

EL TORBELLINO

NEWSLETTER OF SAN DIEGO ORBITEERS FREE FLIGHT CLUB



NOVEMBER 2024

Chairman's Corner – Mark Chomyn

Halloween is history and Thanksgiving is on its way. Every year our cul-de-sac holds a Halloween block party potluck. Lots of food, a lot of kids in great costumes and a few dogs in costume that enjoy chasing each other at high speed through and around the gathered crowd. I didn't eat any candy, but I did pound down my share of chili, wings and lager. I always carve a pumpkin and place a candle in it for effect, Place it outside on a low wall near the house's front entry. This year's carving design was supposed to be Mickey Mouse but I didn't have the two oranges needed for his ears. Still, the result wasn't too shabby. Hope you all had a fun, safe and happy Halloween.



We've faced some trials and tribulations with weather, weed (crop?) growth and entry road conditions. But now we are facing a new challenge. San Jacinto Road will be closed to through traffic for the remainder of the year from Murrieta Road to Dunlap Road for road work. Despite the closure the field can still be reached by taking Murrietta Road north (left) off San Jacinto Road to E. Nuevo Road (right) and then going east on Nuevo to Dunlap Drive then going south (right) on Dunlap to get to San Jacinto Road. Continue straight across San Jacinto and onto dirt heading south toward the R/C field. The dirt road will intersect with two dirt roads heading east (one on each side of the drainage channel. You can take either road east to where it intersects with the dirt road that will take you north to Taibi Field. SCAMPS November newsletter mentions that the alternative route is "bumpy and ill-defined". Another problem is that in the event of rain the route would become impassable. I'm hoping the route gets some manicuring due to the potential increase in traffic. My Toyota Camry is not a good rough road traveler. My suggestion is that you look at the alternative route I described using Google Maps to get a better perspective. My take on all this. Do you remember the Beach party movies of the 1960's? There was a character named Eric Von Zipper who was the leader of the Ratz motorcycle gang. Whenever he met with a mishap he'd say, "Me, why is it always me all of the time?" That's how I'm feeling about the road situation.

The John Hutchinson Memorial was held at Rovey Field in Buckeye Arizona on October 25-27. I did not attend having come back travel weary from France on October 22. That combined with having to repair the planes, I flew and now needed to repair, from flying in the Scale Staffel Two-Day, I didn't take the drive to Buckeye. For those of you who did attend I'm sure you felt John's presence and spirit on the field. I'm looking forward to seeing reports and photos in an upcoming Flying Aces Club News magazine.

Our next monthly outdoor is scheduled for Sunday, November 17 and will feature Coupe, Glider (HL/CL and Tow) and Power (electric and gas). Be on the lookout for an email notice. I haven't seen a cancellation notice for the contest due to access issues so we're on for that date to the best of my knowledge. The Dual Club will be held on Nov. 8-10 in Lost Hills. The contest is a

collaboration of the Orbiteers and Fresno Gas Model Club. This year's event will be the 65th running of the event. For those who make the trip, thermal maxes and good luck. If you're looking for another road trip, The Arizona free Flight Champs will be held on December 7-8 in Eloy, Arizona.

While we're on the topic of contests. From October 15-20 there was a competition held at Lost Hills to select members for the US Free Flight Team. Our own contest coordinator Mike Pykelny was selected to represent the US as a member of the F1Q, E-36 (electric power) team. Mike will be heading to Europe (Czech Republic I think) to compete in the 2025 FAI Free Flight World Champs. Congratulations Mike! Here's to bringing back a world championship trophy.

November means Thanksgiving and Thanksgiving means turkey and I'm crazy about turkey. Love the way it fills the house with a wonderful holiday aroma. In November columns past, I've written about my mom's recipe for sausage stuffing. Hope you saved it because I won't be subjecting you to another list of ingredients and preparation steps. No matter how you prepare your Thanksgiving meal I hope you have a very happy Thanksgiving with family and friends. Me? I'll be looking forward to a healthy portion of turkey and stuffing leading to a warm and fuzzy tryptophan nap.

