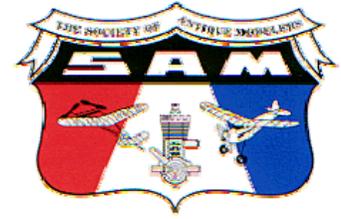


**THE NEWSLETTER OF SAM 26, THE CENTRAL
COAST CHAPTER OF THE SOCIETY OF ANTIQUE
MODELERS. LATE SEPTEMBER 2011 #258**



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NEXT CHAPTER MEETING will be at Dick Fischers' on October 19 at @ 7 PM.

FLYING SITE NEWS: Steve Hulse found a possible substitute for Taft, should Condor Field eventually become unavailable. It's the Bakersfield BARKS club field. It's just off the Elk Hills road between Taft and Buttonwillow, about 18 miles NE from Taft over a nice lonesome paved road.

When Steve gets back from his Alaskan moose hunting trip, we'll gather more information. But he says the BARKS seem to be a friendly enough group who could probably put up with us for a weekend. He says the site isn't as spacious as Taft, but has a paved runway. It's fairly near the California aqueduct, so I suspect if we ever fly there, we should probably bring a small inflatable raft and a special trophy for the first ship to land in the canal.

TAFT is a quaint little town and one of my favorite places to fly. But perceptions of the town vary by individual. In the Robin Williams movie made in and about Taft, someone was defending the town to a detractor. About all he could come up with was that Taft was the safest place in the US to be during a nuclear attack, because there was no wind to scatter radiation.

More recently, Helen Smart, a local author wrote a book entitled "Lord save me from Taft". It's an autobiography about the time she spent in Taft circa 1949 when she moved there with her oil geologist husband. The theme is about how a person can "endure and succeed in the midst of emotional and physical challenges and adversity".

THE JOHN POND COMMEMORATIVE comes up October 29&30. If you haven't marked your calendar, do it now. The flyer was in the last newsletter.

CHARGING LI-PO BATTERIES using a balancer could end up giving you a less than full charge. Unlike Li-Pos, when you charge Ni-Cds using a wall wart charger it keeps right on charging until disconnected. And when using quick chargers they kick over to a trickle charge at the end. So you always get pretty much a full charge on Ni-Cds.

But with my Li-PO charging setup, the "smart" charger kicks off permanently at the end. However, the balancer keeps on balancing. A balancer discharges the stronger cell or cells to match the voltage of the weakest cell. So the battery is slowly draining itself until you unplug things. I didn't do a precisely controlled test, but recently after finding my charger had finished its act between 20 minutes and an hour earlier, I reset the charger and stayed with it to find that approximately 10% more MAH was pumped into the battery. Yes, I know, for safety you're supposed to stay right there watch batteries charge. But how many of us actually do that?

The Ignition Problem Never Mentioned

by Bill Schmidt

I first got back into spark ignition systems for models in 1980 although I tried to do it as a kid in the fifties. I then invented the "SCHMIDT TRIGGER" in 1985 which is the most widely used transistor ignition in use today. See MA August 1985 for the original article. Through the years I've gained quite a bit of knowledge in the operation of model spark ignition systems and the problems that you can encounter. This isn't about dirty points and weak batteries but rather the other bug-a-boos that crop up in a spark ignition system that never gets any discussion and indeed most people don't understand.

Let's talk about degrees of dwell as related to the ignition points. The dwell angle is the number of degrees the crankshaft moves through with the points closed. Just put an ohmmeter across the points and turn the prop while imagining the number of degrees it travels with the points closed. If you aren't good at determining the dwell this way you can get very analytical and put a protractor on the crankshaft. If your engine is a low rpm type such as a Brown Jr., Atom .09, Bunch, Elf or even an early Ohlsson you can get away with a very low dwell time period of 60 – 70 degrees. To do so conserves the life / charge of your onboard batteries.

The Atom has about the shortest dwell period of any engine I've ever come across measuring about 30 – 35 degrees. Ray Arden who designed the Atom foresaw the fact that the models for the engine would be small and light and unable to carry much weight. Dan Calkin thought the same thing about his small, low power Elfs. Dan went so far as to wind his own special ign. coil to operate on only one pencil. I'd like to have one of those myself today. Insufficient dwell time results in a high speed stutter when the engine is peaked out. This same problem shows up when the batteries are low or the voltage is not enough for the job. When you get roughly above 10,000 rpm in your operational engine speed it becomes necessary to increase the dwell angle (duration) of the points to 90 – 120 degrees of crank rotation. Some McCoys and Doolings will require upwards of 180 degrees of dwell to obtain sufficient coil saturation time to avoid high speed stutter / miss. We're talking 13 to 16,000 rpm range in this case.

