RC REPORT ONLINE!

February 2012 Issue 307

I don't remember it, do you?

Oily sure does!

Micro Stik by Hobby Lobby

Scratch Building SIG Riser 150 Inch

Ideas from Sparky!!

RC REPORT ONLINE

OFFICE NOTES

Well, here we are about to jump into February! I blinked and missed January altogether. Hope Old Man Winter is treating you kindly wherever you are!

Thanks for all the kind words via email following our difficult December. We were terribly sorry to not to be able to provide you with a January issue. With a small staff, one little hiccup can cause you a lot of grief and you just have to call it a day.

As I type this late in the month of January, Tony is recovering from a nasty virus that had him in the ER and in the doctor's office twice. Now Cassie has come down with something. ☹ This is day 11 of the healthcare crisis and other than some fatigue and a horrible sense of humor; I am still feeling okay. Though there was that…oh never mind. My veterinarian and good friend Merrill set me straight there. Right before Tony got sick, I was sure that I had brought home some bug from a little French Bulldog that I had helped transport from the shelter to a rescue in a nearby town.

Our Kindle version has been a little hit and miss the past couple of months. Missed November altogether and December was too big to email out (as was the PDF). I did send out the direct link to the PDF. Let me know if you still need that. Hopefully, we can get back on track this month.

I have a couple of different email distribution lists hanging around in my Outlook. If you are an iPad user; you can have the PDF version emailed to you each month. Kindle and Nook users can request that the Kindle version be sent to you also. I have also created a list for subscribers who are having difficulty downloading the PDF. Please email me if you would like to be added to one of these lists with the list you want to be added to in the subject line.

I wanted to take a minute a say a special thanks to all of you who take the time to drop me a line here and there, share a joke or a picture…maybe both. I try to respond to each of these types of email, but sometimes they slip past me on the crazier of days. I do enjoy them and read them all!

We are still socializing on Facebook. Join us! Click the Facebook icon to go directly to our home page!

Bye for now,

Julia

Smile! You could be the next Winner!

Smiley Face Contest #2, 2012!

Throughout this issue we have placed five or more Smiley Face Figures like the one shown here (☺), but as before this page doesn't count. Write us and tell us where at least five are, and you'll be eligible for a random drawing in which the winner will receive a free 12-month Premium Subscription to RC Report Online. The subscription may be used as a renewal or be gifted to someone else. Winners will be selected by a random drawing from all the correct entries received no later than February 29, 2012. No entries will be accepted after this date. Entries must be sent via US mail or E-mail only, and reference the correct contest number in subject line or address. Hobbico employees, RC Report Online employees, columnist and advertisers are ineligible for prizes. No Purchase Required. Valid in USA and Canada only. smileys@rcreport.net Subject line: Smiley Face Contest #2, 2012

US Mail: Smiley Face Contest #2, 2012 PO Box 12051 Huntsville, Al 351015

All terms subject to change without notice. This contest is void in any area, state, or locality where taxed or prohibited.

All,

I have, for some time, had issues with the Smiley Face contest. Random and I just can't play nice and all these numbers and charts and keeping track of who wins and when to announce the winner and the deadlines. Oh my! When one glorious day I am on course, something like this missing a month comes up and I sit and stare at the computer screen and wonder what in h**l I am doing. Glad Valentine's Day is coming up. Sometimes, all a girl has is chocolate!

Can't wait until next month when the real confusion will begin. Fortunately, for the brain cells I have left; I can refer back to the issue following the tornado for help; though that might make things worse. Stay tuned!

Julia

FIVE!

Dan Schaller

Dear Julia,

FIVE? I thought that your generosity at this Christmas season would extend to at least giving us some extra smiley faces to count, but no, all I can see are the measly five grins on pages 3,5,7,27and 29. Of course those are all I need but at this season we always want more, don't we?

On the other hand, thank you for giving us more with a glance at the past with the 1991 edition of RC Report!

Frank Maguire

Happy New Year to RC Report

Boy! The December Issue bought back the good old days. I will have to go and scan over my paper RC Report magazines; they are the only RC magazines that I have kept all these years. All the other paper magazines are advertising magazines. I found 5 smiley's! Now I can go to Pg 31

Thanks

Larry

Please note that not all Smiley Face entries will be published each month. On occasion, I finish this page early in the month, but all entries are considered when determining the winner.

Julia

Still loving the smileys! The winner will be announced in the January issue. The winner will receive a 12-month premium subscription to RC Report Online. Keep searching those articles and columns.

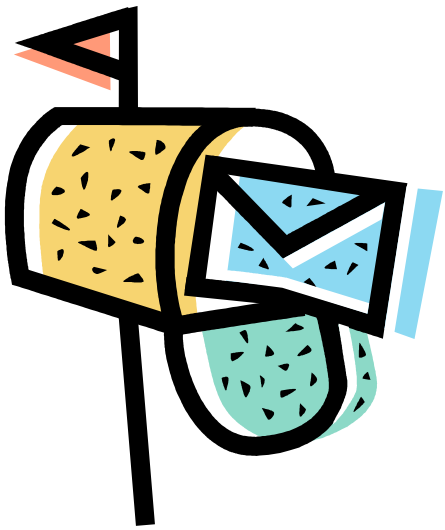
Total Smileys for the December2011, issue was five!

November's winner is Frank Maguire!

Thanks for your submission, Frank!

Julia Coberly

Mail Call



Well, folks keep your questions, comments and jokes coming.

Received this from Rich this month:

Hi Julia:
In the publishing of the magazine, it would be great to read something which would cover the past years of model building. I have been reviewing all of my saved RCM magazines of the 90's, and really miss the coverage of model building reviews. Just had the fun of pre-oiling my collection of 1/2A U-control model engines, and larger ones still in original boxes with after run oil. Handling my OK Cub 0.049 engine which powered my Jim Walker Firebaby models, brought back the castor smell and adrenaline of flying on two lines. It might be something to consider in taking a poll of the subscriber's to find out where their interest lies. Noting how the hobby has sunk from the craftsmanship of building to the foam, and ARF models, almost brings tears to my eyes. Well, I have over 60 model kits, and some plans which will keep me busy the next 20 years; so maybe when I reach the age of 90, either the hobby will be gone, or changed to where the pilot comes with the purchased plane, and flys it so the customer can take photo's before it is crashed so he can purchase another one with pilot. My electric activity is mostly just turning on TX & RX batteries, or house wall switches.

So tell me, what do you really want to read about in RCRO? Shoot me an email…inquiring minds want to know…and Rich and I as well! Julia

Just in time for Valentine's Day: NINE WORDS WOMEN USE

(1) Fine: This is the word women use to end an argument when they are right and you need to shut up.
(2) Five Minutes: If she is getting dressed, this means a half an hour. Five minutes is only five minutes if you have just been given five more minutes to watch the game before helping around the house.
(3) Nothing: This is the calm before the storm. This means something, and you should be on your toes. Arguments that begin with nothing usually end in fine.
(4) Go Ahead: This is a dare, not permission. Don't Do It!
(5) Loud Sigh: This is actually a word, but is a non-verbal statement often misunderstood by men. A loud sigh means she thinks you are an idiot and wonders why she is wasting her time standing here and arguing with you about nothing. (Refer back to # 3 for the meaning of nothing.)
(6) That's Okay: This is one of the most dangerous statements a women can make to a man. That's okay means she wants to think long and hard before deciding how and when you will pay for your mistake.
(7) Thanks: A woman is thanking you, do not question, or faint. Just say you're welcome. (I want to add in a clause here - This is true, unless she says 'Thanks a lot' - that is PURE sarcasm and she is not thanking you at all. DO NOT say 'you're welcome'. That will bring on a 'whatever').
(8) Whatever: Is a woman's way of saying...Go to Hell...

(9) Don't worry about it, I got it: Another dangerous statement, meaning this is something that a woman has told a man to do several times, but is now doing it herself. This will later result in a man asking 'What's wrong?' For the woman's response refer to # 3.

Here's a little DEM0ENTIA QUIZ to keep you sharp until spring! Email me your answers! Entries and correct answers will be published next month! Thanks to Baby's Dad for the entertainment!

1: YOU ARE A PARTICIPANT IN A RACE. YOU OVERTAKE THE SECOND PERSON. WHAT POSITION ARE YOU IN?

2: IF YOU OVERTAKE THE LAST PERSON, THEN YOU ARE.....?

