



Somerset RC

A Chartered Club of the Academy of Model Aeronautics
est. 1972, AMA 1001

**Dedicated to the Enjoyment and Promotion of
Radio Control Model Airplane Flying**

CLUB NEWSLETTER www.somersetrc.org July-August 2019

A "Member Helping Member" Club for ALL AGES!

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domecqsmith@msn.com

Do you have something for the next issue?

Send it along to the editor's email above!

Next issue this September

****IN THIS ISSUE****

From the President..... 2

Krill Extra 330 LX—Part I by Bob Both3-8

Treasurer's Chest by Dave Szabo.....9-10

Field Accessibility Update by Domecq Smith..... 11-12

Mystery Plane Challenge.....13

Member Profile—George Mariasz.....14-15

Club Schedule.....16

Humor.....17-18

Club Application and Info.....19



Domecq handing a transmitter to scout Logan Shepherd after a buddy-box flight with him on Opening Day

From the President

Opening Day for Somerset RC was celebrated with the dedication of a new flag pole, field bulletin board, and introducing eight Boy Scouts to some of the agony and ecstasy that our hobby can offer. We had a

grand turnout of our membership

and guests. I thank **Tony Rossi** for his pictures of the event currently posted on our website. I thank him because I was bent over the uncooperative engine of the scout's newly built Kadet for all of the morning as well as some of the afternoon. It was an engine whose cantankerousness just about converted Rich Blatt to the electric cause. When I later saw the pictures, I was surprised at how many planes had actually taken to the air that day. We were eventually able to get the engine running consistently, and all of the scouts had the opportunity to fly it via buddy-box. Thanks again to **Dave Rollino** (field cafe), **Bill Brouillard**, **Dave Szabo**, and **Larry Gray** (flag pole and bulletin board), **Rich Blatt**, **Jon Gerber**, **Larry Gray** and **Jim Vigani** (instructors), and **John Samtak** (music).



Please note that you will shortly be receiving a link to a survey. To better serve our members we want to collect information about your flying preferences and what you would like to see our club doing in the future. Your identity will not be asked, and the survey platform can not collect IP addresses. We will share the results in our next newsletter. Thanks to **Dave Szabo** who is undertaking this research.

In this issue, we present Part 1 of **Bob Both's** recent build of his 34% Krill Extra 330 LX. It's epic build reading. * **Dave Szabo** contributes an article about how to install an internal speaker system into your transmitter. * I report to you about recent developments regarding field accessibility at North Branch. * You can also read about **George Mariasz** unique story of model aviation in our member profile. * And of course our mystery plane challenge awaits you.

—**Domecq Smith**, President, Somerset RC
domecqsmith@msn.com

Feature Construction Article

Building a Giant—Krill Extra 330 LX Part 1

by Bob Both



My winter project for this year was a 34% **Krill Extra 330 LX**. Krill models are composite and made in the Czech Republic. The Extra 330 LX was designed in collaboration with Krill by world champion Gernot Bruckmann.

I chose the 34% version due to size limitations for me to handle and transport such an aircraft. It's very close in size to my Sukhoi that I had from Krill; its wing span is 103", its length 97", and the finished weight is about 30 pounds.

The Krill 330 LX was designed more for precision maneuvers as flown in IMAC and limited 3D. Krill has a 330 SC for 3D.

Power is a DA 120 with the new carburetor and vent, and a pair of newly designated KS 3086 cans for the DA 120. These are about 3 ½ inches longer than what was previously recommended and are rear dump. The plane has eight digital servos, three each Fromeco 5400 batteries, three Fromeco badger switches, Smart Fly power expanders, regulators at six volts and equalizers. Also, SWB pull/pull system, 27x10 three-blade prop, and a 32 ounce tank. It also has a Taildragers tail-wheel assembly. Radio will be my JR9503 with a JR 921 receiver and MKS 777 servos delivering about 400 oz/in per servo at six volts. Last but not least, a whole lot of paper with a portrait of Benjamin Franklin on the front.