Happy Thanksgiving
Mark

"There's not a word yet for old friends who've just met."
Jim Henson, "From the President", July-August 2024, NFFS Digest

HE MADE THE TEAM - S.Buddenbohm

Tuesday, October 15th, we headed to Lost Hills, the culmination of an effort to get on the US F1Q team for the next world champs. This will be held in Romania next year. These electric FF models are at the top end of technology with 8 ft wingspans, many auto surfaces, two foot carbon fiber props, energy limiters, and GPS locators.

Flying conditions varied wildly throughout the days. Temperatures ranged from 40 to 90 degrees. Winds were measured from zero to 17 miles per hour. The selection covered 2 contests of 7 rounds plus flyoffs. Competition was very serious and fierce, with fliers from around the country.

A few flights landed at our feet, but most were quite far. A few had to be retrieved from the tops of trees. Our longest flight, having been DT'd at the proper time, continued on for 5.1 miles as the crow flies! As you might imagine with such conditions there were plenty of times where repairs were needed.

Mike never made a bad launch, never made a mistake, and never missed a max.

ORBITEER MIKE PYKELNY IS ON THE US F1Q ELECTRIC POWER 2025 WORLD CHAMPS TEAM!

Free-Wheeling Devices for P-30 Props

By Mike Jester



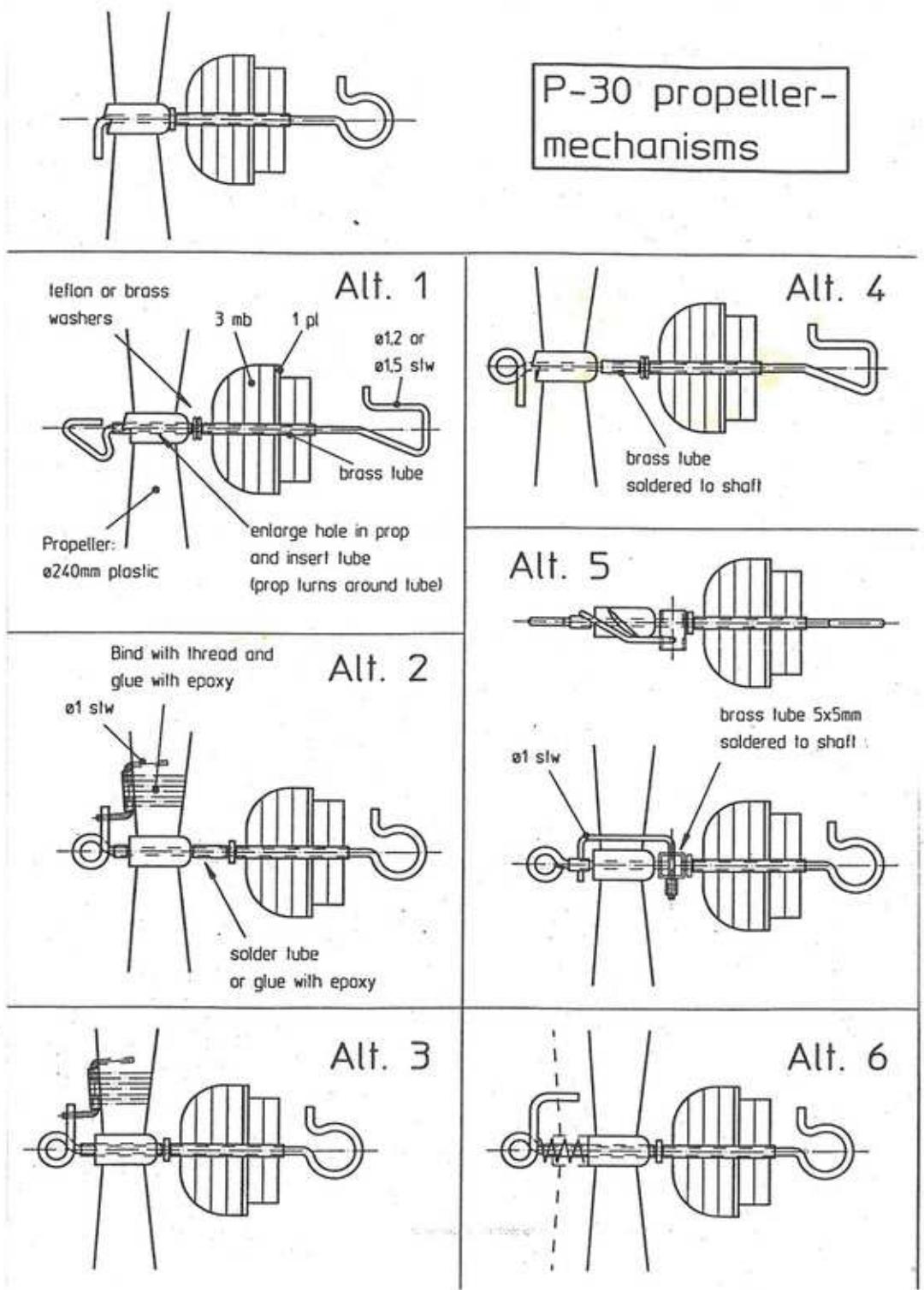
The popular P-30 event was developed by Harry Steinmetz and John Oldenkamp, during the 1970's. Both were long-time members of the San Diego Orbiteers free flight club and were very accomplished designers, builders, and fliers. Around 1981 the AMA made P-30 an official event. Key to the P-30 event being an entry level event, yet challenging for accomplished fliers, is the rule limiting the propeller to "a commercially available plastic freewheeling propeller between 23 and 25 centimeters (9.05 and 9.84 inches) in diameter." By 1974 Peck-Polymers began selling a variety of injection molded plastic props, and one manufactured in Japan had a diameter of approximately 9-1/2-inches. For decades this prop has been the most used P-30 prop, even though its pitch-to-diameter ratio (P/D) of around 1.0 is less than optimum.