3: VERY TRICKY ARITHMETIC! NOTE: THIS MUST BE DONE IN YOUR HEAD ONLY. DO NOT USE PAPER AND PENCIL OR A CALCULATOR. TRY IT. TAKE 1000 AND ADD 40 TO IT. NOW ADD ANOTHER 1000. NOW ADD 30. ADD ANOTHER 1000. NOW ADD 20. NOW ADD ANOTHER 1000. NOW ADD 10. WHAT IS THE TOTAL?

4: MARY'S FATHER HAS FIVE DAUGHTERS: 1. NANA 2. NENE 3. NINI 4. NONO AND ??? WHAT IS THE NAME OF THE FIFTH DAUGHTER?

5: A MUTE PERSON GOES INTO A SHOP AND WANTS TO BUY A TOOTHBRUSH. BY IMITATING THE ACTION OF BRUSHING HIS TEETH HE SUCCESSFULLY EXPRESSES HIMSELF TO THE SHOPKEEPER AND THE PURCHASE IS DONE. NEXT, A BLIND MAN COMES INTO THE SHOP WHO WANTS TO BUY A PAIR OF SUNGLASSES; HOW DOES HE INDICATE WHAT HE WANTS?

Sound advice for the New Year from Larry:

Another year has passed
And we're all a little older.
Last summer felt hotter
And winter seems much colder.

I rack my brain for happy thoughts,
To put down on my pad,
But lots of things, That come to mind
Just make me kind of sad.

There was a time not long ago
When life was quite a blast.
Now I fully understand
About 'Living in the Past'.

We used to go to friends' homes,
Baseball games and lunches.
Now we go to therapy, to hospitals,
And after-funeral brunches.

We used to have hangovers,
From parties that were gay.
Now we suffer body aches
And sleep the night away.

We used to go out dining,
And couldn't get our fill.
Now we ask for doggie bags,
Come home and take a pill.

We used to travel often
To places near and far.
Now we get backaches
From riding in the car.

We used to go out shopping
For new clothing at the Mall
But, now we never bother...All the sizes are too small.
That, my friend is how life is, And now my tale is told. So, enjoy each day and live it up...Before you're too damn old!!

~It's Classified~

Non-Commercial Ads

Ads from subscribers are published free of charge for one month on a space available basis. Free ads are limited to one per subscriber per month and may contain up to ten items. Add $1.00 per each item over ten. Add a photo for $5.00. Please email your ads to juliac@rcreport.net. Include your name and email address. Phone numbers are optional. Modeling items only!

Commercial Ads

Commercial Ads are those offering a service, more than one of the same item, soliciting business, etc. If in doubt, call or email for details. Commercial rates are $.25 per word and must be prepaid. Please contact the office for special multiple-month discounts. Cancellations will be accepted by mail, email or phone, but are non-refundable.

RC Report Online Classifieds

PO Box 12051

Huntsville, Alabama 35815

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PHOTO OPS

From Dick Sprau in Montana: He writes: Well the water is hard here and no snow so I won't fly it for awhile. It's a Model Areo Polaris XL. Thought Montana needed another airline! If it flies like it's little brother should be fun! Cold here today, but it is above zero. Sure wish I could find a place to buy some of that red stuff for my thermometer, could just fill it up and then it would be warm out…right? (See his snow pictures in Tails From the Other Side.)


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All RC Model Enthusiasts Welcome
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Over 1000 tables of Merchandise
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MODELING EXPOSITION 2012

SWAP MEET AND AUCTION

SATURDAY, FEBRUARY 18, 2012 @ 9:00AM

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FROM I-77 EXIT AT RIPLEY AND FOLLOW THE SIGNS
THE ARMED FORCES CENTER IS LOCATED ON US ROUTE 2
APPROXIMATELY ½ MILE NORTH OF WV 62. GPS: 38 53 41 N / 81 50 18 W

SOMETHING FOR EVERYONE

RADIO CONTROL: AIRPLANES HELICOPTERS CARS BOATS
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MODEL RAILROADING TRAINS LAY-OUTS PARTS STATIC DISPLAYS

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SWAP TABLES $10.00 EACH AND $5.00 FOR EACH ADDITIONAL TABLE
PLEASE NOTE – FREE ADDMISSION RESTRICTED TO VENDOR AND 1 HELPER ONLY
NEW - HEATED INDOOR LOADING AREA FOR VENDORS

RAFFLE DRAWINGS - PRIZES - 50/50 CASH RAFFLE

FOOD BEVERAGES REFRESHMENTS BAKED GOODS

VENDOR SETUP FRIDAY EVENING FROM 5:00 TO 8:00 PM &
SATURDAY MORNING AT 7:00 AM. DOORS OPEN AT 9:00 AM.

ADMISSION ONLY $5.00 CHILDREN 10 & UNDER FREE PARKING FREE

FOR TABLE RESERVATIONS & INFORMATION CONTACT
CHUCK WESTFALL AT: 304-531-0077 OR EMAIL: chuckflysrc2@yahoo.com

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AND THE FLYING HILLBILLIES RC CLUB IN WINFIELD, WEST VIRGINIA

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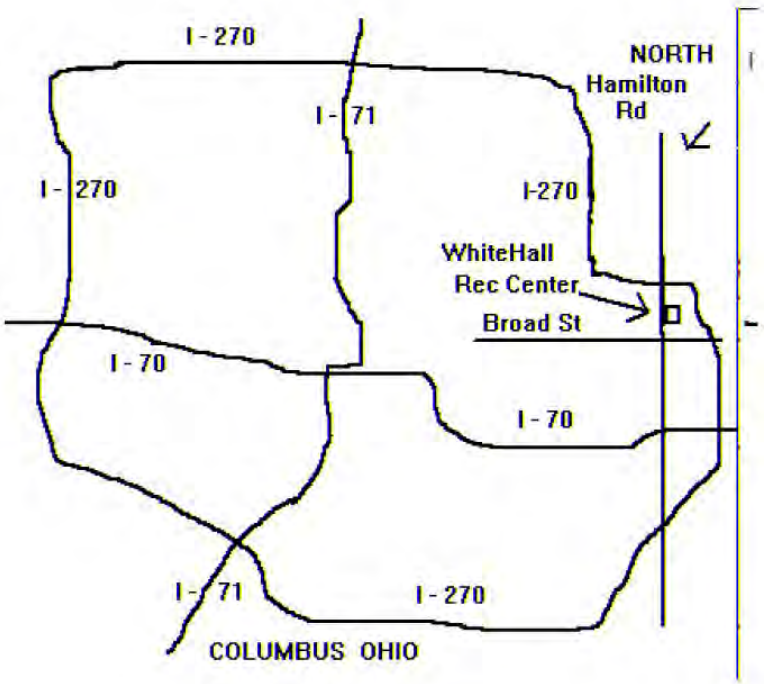

Bring your items to sell or trade. Planes, motors, radios, accessories - anything hobby-related !

2012 Madison County R/C Swap Meet

Date: March 24, 2012
Vendor Setup: 7:30am
Time: 8:30am - Noon
Auction: Noon-1:00pm

Pineview Baptist Church
5614 Highway 53
Harvest, AL 35749
(North of Huntsville, AL)

Directions:
From I-65 take I-565 E - go 14 mi
Take the AL-255 N (Rideout Rd N) exit 14 - go 5.9 mi
Turn left at AL- HWY 53 - go about 4.0 mi

GPS
Latitude 34° 50' 21"N
Longitude 86° 42' 24"W

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Tables limited so call or email to reserve.

Event Director:
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4rd Annual West Virginia R/C Hobbies Expo Bigger New Place

Date : Saturday February 18, 2012

Where : Jackson County Armed Forces Center 8832 Point Pleasant Rd . WV 25262

Time : 8:30 - 3:00

Admission : $5.00 For Adults

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Sunday February 12th, 2011

9 AM to 2 PM

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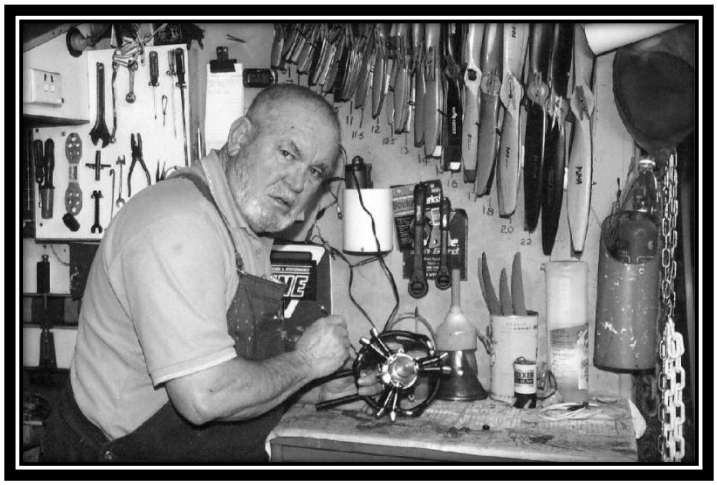
THE OILY HAND BRIAN WINCH

THE OILY HAND: Covering engine topics and working with metal for models. Send your comments or questions to: oilyhand@bigpond.net.au or write to Brian Winch, 33 Hillview Pde, Lurnea NSW 2170. Australia. International Response coupon (Post Office) required if you want a written reply.