I placed my order in October 2018 with Chief Aircraft on a plane they had on order with Krill with a forecasted delivery date of mid-November. November came to a close and no airplane. I became concerned, as the holiday rush was on, and the area truckers have not been kind to us modelers in the delivery of our airplanes. With a model out of Krill, any issues from damage would take months to replace. I couldn't get the images out of my mind posted on "Flying Giants" by another flyer in the area who last spring had a custom composite ARF trashed, and recently, there were two identical airplanes delivered just after Christmas to club members from the same company, and one was trashed and the other not a scratch.

I received an email when the delivery would happen. The plane arrived via FedEx truck to my home. When the driver opened the door, there, at the back of the truck was my plane in its box, with a large hole in it!



I took a deep breath and helped the driver off-load the box. I quickly removed the outside frame, and opened the box to inspect it for damage, and there was none. Chief Aircraft took extra precautions and built a frame around the factory box. Even with that and a top name freight company, there was a hole the size of a softball in the box.

I hurried inside to assemble it for the first time. Once assembled, taking a step back, I got the whole effect, and believe me, it was an eye-full. The colors are bold and vibrant, and not a busy scheme, and the fit of the wing saddle, canopy, cowl, and horizontal were all great.



Sitting down with a cup of coffee, looking at the plane, I was, oh, so thankful that it was here, finally, and in one piece—Wow!

So then I looked at the goody-bag with the plane. Krill offered nothing in the way of instructions, or a bill of materials of what was included. If you order a Krill, expect very limited information and support from the factory and Chief Aircraft. I would also suggest you order their main wheels and tail wheel assembly. The wheel pants are narrow and finding a decent 4" wheel that doesn't require hogging out the side of the wheel pant and weakening it is difficult. Same goes for the tail wheel. Their unit is well below what the asking price is here.

So after initial inspection and assembly, I found a missing control horn from the bag of hardware. I let Chief know within two hours of delivery, and almost six weeks later, I was still waiting for the missing part. The horn was special, and could not be duplicated here in the states, and finding it in Germany, the cost of one was about \$10 with another \$35 for postage. After four weeks, they said they sent one to me, regular post. Without any documentation, I was told that it wouldn't make it past customs. I waited two weeks after their first mailing, and let them know of my feeling on their lack of support. Three days later after another call to Chief Aircraft, they sent one registered priority mail. It arrived on the 5th of February. Their mistake cost them 90 Euros in mailing plus the \$10 part.



So with all my parts, now I could focus on the build, and order what I needed.

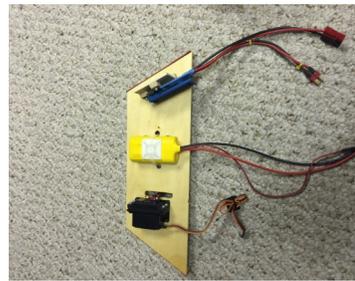
Getting the plane on its feet was the first plan of action. I purchased a set of 4" DuBro main wheels and a Taildraggers RC tail wheel. The DuBro were the narrowest I could find in the diameter I required. Hogging out the side of the pants weakens them, and custom matching pants from Krill are hard to come by and expensive.

When I mounted the pants, I first reinforced the wheel pants inside with 1/8 light ply. Generally, the wheel pants were not thick enough for a blind nut and I used one for retaining the wheel pants on the landing gear. I then drilled and tapped the CF gear 5/16x24 fine threads for the axel. Locating the center for the axel on the pants for the desired wheel on the outside, I drilled a 1/2 inch hole in the pants on that center. The 1/2" hole is the same diameter as the outside of the 7/16 face of the DuBro axel. The axel face sets neatly in the hole and it only requires one blind nut to hold in place. Avoiding the cut-out for the typical mounting fashion with a slot cut in the wheel pants helps maintain the strength of the wheel pants and they are less able to flex and crack.



Mounting the Taildraggers tail wheel was straightforward. I used three 4/40 blind nuts with pocket washers and Allen cap screws.

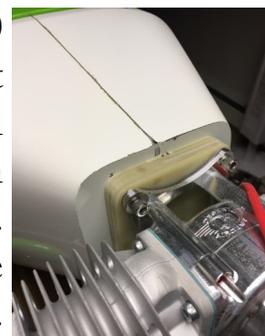
Since this model has no inside structure in the fuselage for mounting components, I took a little guidance from a friend that built the 330 SC and copied his designed for an internal 1/2 shelf within the motor dome. This shelf holds the throttle servo, ignition battery and ignition regulator. I also fabricated a small mount for the top of the motor dome for the ignition module.