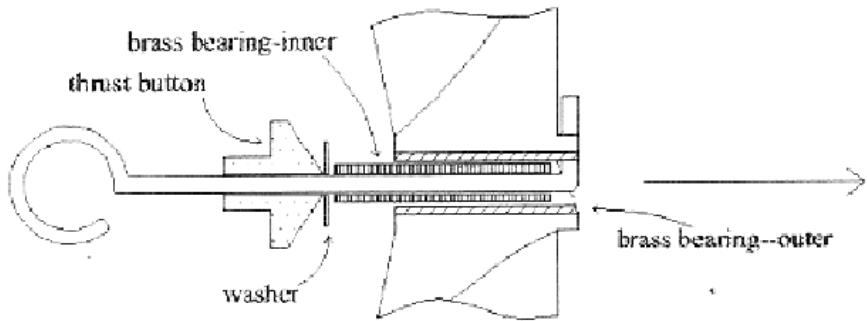
9 1/2-inch Peck Polymers Plastic Prop on 1976 Turkey P-30 Flown by David Steinmetz

Until the advent of 3-D printed props, all commercially available plastic props have been molded with a spiral ramp on the forward end of the hub. A short ninety-degree segment on the front end of the prop shaft referred to as a "dog" engages the wall at the end of the spiral ramp and drives the prop during unwinding of the rubber motor. In theory, the dog rides up and clears the spiral ramp when the rubber motor has unwound to allow for free-wheeling of the prop during the glide. However, in practice, the tension and/or weight of the rubber motor often pulls the dog against the hub, the prop locks up, and its drag quickly terminates the glide portion of the flight. Therefore, as the P-30 event gained popularity various free-wheeling devices were developed and employed on P-30 props. To be legal, each had to comply with the P-30 rules limiting alterations of the plastic prop to removal of flashing, balancing by the addition of weight to one blade, and/or enlarging the hole in the hub to accept a larger diameter shaft or a bushing.

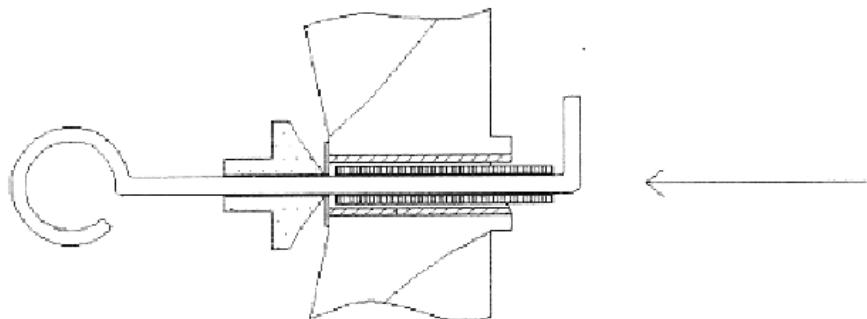
The diagram below illustrates six alternate free-wheeling devices for P-30 props, besides the original spiral ramp clutch illustrated at the top of the diagram. Alt. 2 and Alt. 3 are illegal due to their prohibited modifications of the plastic prop. Alt. 5 is often referred to as a bail clutch.