…AND A BIT MORE



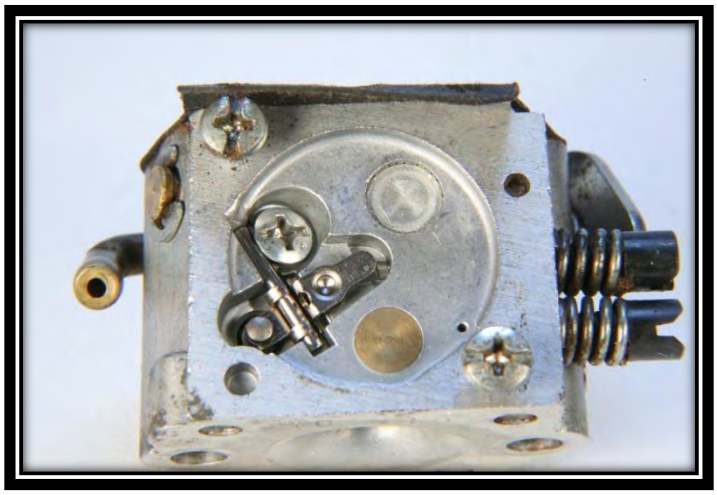
Fired up with the recent fueling articles, I remembered I had a few more bits to discuss with you that have been in my „items for mention" tray for a while. First up is the location of fuel tanks. Yes, yes, I know we went into that only a moment or so back (well, in the recent article series) but this is something different and applies to petrol engines and possibly, some glow engine that are fitted with a fuel pump. This time I am looking at a solution for a common problem often relayed to me from modelers, in particular, those who have purchased a petrol engine fitted with a (Walbro typical) fuel pump carburetor. Actually, all the petrol engines I know of on the market (purpose designed engines) have a pump type carburetor fitted but you just might have purchased a converted glow engine that has the original (glow engine) carby so, as such, fair chance it does not have a pump so - this advice does not apply to you. ☺kay - the problem. For the first starting of the engine and later starting after the engine (model) has been idle for a little while (say, about a month or so), you are going to have to crank the engine for quite a while to get fuel into the (pump section) carburetor. First off, before getting into the subject, let"s look at why I said a lay off period of about a month or more. Generally speaking, if you are flying the model, at least, every weekend then you won"t have this problem. If you are a less than frequent flier, it is a very good practice to run the carburetor dry at the end of the flying day. Inside the pumper type carburetors there is an array of thin Mylar valves, fabric type diaphragms, a very fine needle and seat, a very close weave mesh filter and some super fine fuel and jet holes. All of these are close to trouble free in either of two conditions - wet with the petrol mix or totally dry. However, leaving the „petrol" (petrol and oil) mix in the carby long enough for the petrol component of the mix to evaporate will result in teeth gnashing angst - you will curse, swear, beat your brow (if you have no hair to rip out) as you flick or spin (electric starter) the engine for no running result. What has caused the problem is the aforementioned internal components of the carby being in a state of stuck - stiff - curled - gummed up - blocked…all or any of these…due

An example of diaphragm pump carburetor parts

to dry or gummy oil that has been left after the petrol evaporated. It is quite common, after an extended „gummed up" period, that the carby needs a complete overhaul but here beware. Do the job yourself and do nothing more than replace the valves, gaskets and diaphragms (plus a good cleaning with petrol including the mesh filter). Whatever you do, be extremely wary of some well meaning acquaintance who offers to service the carby for you. If he mentions adjusting the needle movement - run the other way - that is - unless he is really

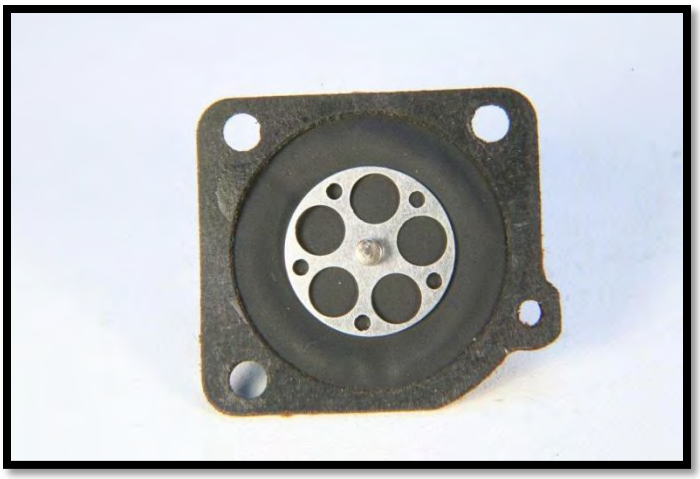
Fine mesh filter - can be removed for cleaning.

qualified to do the job and has the correct tools for servicing the particular carburetor. I have heard so many sob stories where a carby has been „serviced", the needle movement adjusted…even the jets being opened up a bit and the result has always been the same - the question to me has been "where can I purchase a replacement carburetor?" I generally advise the caller to visit their local chainsaw/mower shop and have a qualified person fix the carby (if it can still be fixed). They will have the correct adjusting gauges, rebuild kits and can even pressure test the carburetor to bring it back to new. With due care and no fiddling, these types of carburetors generally work efficiently for years so - if it ain"t broke…don"t fix it.



The 'do not touch' needle and seat.

☺kay, back to the starting and we will consider that the carburetor is clean internally and ready to work...when it gets some petrol into it and again, this is what vexes many modelers. The simple fact is that any fuel pump is, obviously, designed to pump fuel (liquid) - not air, In fact, they are incredibly inefficient at this air task as can be observed when a dry engine is being cranked over and the fuel moves very hesitatingly up the line giving the impression that it seriously wants to return to the tank and stay there. My method, when starting a new



This is the main diaphragm of the pump and it rarely needs replacing.

engine or a dry carburetor engine, is to squirt a few ml"s (cc"s) (according to the capacity of the engine) direct into the carby. As a very rough guide, say, about 2 or 3 ml for a 26 cc engine - practice is the better teacher. Switch the ignition on and spin the prop. A strange thing here and again, practice will be your guide. Some engines will fire up rapidly on this charge - others still like to cough once with the choke closed. Only a test will guide you for your particular engine. The engine will fire up and run on this prime and more often than not, the short burst of running is enough to pull the fuel up into the carburetor - in fact, many times I have had the engine just continue on running. Sure saves a lot of prop cranking to introduce a charge of fuel. Now we come to the main item and this is a move away from all we have been told over many years - the placement of the fuel tank in the model. For any non pumped engine the tank position can be a bit critical at times. As I said in my previous article, it is not as deadly serious as it is often made out to be but it does not consideration and testing. The one position to avoid is a high tank as this will surely be a problem as the carburetor is now subject to gravity feeding - not good. Gravity feeding is the domain of motorcycles (tank above the carburetor[s]) and aircraft with tanks on or in the wings such as a Tiger Moth and similar. However, where gravity feeding is intentional you will find a carburetor underneath that has a float bowl (or similar) and more to the point - a needle and seat that controls the flow of fuel to the main section of the carburetor - fuel on the demand of the engine. We don"t have that luxury with a non pumped engine so care must be taken to prevent - mainly - uncontrolled flooding of the carburetor which is what you would have with gravity feed. Now we look at the engines with the pump type carburetor and what do we know is inside that carby? A needle

Tiger Moths have a fuel tank on top of the wing center section - perfect for gravity feed.

and seat. Are you with me here? Why not take advantage of the gravity feeding plus the needle

The Dubro combination fueling valve allows you to fill or empty the tank, direct fuel to the engine and cut off the fuel supply to the engine as required.

and seat by having a high mounted tank in the model? Like the motorcycles and the (example) Tiger Moth, fit a fuel tap to the fuel feed line so the fuel flow, obviously, can be turned on or off. Taps come in many forms but my first choice is the Dubro filler/tap I mentioned in my previous articles about fuel systems. In case you missed that information, the Dubro filler/tap allows you to fill the tank and not flood the engine and at the end of your flying day, you run up the engine and pull the tap to let the carby be drained by the running engine - the ideal way to leave any engine. Using this filler/tap with a high mounted tank for petrol or other pumped engines would certainly assist easy starting with a dry carburetor. Obviously I have experimented with this set up - a tank mounted higher than the engine - and it worked no problem and I also asked several established modelers if they had any experience and received all positive answers. My distant friend, Ivan Vines of far north Queensland (northern state of ☺z)., said all his petrol tanks are set for gravity feed in his (large) models as it is often easier to mount a tank in a vacant space high in the fuselage and as I suspected, it makes starting a lot easier when the carburetor has to be primed. Give it a try - might make a few aspects of tank setting and engine starting much easier for you.