Motor mounting can be a real pain. I've seen guys stand the fuselage straight up to mount the motor and use that method instead of trying to hold the motor in place while on the wheels. Again, no help from Krill, but I found a layout for a DA 100 or 3W on the internet at RC-Network.de for the 330 SC. The bolt pattern for the 100 and 120 are the same, but not really certain of this information, I came up with a system: I mounted the cowl and took the backplate of the spinner to use for centering the motor. Taking a set of V blocks to hold a carbon fiber shaft square and centered on the backplate of the spinner, I located the spinner centered on the cowl, and with another carbon fiber shaft and Bic pen tip, transferred the center to the firewall. I covered the firewall in blue painters tape to lay out the bolt-pattern from the center that I established. The layout from a thread on RC-Network.de was close, but with small changes between models, it was better to be sure.



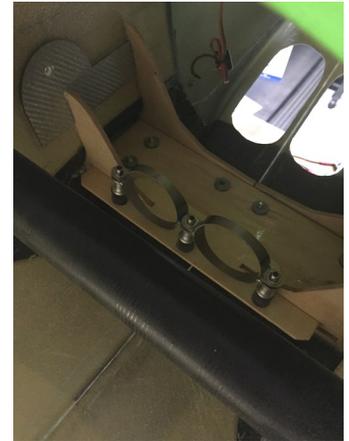
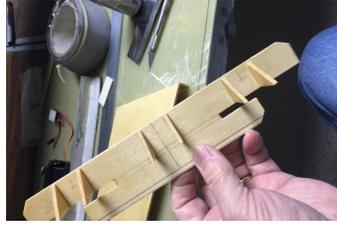
The DA 120 needed 5/8" stand offs to put the backplate of the spinner a strong 1/16 off the cowl. I have read that on all of the 330 SCs built, that the plane ends up tail heavy. That seems to be relevant to almost all of our models lately. Reading the history on several build forums, I learnt that Krill seems to prefer the use of the Czech MVVS motor that is almost two pounds heavier than a DA or ZDZ. With that in mind, I had a sheet of green phenolic and glued five layers together. The block of material ended up weighing 10 ounces. The weight may not be enough, but it was a start.



I drilled the phenolic for the bolt pattern of the DA and grabbed some 1/4 x 20 screws to mount the motor. With the motor mounted I bolted on the headers to locate the cutout for them and the cans. The bottom of the motor dome is angled so it was fairly easy. The opening had to be large enough to facilitate sliding the cans in.

Next was to establish a mount for the KS soft mounts for the cans. The new 3086 were 3 and 1/2 inches longer than the mufflers that were historically used with the DA 120. The KS cans also have a reinforced area for the clamps from the soft mount, but using that mounting area was complicated.

I finally designed a mount that avoided all of the issues that I discovered in the templates that I made. I also used three stand-offs instead of four with both of the cans using the center post.



It's strong, light and will work.

On the Krill 330 SC, they supplied a molded center-section for the rudder servo mount, a secondary servo arm for the rudder, and the rest of the area was used for the mounting of electronics—batteries, power box, and receiver. The Europeans prefer power box setups on their planes, and a lot of this plane is built to accommodate their customer base that is on the other side of the pond.

I prefer using Smart Fly products, and will be using their power expander along with their voltage regulator, similar to what I had in the Sukhoi.

The rudder will be controlled by two JR 8711 each on the SWB pulley mount. This servo mount choice eats up available space, but is well worth it as there isn't an equalizer required, so one less electrical component is needed. If either servo fails, it won't affect the operation of the other, and it's also self-matching.

In the center section of the fuselage in addition to the SWB pull/pull system are the typical components—receiver, satellites, regulator, and switches.

Since Krill didn't offer a molded center section, I wrestled on what to do. Chief Aircraft sells a board called Alutex from Krill at \$30.00 a sheet plus shipping.