In addition to the free-wheeling devices above, a very popular tube-in-tube clutch was popularized by Stan Buddenbohm and used in his highly successful Air Shark P-30 which was kitted circa 1999. In this device after the motor unwinds the prop slides rearwardly due to the oncoming flow of air during the glide. The inner tube projects about 1/16-inch forward of the outer tube and prevents the dog on the drive shaft from engaging the wall at the end of the spiral ramp, thereby ensuring free-wheeling during the glide.



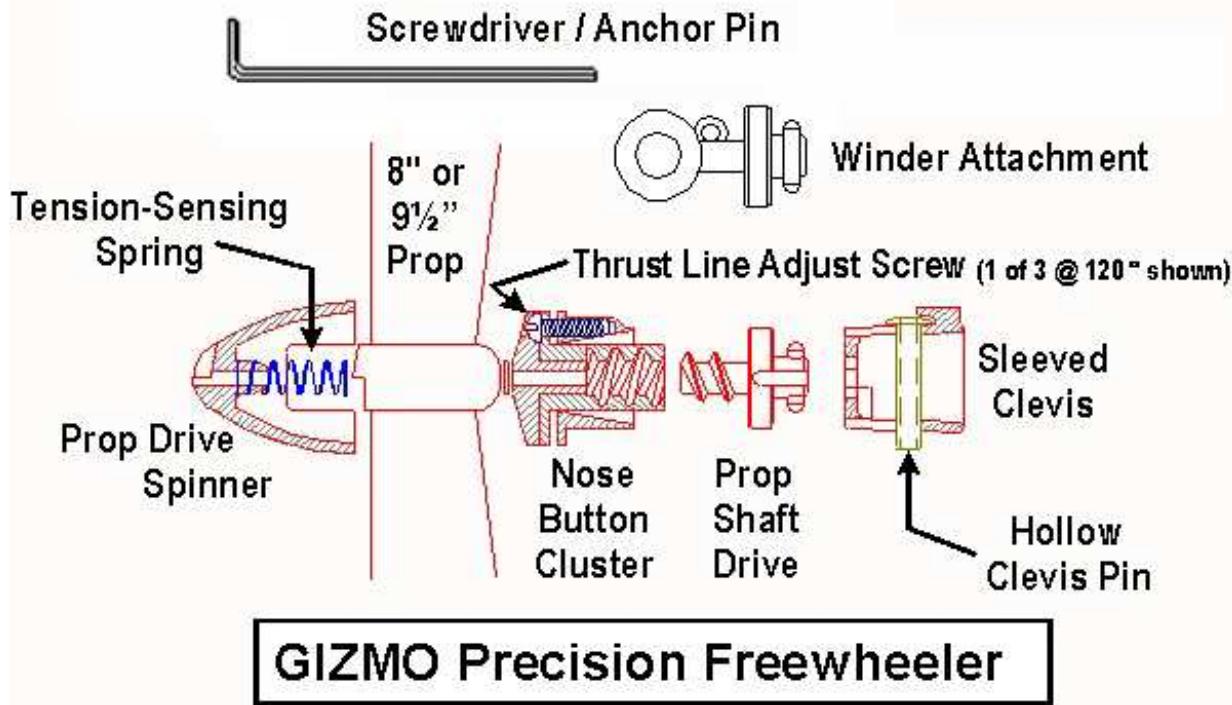
Prop forward--ramp clutch engaged



Prop rearward--freewheel position

Tube-In-Tube Free-Wheeling Device for P-30 Prop

Sometime after 2000 Orv Olm developed and commercialized his Gizmo Geezer prop assembly. One version incorporated the 9 ½-inch Peck prop re-pitched to a higher P/D of around 1.3. This version was soon determined to be legal under the P-30 rules and has been widely adopted by beginners and experienced free flight enthusiasts in their P-30 models. Orv's brilliant design includes a highly reliable free-wheel mechanism that leaves about 50 turns on the standard P-30 rubber motor. The remaining turns eliminate any rubber motor bunching and CG shifting. This avoids any necessity to braid the rubber motor in P-30 designs with a hook-to-peg distance significantly shorter than the standard 19-inch dimension. Another key feature is the nose button that includes three screws that allow for rapid and precise thrust line adjustments. A drawing illustrating the construction of the Gizmo Geezer free-wheeling device is reproduced below.