SMALL PETROL ENGINE

While we are in the petrol mode, The CE☺ of the NGH petrol engine company (China) will be shipping the latest engine „any moment", according to his current news. This is an engine I requested (suggested) some time back when Mr. Chow (CEO of NGH) contacted me regarding the design, capacities and testing of his very popular petrol engines. He had the 17cc engine just about ready at the time and after several discussions, planned the 25 and 35cc engines plus a 70cc twin. At the time we discussed Walbro carburetors and Mr. Chow said he was a close associate of the manufacturer in China (Walbro carburetors are made in almost every country in the world) and he would look into my request for a small carburetor to suit engines around the 10cc capacity, mainly for modelers who have been converting glow engines. He suggested he might make a small engine as well and asked for my opinion as to the value of the idea. I asked around quite a few modelers - particularly those involved with scale models - and the reception was quite good. I passed this on to Mr. Chow so he went ahead and now, moving to current time, he has the engine - 9 cc - well tested and proven and into production so I, and you, will see one quite soon if all goes well.

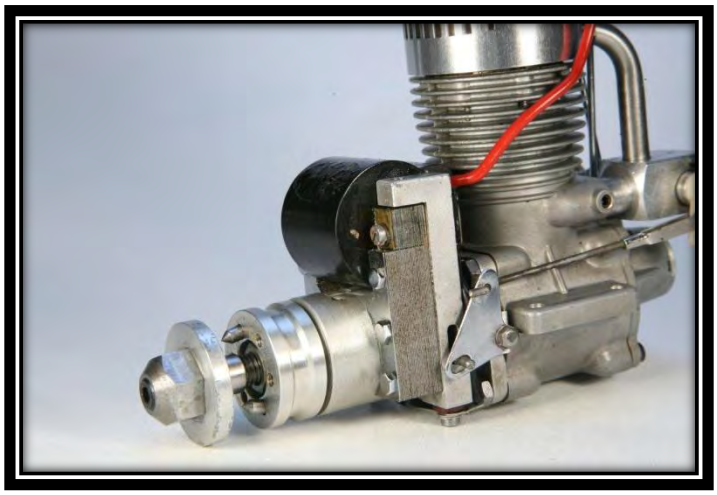
For the interest of latter day modelers, our first internal combustion engines were all petrol (absolute first engines were compressed air and rubber power) and modelers of the time thought

In the very early days of model petrol engines we used this type of ignition coil, condenser and HT lead.

they were to be the norm as nothing would replace them. Obviously it would have been known and expected that the engines would improve in time and really required, the batteries would improve. Ignition was by the Kettering system which utilizes a powerful high tension coil, a capacitor (condenser at the time),

Jim Shelley of MiniMag produced these modern coils that have a built in condenser (capacitor) and he also produced the ¼ inch platinum plugs.

timing points and a standard dry cell battery pack. No small spark plugs initially available so the smallest at the time, 12mm thread was used until the 10mm became available then a 3/8 inch and finally, a ¼ x 32 - the same as current glow plugs. By this time the glow plug was gaining ground and it was popular as expensive and heavy coils, oily points and low grade batteries were, to say the least, quite trying at times.



The MiniMag magneto on an O.S. 60FS open rocker engine.

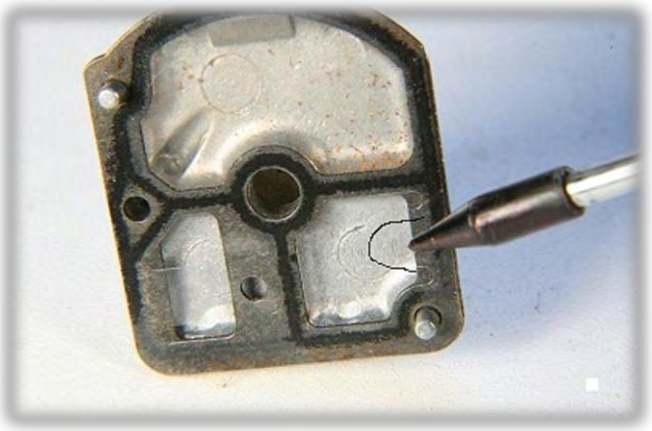
Purpose designed (model use) petrol engines never left the scene, so to speak, as they remained popular with many modelers due to the gaining reliability - better batteries played a big part - and quality spark plugs. Saito made a run of them, oddly, as two strokes but these were on the USA market only and Merco in the UK produced a 10cc model that was quite popular at the time. Jim Shelley (UK) produced the MiniMag - an aftermarket fitted magneto that was extremely successful and he later produced very neat and compact high tension coils for the use with any coil ignition engine. There were several other brands in the USA and also in Europe so the „spark" lived on, albeit in the background, until we saw a complete revival with the use of converted hand tool engines - the Quadra probably being the first and most popular. Certainly common these days and in some way, winding back the clock, becoming

more popular in the smaller (up to 30cc) engines due to the reliability factor, quieter operation, much more amenable to the addition of very quiet exhaust systems, no oil splatter on the model and very importantly in some countries, the economy of using much less fuel and that fuel being petrol which, in almost all countries, is less expensive than methanol. Looking at it overall, when you consider the cost of methanol, nitro methane and the high oil content, running a petrol engine is quite a lot less when you consider nothing more than straight petrol, a very small amount of oil and a much better consumption figure. It will be interesting to see how this new NGH 9cc engine is accepted by modelers. I know that I certainly want one. Then again, any internal combustion engine appeals to me regardless of the fuel and ignition type but…I do like „playing" with something new and slightly different.

GETTING TO THE POINT OF THE PROBLEM

Here"s a problem I"ll wager more than a few readers have experienced at some time of their modeling hobby. I"ll relate the latest incident when a modeler rang me with this problem.

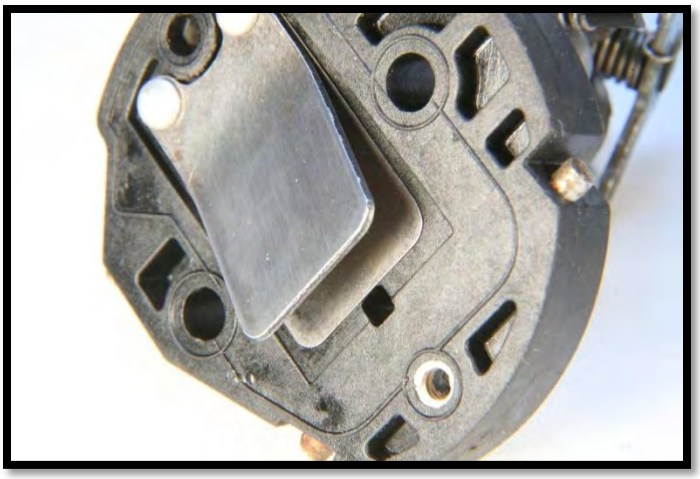
Modeler. "Brian, I cannot tune my 90 four stroke. I can wind the needle right in as far as it will go but the engine will not lean out. It won"t run higher than about 5,000 RPM and it is slobbering rich. What do you think the problem is?"



The clear valve plate is adhered to the surface here so I, roughly, outlined one flap valve (near the pointer).