The Arden engines have a neat cam that gives an unnecessary 180 degrees of dwell that really eats up your onboard batteries. Go measure this for yourself. Why Ray Arden dropped the ball so badly here is a real mystery after his mindful design with the Atom. Arden engines do nicely in the 8 – 11,000 rpm range with 90 – 120 degrees of dwell. I have made new cams for my Arden engines to decrease the dwell problems that are more commonly known and recognized.

These are the don'ts that are mentioned in the literature that comes with the engine and are shown on the model plans. Use the right size wire. Solder, don't just wrap the connections in the system. Never place the coil on or near a ferrous metal sheet or component. I had a Eureka moment with this one some years ago. The Cleveland Playboy Jr. and Baby plans show the coil banded tightly with the batteries. I think Joe Elgin had nothing to do with this diagram but we can't ask him about it now. The main reason I wrote the article is because of one of the most insidious and maddening things that can sneak up on you isn't mentioned much. If you encounter a high speed miss that isn't attributable to any of the above just look carefully at the riveted points on your timer. Is there a bit of black residue around the riveting?

Very close examination of the riveting will disclose a loose joint that results in poor electrical continuity at different speeds. The Brown Jr. Hurlman type timer with the under slung moving point ate me alive at one outing years ago. A Super Cyke moving point was nearly undetectable to me yesterday. DO NOT place the tungsten point on a piece of steel to pound the rivet tight again. The tungsten will shatter in many pieces. I clean the assy. in lacquer thinner and place the tungsten face down on an aluminum plate to reset the riveting. I then solder the rivet joint carefully and again clean the part with lacquer thinner. I know a lot of folks who won't fool with spark ignition and its many requirements, but for us who enjoy the thrill of its successful operation, keep these suggestions in mind.

Best, Bill Schmidt

BILLS' ARTICLE came from the SAM 56 newsletter of WHAM, or Wichita Historical Aviation Modelers, Jeff Englert, Editor.

When Jim Adams was still with us, he had an erratic running Brown Junior and finally, after a lot of grief, found that loose point problem Bill mentioned. Jim alerted me at the time and I wrote it up in our newsletter. I then went through my Brown Junior engines, cleaning and soldering the points. I found just one that might have become a problem. I didn't try to re-stake the points as they didn't seem to be loose enough to bother. The solder alone has worked fine.

There is a related problem that can also crop up and cause grief. You can have a poor ground connection between the timer case and the engine block. Often you'll fix it on an engine such as an O&R, just by tightening the retaining or clamp screws. And you might never know what caused it or how you cured it. But sometimes the permanent cure is to run a copper ground strap from the timer case to an engine mounting lug.

WHAT'S THIS BELOW?



Jim Bierbauer recently built this whip powered control liner from an original kit. Whip powered models were popular in the 1940's as control line trainers. You used a regular control line handle with the 1/2A size lines strung through the tip ferrule of a fishing pole and whipped the model around the circle with one hand while steering with the other. Since your Editor supplied the pole I got to share the flying with Jim. It flew successfully, but wasn't really capable of much stunting as we couldn't get up enough speed to do loops or even get it inverted. But at least Jim and I both managed to stay on our feet, since we could easily land whenever we started getting dizzy.

FAILSAFE is one of the many features of computer radios that have never given me a warm fuzzy feeling. Steve Boucher sent the following message across the airwaves.

“I have had several range failures with my Hitec 2.4 Ghz radios which I have traced down to the "fail safe" receiver mode. I had set my receivers to "failsafe" shortly before the contest and I had no problems preparing for the Muncie Midwest Champs this month when I flew below maximum height. I then flew my Playboy to full height and it went crazy, shed the wing and was totaled. I put this down to radio failure and sent the receiver and module to Hitec, who could not find a fault. At the contest my Record Hound suffered the same fate twice, being totaled the second time. I finally interpreted the problem as the attenuation of the signal at maximum height (range) causing the receiver to enter the failsafe setting I had made (full left, full up and off throttle) and failing to reset on the way down. These latest failures occurred on day one. I then deactivated the failsafe on all my other receivers and had no more troubles like this. I guess the "failsafe" feature is OK for pattern and sport but I think you should be careful when the signals are weakened. Hope it doesn't happen to you.” Steve

SIG NEWS from Ned Nevels.

I think I have good news for everyone. Ed Hamler had been getting spruce from Sig until they decided to discontinue it. Sig was sold to some Aussie investor by Hazel Sig and a lot of changes were made. The investors have just sold it to new American owners who have told their employees that Spruce will be coming back-along with a bunch of other products dropped by the previous owners. Ed spoke with an employee of Sig for this info-and like all businesses, their plans are subject to change, so your mileage may vary but it's much better news than we had previously to work with. Ned

OOPS! By Jim Hainen.