Early in my free flight experience the orange Chinese prop on my Pirate P-30 locked up when I was relying solely on its spiral ramp for free-wheeling. Of course, the glide was killed and I did not achieve a two-minute max. So, I adopted the bail type clutch which worked well for me until Stan Buddenbohm gave me a P-30 prop and nose block assembly which incorporated his tube-in-tube clutch. I found this to be a simple inexpensive alternative, the only caveat being that you need to pull forward on the prop while inserting the nose block and while heading to the flight line. Otherwise, the ninety-degree dog on the end of the drive shaft can disengage and you will hear a super-fast unwinding of the rubber motor. It is not possible to do a sharp bend of a .047-inch P-30 drive shaft when making the drive dog, but you can improve the reliability of the tube-in-tube clutch by grinding a flat face on the dog where it engages the wall at the end of the spiral ramp. You also need some thin-walled 1/16-inch OD Brass tubing that will allow the standard .047-inch prop shaft to rotate freely inside of the inner tube segment made of the same. Nowadays I mostly use the 9 ½-inch Gizmo Geezer prop assembly on my P-30 models due its advantages summarized above. Over the years there have been other free-wheeling devices used with P-30 models, such as the Crocket clutch mentioned to me by Don Bartick, but I have no details on them.

San Diego Orbiteers Board of Trustees meeting

October 23rd, 2024

Held at the Merrill's home, with 9 in attendance.

After lunch, the meeting was called to order at 1:03 p.m.

Minutes of the previous meeting were approved as published in the E.T.

Treasurer's Report was approved as provided to the board members (thanks Howard!).

Membership Report – not much new, just is continuing to answer questions as they come into the website.

Old Business:

Potential indoor flying sites were discussed; including Miramar College, Grossmont College, San Diego Arena, and Peterson Gym at SDSU which may be the best.

Still looking into the possibility of an alternative outdoor flying site.

SDSU AES 123 class needs help on Wednesday, 12/11/24 with timing students. It will be on the soccer field from 1-2p.m.

New Business:

Taibi Field in Perris, CA has been mowed and is in much better shape. Unfortunately, San Jacinto Road will be closed by the time you read this. We are currently exploring an alternative route to access the field. A little more difficult, but not impossible.

Greg Hutchison has agreed to become our newest board member. Thank you Greg and welcome aboard!

Jake Olefsky has graciously been upgrading our website, thank you Jake!

Discussed the possibility of an indoor site at Mira Costa College in Oceanside. No contact yet.

Annual banquet was brought up. Linda will be making the arrangements. Thank you Linda!

Michael Smith, Curator of the AMA model museum in Muncie, IN has asked for our help with a possible new exhibit about the history and development of the P-30 event. Don Bartick has taken the lead on this. It is fitting that we contribute to this, as it was started many years ago by fellow Orbiteers John Oldenkamp and Harry Steinmetz.

Contest Corner:

We were finally able to restart our monthly contests, with one on September 22nd, another on October 20th, and one upcoming (hopefully) on November 17th.

Scale Staffel held a two-day contest on September 28-29, 2024. Nice weather and good flying conditions. Thanks to William Scott for hosting the contest.

The John Hutchison Memorial Contest will be held in Buckeye, AZ October 25-27. A great chance to fly in nice soft alfalfa!

Next year's schedule was discussed, but not finalized. It will be published soon.

Contest Reports:

2024 AMA Free Flight Nats – Don discussed the contest, and his write-up was already published.

U.S. Free Flight Champs was held September 13-15 in Lost Hills. Don reported that there was poor attendance, with only 2 entrants in P-30 and E-36.