My answer: "☺ne of two considerations comes to mind. First is that you have been using a long extension rod on the needle valve and the subsequent vibration has worn out (bellmouthed) the spraybar (carburetor jet tube) seat for the needle or, secondly, you have changed needle valves with another engine."

It turned out that the second option was true. Like many modelers, he had completely removed the needle valve to remove the engine from a model. The cowl had a small hole in the side and would not fit over the needle valve extension. First off, I do not like this method of installation due to the fact that parts of the engine have to be removed before the cowl can be removed from the model. This leads to lost parts and worst of all, worn threads. For example, in the case of a four stroke, the exhaust screws into a very fine thread (.75 or 1mm pitch) in the engine head which is aluminum alloy. The alloy in most engines is quite tough, the threads are well cut and formed and the screw in lock fitting is quite adequate.



This reed block is after the carburetor in a reed valve engine. The flat plate is the stainless steel 'reed' and the curved plate is the reed restrictor.

However, this fitting has a limited life - it is not intended to be constantly accessed - screwed in and out - as each threading in/out process causes a very small amount of wear - not to mention the occasional (terminal) cross threaded application. Consider that you are screwing a threaded steel or stainless steel header pipe into the fine aluminum head thread and it is quite obvious which part is going to suffer the wear. I have not carried out experiments (don"t intend to do so) but I would make a calculated estimate that you are getting close to the end of a good thread grip after about 20 „ins and outs" - 20 times removing and replacing the exhaust pipe. I get a constant dribble of heads sent to me for thread repair when a header pipe will no longer stay fixed in place. The threads cannot be repaired but in most cases, a larger thread can be cut in, an adapter fitted and my positive direction for the adapter is - never remove it - leave it in place and you will not have further problems. Remove it and there is a fair chance you will need to purchase a new head. Right then, back to the carburetor needle. Changing needles, to me, is a bit like changing false teeth. Can"t find your worn dentures in the morning (after a heavy night out) so, "Oh well, I borrow Granny"s teeth until I find mine. She won"t mind - she can just „gum" an apple „till I give hers back." Maybe you would consider similar on a camping trip with a few mates. In the mess within the tent, you can"t find the underdaks (Y fronts - underpants) you wore the day before so you grab the first pair you can see - your mate"s, while he is still asleep - and put them on…doesn"t bear thinking about does it. Well, I feel similar about changing needle valves. The tapered end of the needle fits into a needle seat inside the spraybar (jet tube) and after a bit of use and the constant winding which is the habit of some modelers, the needle mates into the seat with its wear pattern. Change needles and you upset the seat wear plus, in many cases, wind the needle too far in (the correct needle position is, say, 1.5 turns out, for instance) and further upset the seat as the needle of the substitute is either too long or of a different taper. Maybe the needle length does not interfere but being too short or the angle is too acute (sharper), you cannot satisfactorily tune the engine so you wind in even tighter and the thread is then deformed. Sound familiar? With the case in discussion, the needle itself was of a lesser diameter than the bore of the internal seat plus, the needle valve would wind right in up to the finger ferrule. Two strikes against it being effective. The owner of the engine could not even consider how he had mixed up the needle valves not could he locate the correct needle. Strangely, all his other four stroke engines tuned exactly as they had previously so the missing needle had not been used in any of them. The only other consideration was that the needle had been removed at the flying field (a

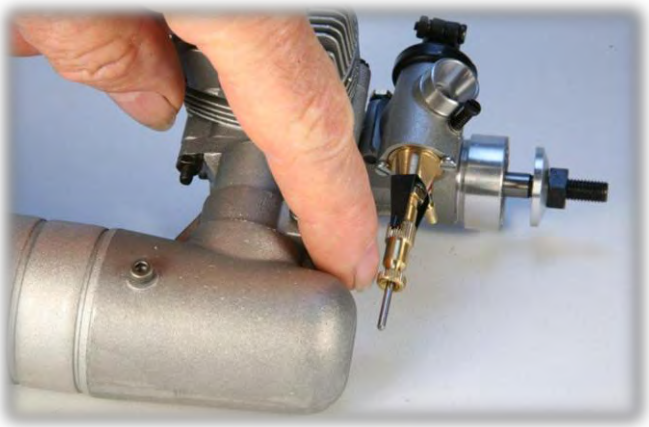
float fly) and somehow, gotten mixed up with the needle from somebody else"s needle when a similar field operation was being carried out (cleaning an engine out after a dunking). Problem was, the dunking occurred at a float fly venue overseas so…some modeler in that country is still wondering about his needle valve problem. Anyway, now I had a problem as the carburetor did not appear to be the correct one for the engine - an O.S. - as it had no model number on it and the needle seat bore seemed larger than any O.S. four stroke carburetor I had ever serviced. The owner of the engine said he bought the engine new…or…maybe he did - he wasn"t too sure. Anyway, I had to find a needle to suit. In my reasonably large collection of carburetors, carburetor bits and needle valves, I had one only that came anywhere near what was needed. The only part that matched was the diameter of the needle and the thimble thread but this needle came from a much larger capacity two stroke and the needle end angle was too obtuse (broad angle) for fine tuning this four stroke. With some very careful setting up I was able to regrind the taper on the needle in my lathe using a toolpost grinder attachment. All well and good but on fitting it, the needle would go not far enough in for a full tune position. Back in the lathe and a very slow and steady machining of the length of the thimble - after the thread - was carried out. This time the needle went right in and stopped - completely closing the jet tube with half a turn to spare. Whew! Thank heavens for that. Had I misjudged the machining or damaged the needle in the process I would have been back to taws - looking for another suitable needle (in a haystack). On the bench for a test run and the engine tuned out nicely just over 10,000RPM - right on the mark. When I returned the engine to the owner I warned him that, if I caught him removing the needle valve, I would belt him over the knuckles with a 12 inch wooden rule (as it was at school) or a stiff blade propeller - maybe both.

As I and many other engine writers have said so many times, you don"t need to be constantly fiddling with the needle valve to change the mixture. Hide the needle inside the cowl, fit a small caphead (socket head) screw in the end and access it with a ball driver or similar…on the very rare occasions you need to - if ever. As for the exhaust, set it up so that the cowl can be taken off over the exhaust, fit a flap or slot or have the exhaust under the cowl in an aperture so that it does not have to be removed should you ever remove the cowl. Consider any internal access you might need for a cowled engine and design a method of having the access with the cowl still in place. It certainly can be done---if you look and think about it during the model construction.

WHY?

Note: Engine orientation in this section is looking from the rear - the exhaust is on the right hand side.

A modeler emailed me to ask why engine manufacturers put the throttle arm on the same side of an engine as the muffler. According to him, it causes all sorts of grief linking the throttle servo to the throttle arm due to the manifold and/or the muffler. I have been asked this several times before and it does make me wonder at times as to what problems any modeler has had with the muffler or manifold when linking the throttle arm to the servo. I do



Would you want to tune this needle after (when) the motor had been running? My finger indicates the close proximity of the (hot) muffler.

it so many times with just the testing of an engine let alone the test running of so many engines I repair. The only time it does grieve me in any way is when I am running a four stroke (after repairs) and the owner of the engine has reversed the carby so the needle valve is on the same side as the muffler - you know - the bit that gets very hot…get my thinking? Yeah, I get burnt and have the scars to prove it. The placement of the (main) mixture control needle goes back a long time to controlline and free flight days when the position varied according to the particular engine. Having it on the exhaust side was a problem with sidewinder engines (engines mounted on their side) as you had to fiddle under the engine to tune the mix and this led to copious amounts of oil on your hand from the open exhaust. Perhaps this was the birth of THE OILY HAND SOCIETY? Actually, any position in those days was a problem as the engines were a bit on the smaller side, had (generally) short front housings so the occasion of skinned knuckles (and worse) from propeller strikes was more than common. There doesn‟t seem to be any pattern when you look at many engines of days past. Maybe the handedness of the designer or manufacturer was a factor - be they right or left handed - who knows? My thinking as to why the main needle is on the left side of the engine (mainly) is that it was influenced by the introduction of mufflers - a necessity these days worldwide. Think of the „fun‟ of tuning a two stroke if the main mix was on the same side as the exhaust. Here we have a fiddley little adjustment needle hiding nestling close to a large muffler. Problem seeing it and accessing it pales into insignificance when you remember that the muffler is hot - bloody hot - flesh cooking hot. The hot contact area will be, mainly, on the left side of your hand so the reaction from you will be to fling your hand rapidly away from the pain causing item and….what is waiting for the right side of your hand? The chopping, slicing, mincing, breaking, spinning propeller blades. Generally the propeller strike injury takes your attention away from the exhaust burn…if that‟s any consolation to you. As I said, I get a few „singes‟ and almost , very rude words when a four stroke exhaust catches me but my reaction is to pull back from the engine - not into the propeller arc.