In mocking up the location with sticks running across the fuselage to support the components, I soon discovered I could do the same with basswood or carbon fiber tubes and have a greater open area for air circulation, and less weight. I support my massive 10-cell battery packs in my pattern planes with a similar construction, and

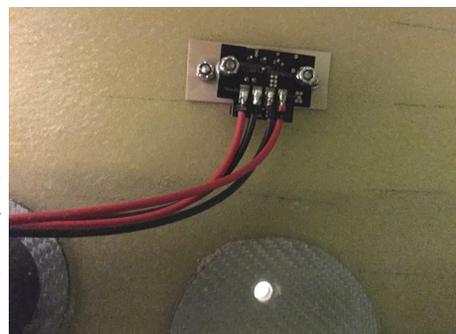
the weight of the components is nothing compared to them.

I went to the local train shop and purchased $\frac{1}{2} \times \frac{1}{2}$ and $\frac{1}{2} \times \frac{3}{8}$ basswood to make the cross supports. I had some 1/32 carbon fiber and glued that to the top on each rail—more decorative than functional, but still a nice touch to compliment the plane. I attached each support to the side rib in the plane with a 4/40 cap screw, washer and lock washer.

I used the supplied molded plate for my fuel tank, despite the fact I used one 32 ounce tank, and the plate was set up for 2 soda water bottles.



The rest of the assembly in this area was straightforward. I used three Fromco switches to three batteries. I have 2 each 5400 mah Fromeco batteries for the 8 digital MKS servos on the airframe and one 2700 mah for the ignition. The throttle servo is an 8611A under the motor dome with Fromeco regulator for the ignition module located alongside it.



The elevator servos took a little work to attach, and one needs to cut the relief for the servo arm, but nothing out of the ordinary. The horizontal has a CF tube that got a piece of hardwood glued inside for the screws that attached it to the plane. On other applications like this, the manufacturer generally has a hard point for you to drill into the horizontal for rigidity. Krill sort of left that out. So I opted to add material for that hard point and called it a day.

The wing servos are accessed from the root and from a hatch for the outboard one. They too, needed to have the slot for the servo arm cut to fit. The hatch is skin hinged on one side and I used a couple of servo screws to secure it closed.

—Bob Both

(To be continued in the September newsletter)



Treasurer's Chest

Installing a Speaker in Your Transmitter

by Dave Szabo



Futaba is a mainstay when it comes to RC radios. They make good quality radios that are very dependable and glitch free. Unfortunately, Futaba doesn't always get it right when it comes to designing in user friendly features. For example, I have the 14 SG radio which features 14 channels, telemetry, unlimited model storage, advanced programmability, and voice commands. The problem is that there is no speaker, and one needs to plug earphones into a jack located in the back of the radio to hear the voice commands. If Steve Jobs was running the show, he would have surely fired all the engineers and marketers for such a limited design!

Simply adding an external speaker to the radio will not work, since there is no amplifier, and the voice output signal is not strong enough to drive it. So to get around the issue, I needed a small portable amplifier and speaker to plug into the phone jack.



There are a thousands of small amplified speakers when you search in Google. I selected the "New Super Mini 3.5mm Audio Speaker ABS Rechargeable Upright Type General DC 5V 2W USB2.0 Speakers for Mobile Phone Smartphone" from Ali Express. I had no idea how I was going to implement it. It only cost \$8 on Ali Express and was worth a try.

The easy option is to just plug the unit as it is directly into the back of the radio. However, I thought it may put undue stress on the jack or easily snap it if the radio was put down hard. Therefore, I decided to tear it apart see its internals, and I was surprised at how small and sophisticated it was. I then realize I could probably take out the guts and cram all the components, speaker and all, inside the radio case.

Below is a picture of the installation looking at the inside of the battery cover. There were three basic components needed:

1) The amplifier board is shown on the left-side of the screen. It fits perfectly within the width of the battery cover and is simply held down with double-faced tape.



2) The rechargeable battery is shown in the middle of the cover. I replaced the Lipo that came with the speaker unit with a 110 Mah lithium ion button cell part # RJD2430C1. The original battery will fit, but I prefer the button cell because they are significantly safer to charge over the Lipo. I also could have powered the unit from the radio battery. However, I was not sure if the amplifier would induce feed back into the radio and cause a potential radio glitch.



3) The speaker shown on the right. This is the thickest of all the components, but is less than 3/8 " high. That take up 1/2 of the 3/4" inches of clearance inside the battery tray.