Congratulations to Mike Pykelny, who recently made the F1Q USA National Team!!!

The 4th quarter board meeting will be held on December 11th at noon at the Jester's home.
The board meeting was adjourned at 3:00 p.m.

Respectfully submitted by John R. Merrill, secretary



EP30 - A PROPOSED EVENT DEMONSTRATION

A concept for a new event is being explored. This event combines two popular events into one new event that utilizes components of models that have been built for the source events. The source events are E20 and P30. Both popular events with a high fun factor.

The proposed new event is EP30. This event uses the airframe of a P30 model and the electric power system of a E20.

To demonstrate the feasibility of the EP30 concept, a deomstration competition will be held Tuesday evening after the E20 flying is complete. A set of simple rules has been proposed by Stan Buddenbohm and that set of rules will be used for the demonstration competition.

The proposed rules are as follows:

1. Minimum flying weight of the model is 50 grams. This includes the airframe, power system, battery, and timer.
2. No part of the model shall exceed 30 inches when it is in assembled condition.
3. Maximum propeller diameter is 2.7". Any number of blades can be used.
4. Electric motor used to power the model must be a coreless electric motor with a diameter of 8.5 mm and a length of 20 mm. No gear drives are allowed.
5. A single cell lithium battery of any capacity, or two nicad/nmh cells of any capacity.
6. Motor run time is 20 seconds for the first three official flights, and 10 seconds for the fourth and subsequent flights until a max is not achieved.
7. Maximum flight time is 90 seconds for the first three official flights, and 120 seconds for any subsequent flights.
8. Attempts. A motor timer malfunction (fails to shut off or restarts once stopped) is an attempt. A flight of less than 20 seconds is an attempt, but it can be used as an official flight if the contestant declares it. No limit on the number of attempts to achieve three official flights.

EP30 Electrical System



By Mike Jester

BMK in the United Kingdom sells a complete E20 package that makes it easy to convert an old rubber-powered P-30 model to an EP30 model. It includes a tiny electric motor, along with right-handed and left-handed handed props that press fit onto the motor shaft. The E20 package from BMK also includes a 150 mA LiPo battery, a charger, and an extra cord with connectors. The charger can be connected to a standard wall-mounted 5-volt DC charging brick through a standard cable with a normal USB connector at one end and a micro-USB connector at the other end. The E20 package from BMK also includes a tiny PC board with a timer/motor controller/band burner DT. The motor run time and DT trigger time are separately programmable. Easy-to-follow instructions for programming and charging are on the BMK website. This E20 package is available in the US from J & H Aerospace for \$50 if you want to avoid shipping costs from the United Kingdom. A picture of my EP30 is reproduced below. I ended up using the left-handed prop as this is the one that produced rearward thrust when the motor was energized. I mounted the PC board on the side of the fuselage, and the motor and LiPo battery inside of the nose of the fuselage. The motor is mounted in a hole in an otherwise standard nose block and fixed in position with a little CA.



EP30 By Mike Jester



WHAT YOU NEED FOR AN EP-30 - S.Buddenbohm

A P-30, but you won't need the parts that are for rubber power.

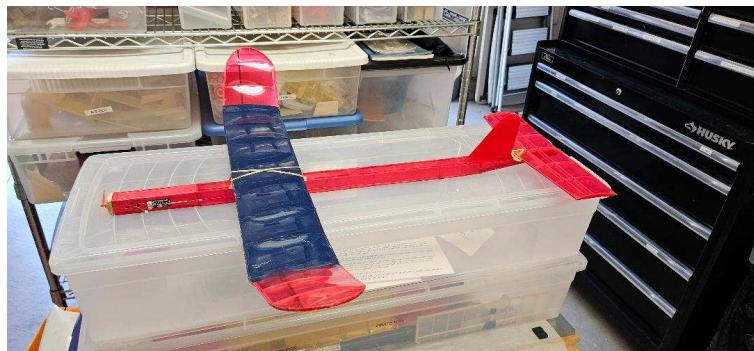
An E-20 power train. Rules for E-20 can be found in the free NFFS rule book. Parts can be bought separately or as complete systems from some FF suppliers. Basically it consists of a timer that controls the motor and has a mechanism to dethermalize, an 8520 motor, and a legal propeller. A legal propeller is 2.7", or less, diameter. Most 8520 motors have a shaft that is either 1.0, or 1.2, millimeters. I buy props with 1.0mm holes, and use a drill bit held in a pin vise to enlarge the hole, if needed, by hand, for a snug fit onto the motor shaft. This is not hard to do. Some suppliers sell motors with props that already fit.