Maybe you might have a little problem linking the throttle connection but…you do it when the engine is cold and the propeller is not spinning. When I set up an engine in a model I pay particular attention to throttle linkages and the like so I do not fit the muffler or the propeller until the model is getting close to be flown. I like it that way.

OUT OF FUEL

Well that‟s my lot for the present as the fuel tank is now empty and I hear a new engine calling me in my downstairs workshop. Apart from that I want to put a bit of space between me and the workshop clown - he‟s driving me crazy with this new learning thing he is currently engaged in. As I mentioned some time back, he decided to go back to a TAFE college (Trades And Further Education) to learn a skill so he could earn a wage to support his weird desire to fly (minus an aircraft). He tried a language course and that failed (as you will see in a moment) so he then signed up for something completely different but….well…he is a bit weird.

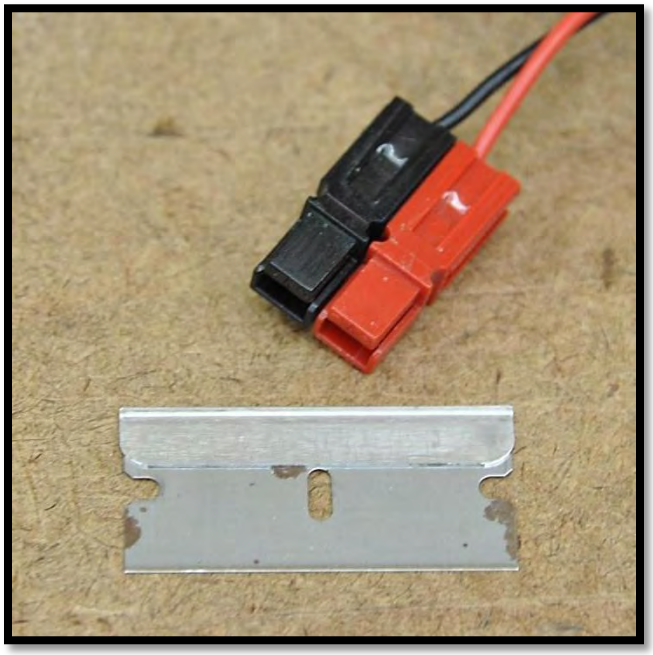
“ARRY THE DIRTY SHEET” was how he signed off yesterday. When I challenged him about what he said, he claimed it was some Italian language he had learned at his last course. Asking what it meant, he said, “it‟s some odd Italian phrase for bugger off or similar - everybody says it when they leave you.” I suggested that the term was more like „arrivederci‟meaning „goodbye. He then said, “goodoh” and took off like a duck heading south with a rocket up its clacker towards the tech building where he was about to attend lesson number 2 of BATHING ANIMALS. He has been learning how to wash and clean various animals with a view to employment at the zoo as an „ANIMAL WASHER‟. For a homework assignment he started off real easy by giving his goldfish a bath in the tub with lots of detergent and bubble bath. When he put it back in its bowl it showed how much it enjoyed it by lying on the sandy bottom with a dreamy look on its face and blowing lots of bubbles. He gave the dog a spin in the washing machine and after the spin dry period, the dog just walked around in circles looking at his tail. The budgie looked a bit bedraggled after the shampoo and conditioner but I‟m sure his feathers will fluff up nicely when he dries out. The biggest problem was the cat. The teacher told him to observe how the animals washed themselves and that he should try their method. Okay. He licked the cat all over but he got a monster furball. He had to take a large dose of some old castor oil to get rid of it. I‟ll bet it tasted bloody „orrible - I reckoned he should have taken a dose of some nice synthetic oil - maybe it would help to get him to „slip‟ out of my way.

A bit more clotted rot from WINCH - THE ZYGODACTYL WIZ.

Sparky's Revolt

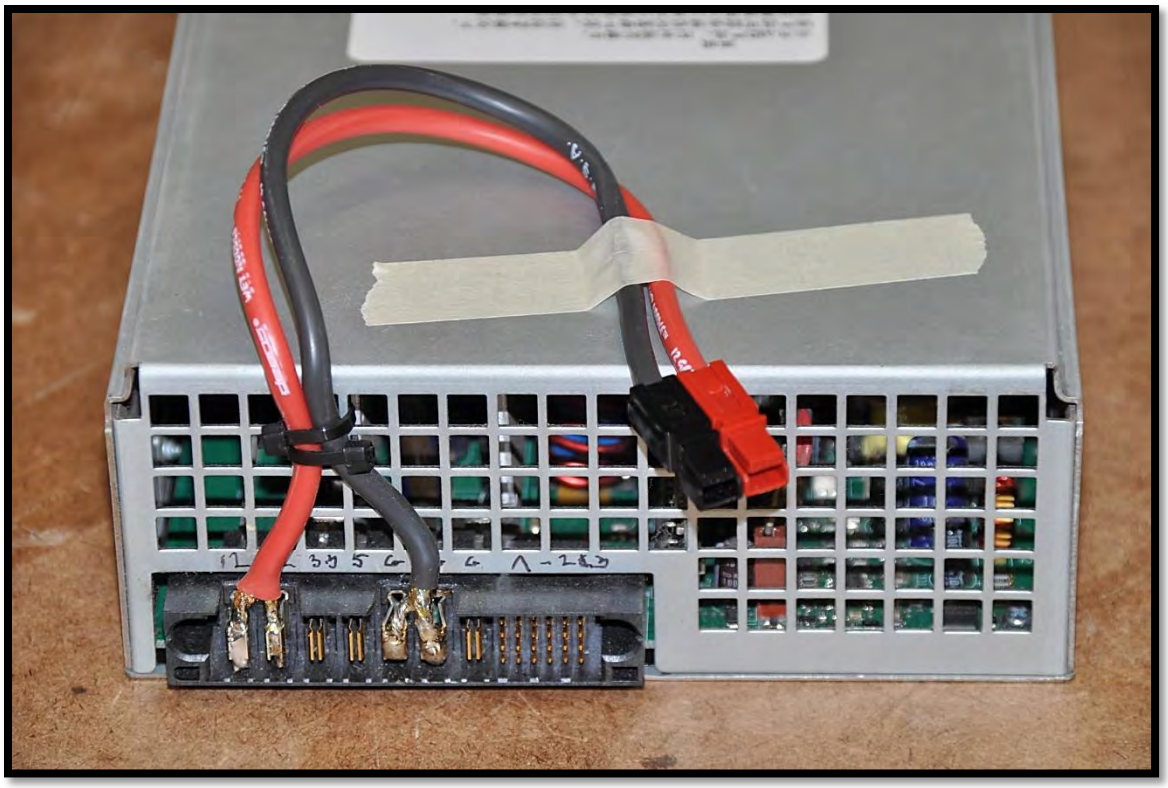
by Tony Coberly

I would like to thank everyone for sticking with RC Report Online through the problems and delays starting the 2012 year; albeit a month late. This month I will focus on a few items that I have come to depend on at the flying field here in Huntsville, as well as flying fields in the southeast United States. And finally we introduce you to a new tester that I am calling the "FrankenTester". I will be using the "FrankenTester" for long-term battery life testing over several months to show the true life expectancy of LiPo batteries being used in the RC hobby today. Let's get started!