The on-off switch that is mounted on the PCB was not in a usable position (you can see it under the red wire at 12 o'clock on the PCB). It's bypassed by a switch purchased at Greenbrook Electronics but is easily found online along with the battery (Digikey) The on-off switch was mounted such that the slider is flush with the bottom surface. This allows the radio to stand up right without any wobble.

Here is a picture of the outside of the battery cover. I cut a small slot in the on-off switch slider to make it easier for my finger nail to engage it. 1 is on and 0 is off. The speaker hole was cut with



a Dremel tool, and then I press fitted the metal screen that came with the mini speaker. A little hot melt glue on the inside was added on the inside of the screen for extra security.

The unit does have a USB charger for the battery—it's the silver thing to left-side of the cover (the white hole to the bottom left is a mistake). I thought the USB charger, which was designed to charge the original LiPo, would also charge a Li Ion battery. However, it was over charging the Li Ion battery to 4.3 volts. This was not a not good thing. To fix the issue, I added a set of leads from the battery to the outside the case (not shown) and just use my smart charger. I typically turn it on when I get the field and leave it on the entire time I am there. The unit only draws about 10 milliamps, so it will play for two or three flying sessions between charges.

The unit has plenty of volume which can be controlled by a variable dial on my radio.

—Dave Szabo

North Branch Flying Field Accessibility Update

by Domecq Smith



For those of you who could not attend our last June meeting, I reported out to the club what has been done to address the new policy at North Branch Park that restricts drop-off of equipment only to drivers who have plates with a disability designation. Recently, the park installed a sign forbidding driving on the grassy area between the gravel lot and the wooden pole down the hill. What has been done about this, you ask?



The Sign

Driving Access

Members of our executive board had a meeting on May 29th at the North Branch Park headquarters with Park Ranger Frank Masini, an additional park ranger intern, and Dina Healey, Manager of Parks and Recreation, to discuss the current policy regarding car access of the grassy area between the parking lot and the post for the unloading of equipment. Present from Somerset RC were myself, Tony Rossi, Dave Szabo and Joe Lachowski. A purpose of the meeting was for us to seek what motivated the action of installing a sign that restricted vehicular traffic for unloading at the post, excepting those who possess disabled plates. We were puzzled as to this action since there has been no perceived or expressed problem before to our membership for unloading from this area.

Frank and Dina explained to us that they are acting on existing park rules that prohibit driving on off-road areas (“Somerset County Parks Rules and Regulations. Section 12 vehicles part B, and section 13 parking”). They stressed that we as a group were not being targeted, but that they are applying the rules to all areas of the park, and to all groups that use the park.

Our executive board wanted to determine if any prior damage to the grassy area motivated the grounds crew at North Branch to register a complaint. Dina informed us that the grounds crew had no problem with our past activity, nor was our activity adversely affecting the grass. Dina and Frank explained that

this new policy would be followed by all groups because it is an existing rule, and they want to observe park rules consistently and in all instances.

They suggested that we could petition the Somerset Parks Commission for a review of existing park rules as it affects our organization, and if the commission determined to recognize an exemption or amendment in our case, then Dina and Frank would naturally honor any new policy.

If we don't petition the Parks Commission, then the existing policy simply remains in place for the foreseeable future.

Your board, therefore, has decided to draft a petition to the Parks Commission for a review of the park rules as they specifically apply to us.

Adverse Condition Field Closures

Concerning flying field closures posted on the park's Facebook page, we expressed at this meeting our concern that the park was exercising its authority to close the flying field when it determined that conditions were too wet. They explained that their understanding was that our members wanted to know when the field was wet or not so that our membership would not have to make a needless trip to field to discover an overly wet flying field (which was a rationale of our webcam proposal).

We made it clear during the meeting that whether to fly or not was an individual consideration among our membership, and that some members can tolerate some standing water, where some won't, and therefore a blanket determination by the park to close the field had the potential to adversely affect some of our members.

Dina and Frank indicated that they understood our concern and suggested that we articulate some field condition guidelines for them to use for the future when too much water means too much water for flying. Our executive board proposes that so long as the hump (also known as the carrier deck—the highest elevation on the field—located off-center, right) is above water, then the field should be recognized as being open for flying.

—Domecq Smith, President, Somerset RC

(Thanks to Ernie Evon for providing the reference for the Somerset Park Rules during our June club meeting and for this article.)