Single cell lipo batteries that will connect to your chosen power system. I use Tattu 1S 270 mah batteries. (1S strands for one cell). They use a good connector called PH2.0. These batteries are rechargeable. They will easily make four 10 second runs, or two 20 second runs, before needing to be recharged. It would be a good idea to learn a bit about caring for such batteries. With just a bit of care they will last for very many flights.

A charger. I like a simple, cheap, charger that plugs into a USB port. It will charge up to 6 batteries at a time.

You may also want a small device to measure voltage on these batteries. It should have a PH 2.0 connector. They are cheap. Also, a discharger for these batteries, not strictly necessary, can be a nice luxury. There is no need to spend a lot to do this job. Devices that work can be less than \$5

Depending on your choices you may need the ability to solder, some of the right connectors, and maybe some of the right size wire.



This EP30 by M.Jester is slightly over 45 grams, but with the addition of a Walston RF tracker and its batteries, this model should weigh close to the 50 gram minimum. The prop, motor, timer/band burner, 150 mA LiPo battery, and charger are a package from BMK sold in the US by J & H Aerospace for around \$50.

FROM THE WORKBENCH - J.Merrill

Greetings! I've started a couple of new projects recently.

One is a 20" wingspan Fairchild trailer from the WWII era. It's a "Double Nickel" kit from William Scott's P.T.Aviation series. This is the 3rd of the series I've built; one flew great, the other absolutely refused to fly. Unfortunately, I'm not smart enough to know how to convince it otherwise.

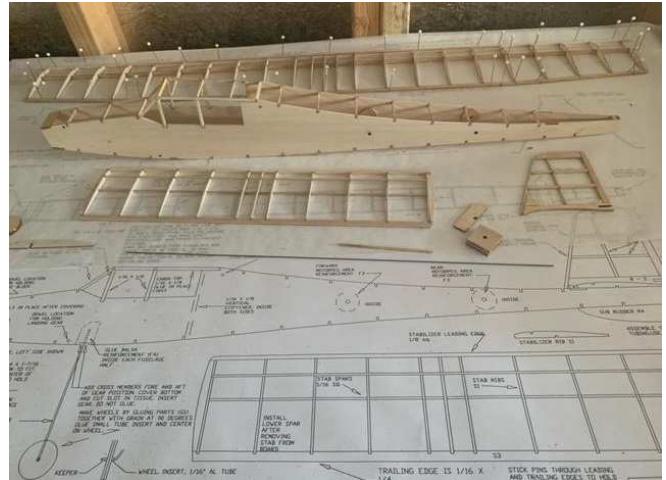
The other project is a model from J&H Aerospace called "Echo". It is primarily a P-30, but can also qualify as a Hi-start glider (by changing nose plugs) or as a Small Mulvihill.

It has a cabin fuselage and removable landing gear.

It may possibly be the most complete kit I've ever seen, with everything imaginable included. It's a pretty easy build; it could easily go together in a day or two if using CA glue. I still prefer Titebond, so will take a few extra days to complete.

That's it for now; I hope to have these completed by the next newsletter.

So, what's on your workbench?



ECHO
P-30 Endurance model
By J&H Aerospace ↗
www.jhaerospace.com

Ken Grubbs' beginner friendly contest model for AMA P-30, Hi-start glider, and Small Mulvihill

Build manual:



OCTOBER MONTHLY (October 20, 2024) PHOTOS - A.Bartick



Continued Next Page

OCTOBER MONTHLY (October 20, 2024) PHOTOS - A.Bartick (Continued)



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WHAT'S HAPPENING - OCTOBER 2024



- November 17 - San Diego Orbiteer Outdoor Monthly Events: Coupe / Glider / Power Taibi Flying Field, Perris CA, 7:30 am
- December 15 - San Diego Orbiteer Outdoor Monthly Events: **Make Up** Taibi Flying Field, Perris CA, 7:30 am