As long as there has been electric aircraft there has been an ongoing feud regarding the best connectors to use the on your battery pack and your speed controller, be it brushless or brushed. Oddly enough I have been converted of sorts. When I started flying electric I initially decided

to use the Anderson Powerpole type connector. The Anderson Powerpole is made up of a red and black plastic pole connector that houses metal tabs for the electric connection itself. (There are also blue green and others, but most use red or black for obvious reasons.) The metal tabs of the Powerpole can be soldered or crimped depending on the wire size, the connector size and of course your personal preference. The standard size Powerpole used for RC purposes as the housing series 1330, with the metal contact within the Powerpole being a 1331 series. This metal contact can be used on 16gauge to 12gauge wire. While these connectors are quite easy to separate from each other there is a bit of difficulty in actually soldering (or crimping) the connector tab itself. That being said, it is quite easy to solder or crimp the metal tab, but the problem is due to inherent shape of the tabs. The metal contacts within the Anderson Powerpole are formed with a couple of

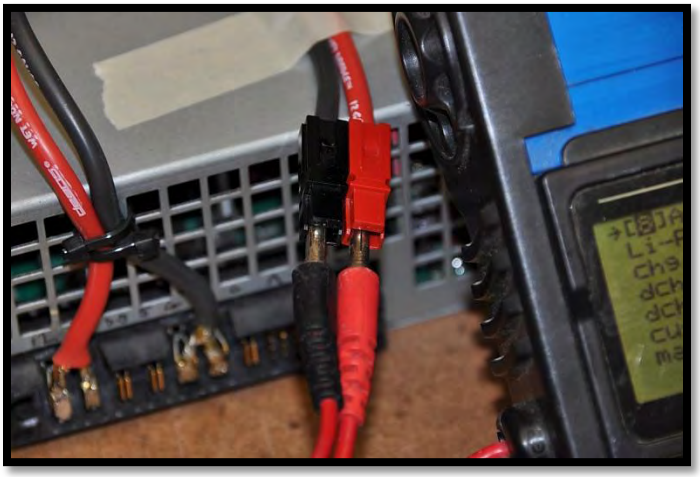


bends in them from the factory. If these tabs get bent they just don't seem to fit the connector very well. If you crimp or bend the tab incorrectly the connector is either extremely hard to get connected into the plastic sheathing, or alternatively doesn't make a good electrical connection at all. Of course the most important thing in electric flights as far as I'm concerned is getting the best possible connection between your battery and speed controller in order to flow the most power. If you are not comfortable with the electrical connections made with any aircraft, is very hard to be comfortable flying aircraft. Myself, I moved on to using Dean's Ultra-connectors rather than the Anderson Powerpoles. Now I'm not saying that Dean's ultra-connectors don't have their own possible issues, but I decided I will worry about connectors while soldering them one time rather than worry about whether or not the connector has been bent appropriately. With a good hot soldering iron, and some liquid flux, the Deans Ultra connector could be soldered and ready to go without having to worry about bending or straightening it. But we are not here to talk about the Dean's Ultra-connectors this month but rather to talk about the use of Anderson Powerpoles - just not on the airplane!

Considering I had about 20 pairs of red and black Anderson Powerpoles, I needed to do something with them. What I decided to do was re-task them to be used as my interconnect for power supplies. Starting with my computer-based power supply from a Dell server computer, I used a piece of 12gauge silicone wire and soldered it onto the power supply at the backplane of the 2-12 V rails. Now why you might ask am I going to use their Anderson Powerpoles power supply but I'm not going to use them in the aircraft? Quite simply, it comes down to the amount of current involved. Currently even my most powerful charger is only going to draw about 225W. 225 watts is only 18.75 amps. So the maximum current draw on any one Anderson Powerpole can vary from 0 to 18.75 amps. I have found that no matter how imperfectly you crimp or solder the Anderson Powerpole it does not have any problem flowing currents in the 20 amp range. So you are wire in the Anderson Powerpole already connected to it. With the power supply in this configuration I have many options in which to hook up nearly any type of charger that I have. Of course the first option is always to put a Powerpole on the end of the charger itself. I have taken my TME Xtrema charger and outfitted it with a pair of Anderson Powerpoles on the input

side of the charger. Now to use the Xtrema I simply plug it into the power supply matching red to red and black to black, considering it is impossible to do otherwise. Of course the Xtrema will function very well with this power supply considering the 12V output is rated at 37 amps. Alternatively we can go to the other side of the spectrum and hook up the E-flite Celectra into a different configuration. First, and most pertinent to this conversation, are these small alligator clips on the E-flite charger can simply clip into the Anderson Powerpole; once again noting black to black and red to red. Now when we use this clip on technique to the Anderson Powerpole like this you must remember that the slightly smaller and of the Powerpole is where the metal tab is located.

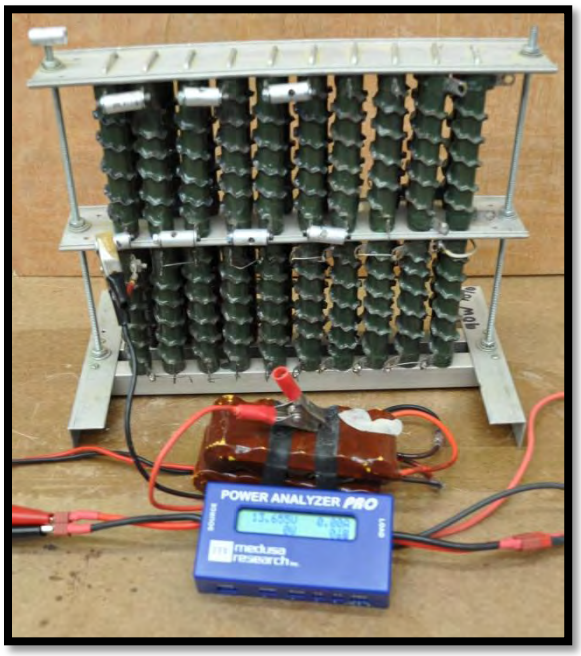
A third way we can connect a battery charger to the output of the power supply in Anderson powerful connector is to simply slip banana plugs into the connector itself. A standard banana plug will fit very snugly in the connector and does no damage to the connector or the banana plug itself. It demonstrates this was probably my oldest lithium-based the charger in my arsenal. My Intellieak ICE charger came from the factory with banana plug connectors preinstalled. Not Islamic a broken record here but you simply note read to read and the black and plug the plugs into the end of the Anderson powerful. Value of course notices that with the banana plug connectors inserted into the Anderson Powerpole, you will be left with about one quarter of an inch of exposed banana plug connector. This is where some common sense comes in. If it charges in such a way to make sure that you are leaving live bare metal wires flailing around your charger while charging. (But considering you fly an electric motor aircraft, you are always mindful of such things, right?)

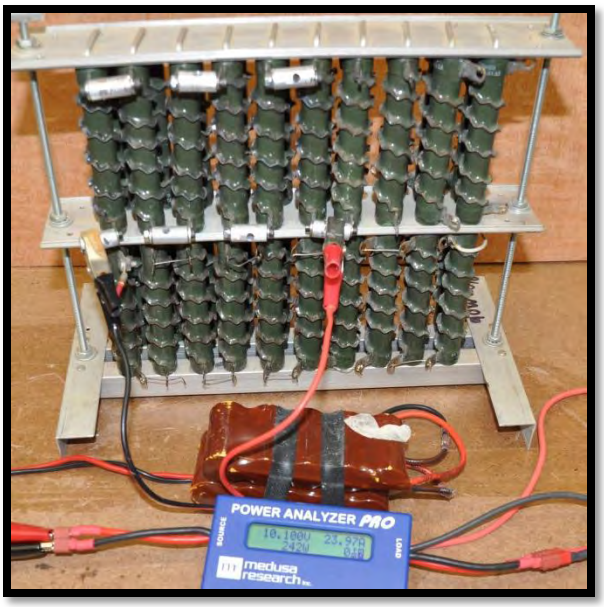


Now when you outfit your power supplies in this fashion, you will have to make some other allowances for a charger that has a large set of alligator clips on it. Now, what I mean is that if you want to allow someone else to use your power supply to charger their batteries be aware, because all my chargers are equipped with banana plugs or Anderson Powerpoles!