MYSTERY PLANE CHALLENGE

Can you name the model airplane below? It was the first RC plane for many aspiring RC flyers in the 60s and 70s. Though it appeared during the pulse era, it was still available as a kit late into the 70's when proportional RC had long replaced both pulse and reed systems. Send your answers to Domecq Smith at domecqsmith@msn.com. The answer will be published in the September/October Newsletter.



The May mystery plane was Posing in the himself with one bears his name. **Samtak** and correctly identified design.



newsletter's Phil Kraft's Kwik Fly. photo is Phil Kraft of his radios which Congrats to **John Tony Rossi** who this influential

Member Profile

George Mariasz



Who is George Seven?

Many of you know me as George Mariasz and as George Seven on Facebook - and to some as “Hey-You go away!”

I have always had this urge to know how things worked. In the early 60s, I wanted to know how a TV worked, so I took them apart, read books on electronics, and over time was able to fix many problems. I graduated from high school in 1965, and worked at RCA until the Army invited me to join them in 1966 as Pulse Acquisition and Range only Radar Mechanic. Keeping their promise that I could see the world, the Army sent me to Vietnam from 1967 to 1968 where I survived the TET Offensive. When I returned safely to the States, the Army changed my job to work in a unit that flew R/C planes as practice targets for the National Guard. This was my first exposure to R/C and losing airplanes.



In the early 70s, I got interested in computer programming, enrolled in a school, and was able to get a job at Johnson & Johnson with the hope of working into a programmer job. Over time, I did, and hated it. I changed careers to PCs and networking which I loved. I retired as a Senior Systems Analyst after 32 years with J&J. After that, I got a part time job with Duke Farms Foundation in security for 14 years. During my time with J&J and Duke Farms, I had another part time job as a Hillsborough Township Police Department Special Officer, which I did for 31 years.

I met a lovely lady working at the police department—best of the best. We married in 1988. She has seen me through some bad times and keeps me going (heart attack and other operations, motorcycle and car accidents). She gives so

much to me and asks so little of me. She tries not to sigh too much when I crash an airplane.



In the late 70s, I was in a book store checking out magazines, and came across one about R/C planes. I got the urge to give it a try. After some research, I purchased a very basic 34" wing over balsa kit. I think it took me about 3 weeks to build it at which point I realized I needed to cover it. I found this plastic product you could iron on, and picked out a bright orange color. While I was building, I looked for a radio and motor.

MRC had a 5 channel package that came with 5 servos, and was based in New Jersey. The dealer recommended a Super Tiger for the size plane I had. Now, the plane was built, electronics installed, and everything appeared to be working.



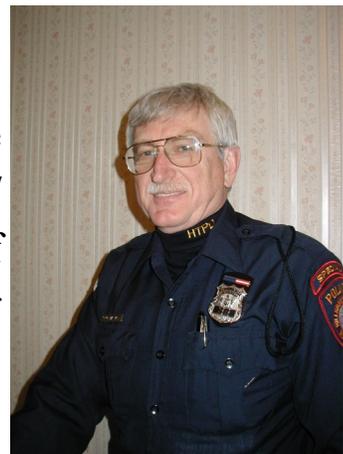
Back in the day off Stelton Road in Piscataway just off Route 287, I found a few people flying in what looked like an old airport. I brought



all my stuff and asked if someone could give me a hand. I explained what I did and they gave me that polite look that said, "You have got to be kidding!" Three of them looked it over and one said he would test it. We got it going, and up it went. He was amazed at how well it flew. This made me feel good. About 3 minutes into the flight at about 150 feet the motor left the plane. He was able to re-trim and landed the plane with no damage! I found the motor. Turned out I used the wrong type of nuts and bolts. They gave me the correct ones,

I re-installed the motor, we got it working again and it flew great. As always, life changes, so I got interested in motorcycles and other things for 20 or so years.

A number of years ago I came across Somerset RC at the park and got the urge to fly. I went through the testing/certification. I am able to fly somewhat, but I need a lot of practice. I find it relaxing and fun hanging out with the other members, and hope to spend more time doing so.



—George Mariasz

Club Event Schedule, 2019

*All events at North Branch Park Flying Field, 355 Milltown Road,
Bridgewater, New Jersey 08807, unless otherwise noted.*

April Meeting and Club Expo, Saturday April 27 11:00 a.m.