Yesterday while in a hurry to break-in this **Brown Jr.** which I had just had new rings installed, fantastic compression, I reached for the fuel bottle and grabbed the wrong one. Glow fuel with Nitro is not good for your Brown Jr. As a matter of fact the only fuel good for a Brown Jr. is old fashion gas and oil and don't

be stingy with the oil. Anyone got a spare crankcase and rod? Jh



And while we're confessing, your editor once did something similar, destroying the case of a nice Phantom P-30. I didn't have gas'n oil on hand, so used mild (?) 5% nitro fuel. It started and ran fine until the needle leaned to just begin a 2 cycle sound when it let go.



HERE WE WERE in the good old days (2006) at the John Pond Commemorative at Taft.

The turnout was great, along with the weather.

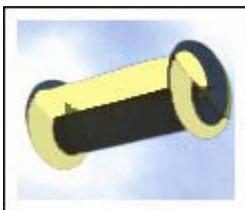
Do you suppose we can duplicate most of this scene in October?



And here's part of the '08 crowd at the closing ceremonies of the Crash 'n Bash at the Schmidt Ranch.

View is from the house toward the flying field and the afternoon sun.

With this year's event just concluded, we eagerly await results.



ANOTHER WIND ENERGY GENERATOR? Here's another of many proposals for generating electricity, which will probably never fly. rla

“The horizontal rotor kite is a very unusual kite. It has been around for quite some time although its' exact date of origin or its' inventor have not been determined. Rotor kites are usually quite small when compared to other kites found in the skies. Indeed, the rotor kite seems so much like a

child's toy in that the vast majority of serious kite hobbyists do not even own one.

The horizontal rotor kite achieves flight through a little known scientific principle, the '[Magnus effect](#)'. Kite flyers are generally very knowledgeable about the principles of lift and the Bernoulli effect, but often are not as aware of the Magnus effect and how it provides lift to a horizontally spinning object.” (Continued next page).

ROTO KITES – Editorial Comment: Around 1960, I picked up a toy styrofoam roto kite for my two boys and I to play with. It was maybe 1-1/2 to 2 feet wide with the "S" shaped cross section. It had round end plates and flew horizontally. It used a large U control type handle held horizontally, with lines running to each end of the kites' axle. You could maneuver it back and forth with the ukie handle, and if I remember right the control was counter-intuitive. That is, when you pulled the right string in toward yourself the kite went left. We never even knew we were experimenting with "Magnus Effect".

I can't imagine such a kite flying loosely around generating electricity, because most of the energy is being used making lift. But if the idea became practical I suppose you could make rigidly mounted banks of the things. And I don't see why they couldn't be mounted with the axis vertical instead of horizontal.

TORQUE WRENCHES: The October Engine Shop column in Model Aviation partially answered a fellows' query about torque wrenches. It sounded like the asker had no idea what a torque wrench or "torque driver" was or how it worked. The columnist corrected a statement from his first column, and gave a suggested value of 19-21 inch pounds for the head screws of the engine he was currently reviewing. I got all excited when I thought he'd switched from inch ounces to foot pounds, but upon re-reading he'd gone to inch pounds not foot pounds.

Still, be aware his recommendation of 19-21 inch pounds for heads and 15-16 inch pounds for back plates was for the 150 size engine he was reviewing. That would be way too heavy for engines in the smaller sizes that we use.

There are inch ounce, inch pound, and foot pound torque wrenches available. Of the three pictured below, I generally use only the small torque screwdriver at the right for model engines.



The large wrench is calibrated in foot pounds and for you metric enthusiasts it has a second scale in meter kilograms. At its' max reading, 140 ft. lbs. = 19.36 meter kilograms.

The middle wrench is calibrated in inch pounds and also in centimeter kilograms. Its max reading is 600 inch pounds = 691 centimeter kilograms. So in. lbs. and cm. kg. are nearly the same.

The small torque screwdriver is also calibrated in inch pounds, but has a more expanded scale than the mid size wrench, for more accurate readings. It has a 12 in. lb. max reading, which is enough for most model engines. I usually just cross tighten a head or back plate by feel, and then finish by using the torque screwdriver to equalize each screw.



SAM CHAMPS 09 action at Boulder City NV by Ned Nevels. Start of the C glow fly-off. If all works out as planned your editor will be there for 2011 next Monday Oct 3, along with a batch of other “official” SAM 26 members, many of who we only get to meet at such gatherings due to our geographical spread. We should have at least a mini-report of the Champs for the next issue.



