot of them. Indeed, he says a contract has been signed, though not yet funded, for a sizable number of aircraft to be delivered to a foreign military entity. The Seeker's simplicity precludes any concerns about International Traffic in Arms Regulations. If and when the funding comes through, Seeker plans to enlist Erickson Inc. to manufacture them in Oregon.

Lundeen likens the Seeker to "a helicopter with wings," and to him it's a beautiful thing. ☺

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



WHAT'S HAPPENING - December 2017 / January 2018

(2017)

- Dec. 3 - **Indoor Flying**, Grossmont College (Upper Gym), 7:30 am to 11:30 am.
Feature Event: **Catapult Glider**, Other Event: **Embryo**
- Dec. 10 - **Orbiteer Outdoor Monthly**
SCAMPS Field, Perris CA, 8:00 am.
Feature Event: **Coupe** Other Events: **Power & Glider**
- Dec. 13 - **San Diego Orbiteer Board Meeting**, 6:00 pm
Mike Jester's residence, 11 Buccaneer Way, Coronado CA 92118

(2018)

- Jan. ? - **Indoor Flying**, Grossmont College (Upper Gym), 7:30 am to 11:30 am.
Feature Event: **A-6**, Other Event: **Phantom Flash**
- Jan. 27 - **Orbiteer & Scale Staffel Annual Awards Banquet**
Giovanni's Restaurant, on 9353 Clairemont Mesa Blvd.
Italian buffet: pizza, pasta, salad and soft drinks. \$20 per person
- Jan. ?? - **Orbiteer Outdoor Monthly**
SCAMPS Field, Perris CA, 8:00 am.
Feature Event: **P-30** Other Events: **Power & Glider**