American Legion Post 306

707 Legion Place

Middlesex, NJ 08846

Opening Day, Saturday May 25

Big Bird Fly-In, Saturday June 22

E-Fly, Saturday July 27

Warbirds Over North Branch, Saturday August 24

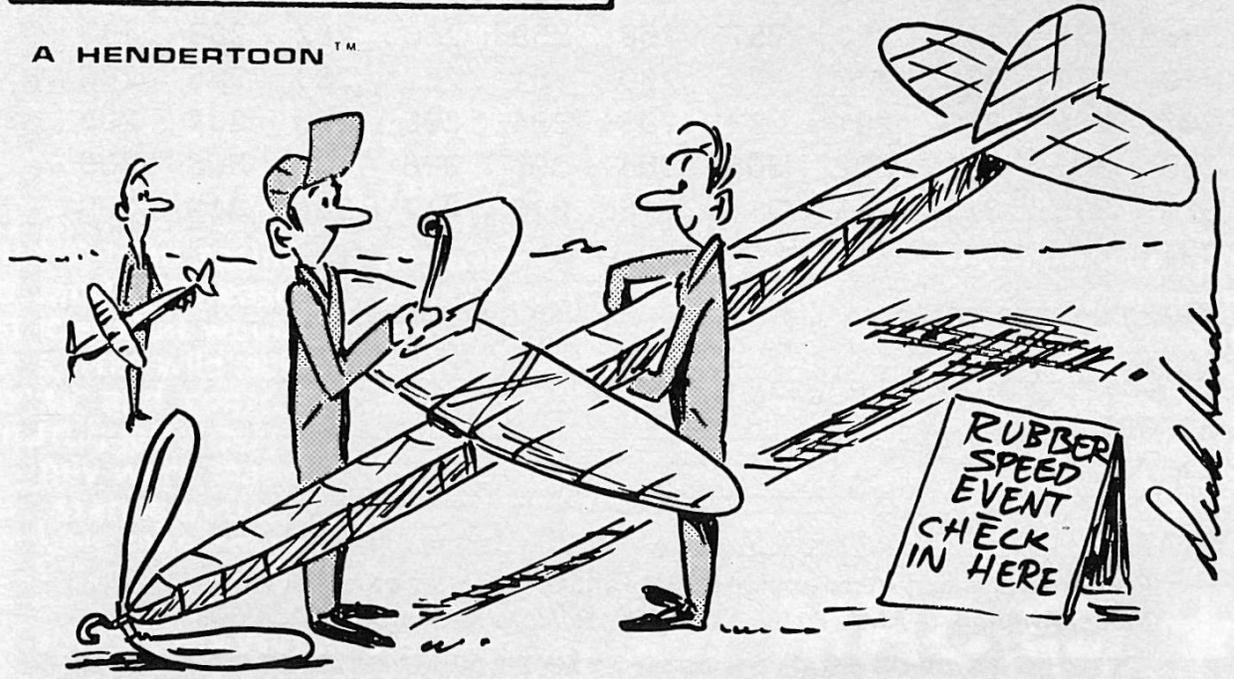
End-of-Season Picnic, Saturday September 28

(make-up October 5)

Turkey Fly, Saturday November 16 (make-up November 23)

please refer to SomersetRC.org for event updates

A HENDERTOON™





"These are so accurate that they even come with inedible food that you have to pay extra for."

Carl was noticeably nervous during the hand-launch endurance event...





Somerset RC Membership Application

Name: _____ Date: _____

Address: _____

Phone: Home: _____ Cell: _____

AMA Number: _____ Email: _____

To obtain an AMA Membership go to:
<http://www.modelaircraft.org/>
Membership is \$30.00 for adults \$4.00 for
students up to the age of 21

Mail all applications with check to :
Dave Szabo
12 Shoshoni Way
Branchburg NJ 08876
Make check out to "Somerset RC Club"

Paying by PayPal send to:
Somersetradiocontrol@gmail.com
Put your name in the notes and use the":
"send to a friend option.

Meetings are 8:00pm every last Tuesday of the month at:
American Legion Post 306
707 Legion Place
Middlesex, NJ 08846
732-356-9699

For full club information, please visit SomersetRC.org