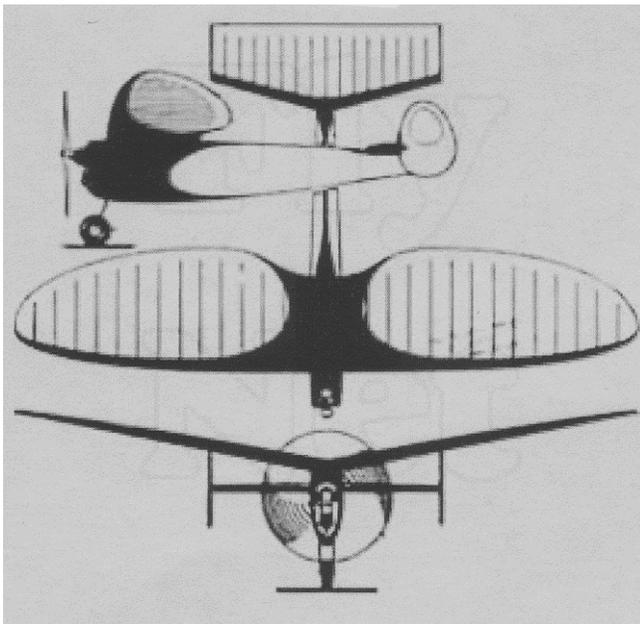
THE FEATHER

MERCHANT belongs to Australian Evan Evans, who explains the unusual color scheme. The wing passed through some hands via inheritance, gift etc., but without the fuselage. Evan built the fuselage and flies it with an OS 26 FS. He says it glides beautifully and he feels it's under rated as a competition ship.

Fred Lehmborg designed the Feather Merchant so it may be fitting that it has an unusual color scheme. Fred seemed to prefer the unusual, as his “Goon” design was even more unusual. I think Mike Myers has flown both those designs, as he too likes the unusual.



RARE BIRD? It's a Falcon, designed by Paul Plecan and featured in Model Builder. I believe this one belonged to Gerald Martin. It's a 60" span 1940 Old Timer category design.



Since the photo above doesn't do justice to the graceful wing planform, here's a three view of the Falcon scanned from the SAM web site. Courtesy of Trevor Boundy.

There are three views like this, along with lots of data on the SAM website. Just go to Antiquemodeler.ORG, click on "Approved lists" and Model Recognition page.

When you get to the model, the picture square will say "Not available" until you move the cursor off the square, then the three view will appear.

You can also search for models designed by a certain person on this web site. I gave it a try just to see for example if Michael Roll was credited with designing more than two ships. He wasn't. But at first I couldn't bring it up using his full name. You must use only the last name of the designer. That makes sense, because many references use only the last name. So for Kicks, I searched for SAL Taibi and saw the whole list of his designs.

RUBBER WINDER: If you haven't noticed, rubber fliers don't just wind the prop backwards with their finger anymore. They use special winders with turn counters and torque meters built in. Rubber ships now take almost enough support equipment to launch a space shuttle. But Neil Denis sent an idea for those who'd just like to fly a simple little rubber job for fun. He uses a bent nail in a hand drill to wind. But to solve the problem of the nail pulling out and doing damage, he opens the drill chuck wide and inserts the nail head behind the chuck jaws. You might have to find a nail with a small head to fit some drills.

BATTERY FOLLOW UP: In the last issue I told my story about the Ni-Cd charging experience where I happened to find low voltage via the ESV before quick charging an ignition pack. The charger then put in way less than it should have before shutting off. The smart charger probably saw the one sick cell come up rapidly, viewed that as a peak, and turned itself off. A follow up charge brought it up and it worked OK for the day. The following week, the battery wouldn't charge up fully, and had to be replaced.

I guess the moral is it's a good idea to check voltage under load before charging. And even though some believe fast charging shortens battery life, I haven't seen that to be the case, especially if you use a rate that doesn't heat up the batteries significantly.

THIS PACIFIC ACE SPORTSTER built by Bob English has become a favorite magazine subject (SAM Speaks cover, Model Aviation column etc ;) because of its' striking finish. But here, Ned Nevels shows a close up of some of the fine detailing that also went into the bird. It's more than just a stand-off display ship.



THE LAST WORD: Maybe there will be an October edition, maybe not. Right now I'm pushing to get this newsletter out before heading off to the SAM Champs. Then with our Pond event coming up, it will be a busy October. But all this activity should provide plenty of contest results and photos for next time. We don't guarantee an issue every month, which is why I number them, as well as show the month of publication. Theoretically there could be two issues in a month, but that hasn't happened yet. Hey, I notice some newsletters are coming out every other month, and a few have even become quarterly.

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