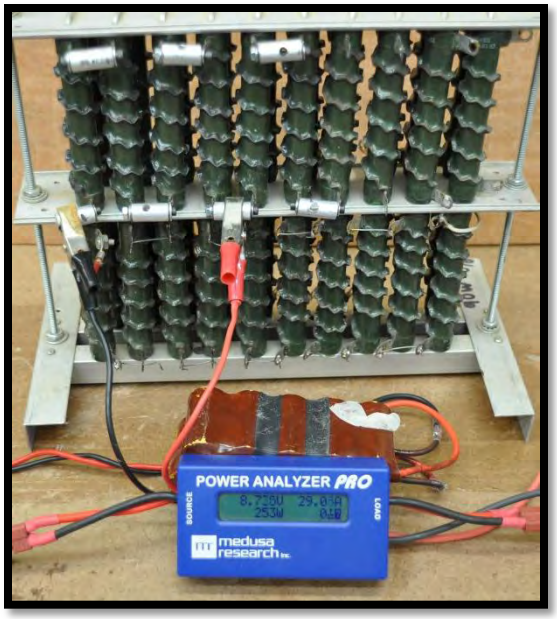
Now it's time to talk FrankenTester. For a long time, I've been looking for a way to truly test batteries to their true highest C rating from the manufacturer. I liken this back to the days of the Accu CycleII where we would cycle our nickel cadmium and our nickel metal hydride batteries to see if they meet their advertised capacity. Well with the days of these LiPo battery packs capable of 20C and up to 45C ratings how exactly are we to know that they can meet these ratings? Most higher end chargers these days will do some kind of a discharge perhaps up to 50W, but what good does that do us when you have a battery that mathematically should be capable of 1000 wants discharge? Well I've come up with a plan. I have come up with the FrankenTester to be used as a variable load device for battery testing. This homemade resistive tester consists of 40 resisters capable of dissipating 90 watts each. I intend to use these resisters to test batteries as high as humanly possible.by varying the number of resisters in series parallel and series parallel configurations I can safely dissipate up to 3600W in the form of heat. I will give a little example and follow pictures well.

For our FrankenTester demonstration we will use a 10 cell nickel metal hydride pack I keep available on the bench. This particular nickel metal hydride pack is used when I am charging aircraft on the bench in the middle shop. Rather than use the server power supply, I can simply plug my charger into this battery as a source and charge my receiver packs in my planes. I have set up my Power Analyzer Pro between my battery pack and by FrankenTester. Initially you can see that our Power Analyzer Pro is showing the battery at full charge at 13.655V and the FrankenTester circuit is not completed because the Red alligator clip is atop the battery. (I am using alligator clips for this demonstration, but I will be using something more substantial for pack testing.). When the red alligator clip is connected to the aluminum bar attached to the number six resistor, the Power Analyzer Pro begins to read a current of 242W and a total of 23.97 amps. Now if I want more current for this particular set up, I could simply move the red alligator clip to the left and reduce the number resistors. Because the resisters slow the movement of current, the more resisters you use the less current there will be. If I want to increase the load on the battery I must therefore lower the resistance. By moving the red alligator clip to the left I effectively lower the resistance by removing the number of resisters. Now here's where must be careful because these resisters are dissipating 90W per resistor. Considering I have





six resistors in series and a total wattage of 242W, I am theoretically dissipating 40.3W per resistor. Now because of the low power nature of this nickel metal hydride pack, the voltage and current drop-off is significant. After just about one minute our current drops off to 230W as the pack voltage drops. By moving the red alligator clip up into the left I have reduced the number resisters to five. Now our analyzer reads 238W. Another move to the left and limiting of resistors to account before we now have 253W. Again the closer I go to the black alligator clip the less resistance therefore the more current flow. Now this is just a test bench style test, but when I do actual lithium battery testing I will have my Power Analyzer Pro plugged into my computer and downloading graphing the data as the battery discharges. At no point will I draw the battery's down below 2.9V per lithium cell. In the months to come I will test many of the popular brand-name batteries as well as the knockoff or inexpensive batteries we're receiving out of Korea and China these days. I believe this testing will show the true nature that C ratings are definitely



more a design from a marketing point of view rather than actuality.

I hope everybody finds portions of this article interesting, informative, or at the very least; just time consuming if nothing else. Don't forget that during this cold flying season make sure your batteries are at least 70°F or better to prevent damage and a shortening of battery cycle life!

Tony Coberly

tonyc@rcreport.net

TAILS FROM THE OTHER SIDE ISABELLE

Well, I hope you all found events to interest yourselves while I was away last month! Hoping that 2012 is treating you well so far and wishing you a Happy Valentine's Day a little later in the month!

Let's see what we can find to do in March!

3/3/2012 - Eldorado, AR (E) 12TH ANNUAL INDOOR SWAP MEET. Site: 1000 N Mosby St. Jason Cunningham CD, Email: jcunningham50@hotmail.com. Open 9AM to 4PM, set up 8AM. Admission $5, women and children under 12 free. Raffle drawings, concessions on site, non smoking facility, open to sell new and used products, dealers, hobby shops and the public invited. Tables $12 each. Tables limited. Sponsor: MODEL AVIATORS OF S. ARKANSAS

3/4/2012 - Linden, MI (E) 21ST ANNUAL FLINT'S RC SWAP MEET. Site: Lake Fenton High School. William Gerald CD, Email: impalass6565@comcast.net. Visit: www.rcflyingaces.com. Tables $15 in advance, additional tables $12, admission $5, women no charge, 17 and under $1. Vendors 8AM, public 9AM. Wide screen RC videos. Sponsor: THE FLYING ACES R.C. CLUB INC

3/4/2012 - Ravenna, OH (E) RAVENNA THUNDERBIRDS 23RD ANNUAL SWAP SHOP. Site: Maplewood Career Center. Daniel Porcase CD, Email: dannyspeed@aol.com. 10AM to 1PM, vendor set up 9AM. Admission $3, wives and kids free. Raffles and refreshments. Table reservations are highly recommended. Sponsor: RAVENNA THUNDERBIRDS RC CLUB INC

3/10/2012 - Lebanon, PA (E) 32ND ANNUAL RC FLEA MARKET. Site: Lebanon Expo. Larry Leiphart CD, Email: info@cpaa.us. Visit: www.cpaa.us. Over 600 indoor table spaces are available in 41,000 sq ft. Aisle space $13 ea, wall space $20 each. General admission is $7 (8:30AM), advance general admission tickets are available. First time renters e-mail or call CD before ordering spaces. Sponsor: CENTRAL PENN AEROMODELERS

3/10/2012 - Land O Lakes, FL (E) SWAP MEET. Site: 22500 State Road 52. Michael Diesu CD, Email: mdiesu@tampabay.rr.com. No charge for tables. Sponsor: BAY CITY FLYERS, INC.

3/10/2012 - Rockford, IL (E) 18TH ANNUAL SWAP MEET AND AUCTION. Site: Rockford Christian School. Edward Scherer CD, Email: edward.scherer@comcast.net. Visit: www.rvrcflyers.com. Set up 6:30AM, open 8AM, admission $5, under 12 free. Tables $10 each prepay or $15 at the door. Silent auction, winning bidder must be present. For more and vendor app see website, then calendar. Sponsor: ROCK VALLEY RC FLYERS

3/17/2012 - Lexington, NC (E) LEXINGTON NC ANNUAL SWAP MEET. Site: Davidson County Fairgrounds. Thomas Brittain CD, Email: tbrittain1@triad.rr.com. Visit: www.triadaero.org. 8AM to 1PM. Early vendor set up Friday evening 5:30PM to 9PM and Sat morning at 7AM. Aisle tables $12 w/1 free admission. Wall tables $15 w/1 free admission. Admission $5, spouse and children free w/paid admission. Concessions, door prizes, raffle and lots of bargains. For table rental contact CD or visit website. Sponsor: TRIAD AEROMODELERS, INC

3/17/2012 - Mt Holly, NJ (E) FLEA MARKET. Site: America Emergency Squad Bldg. Fred Lumb CD, Email: lum945@aol.com. Tables $12, wall tables $14, admission $4. Sellers 8AM, buyers 9AM to noon. Table reservations recommended. Food, raffles. Contact CD for further info. Sponsor: BURLINGTON COUNTY RC CLUB INC

3/17/2012 - Canandaigua, NY (E) 25TH ANNUAL AUCTION/SWAP MEET. Site: Canandaigua Middle School. Michael Howell CD, Email: mhowell3@rochester.rr.com. Doors open at 9AM, auction at 12 noon. Adults $5, children and wives free. Vendors welcome, must bring own tables. Food and drinks available. Aircraft and equipment raffles. Sponsor: CANANDAIGUA SKY CHIEFS

3/24/2012 - Lancaster, OH (E) FORKS 37TH ANNUAL RC MODEL SHOW AND SWAP SHOP. Site: Fairfield County Fairgrounds. Tony Scott CD, Email: tonyscott40@sbcglobal.net. Visit: www.flying-forks.com. Open to public 8:30AM to 1PM, vendor set up 7:30AM. Admission $3, ladies and children under 12 free. Free parking and free coffee. Trophies awarded thru 3rd place per class. Lots of door prizes, vendor tables $10, great refreshments available. Sponsor: FAIRFIELD OHIO RADIO KONTROL F.O.R.K.S

3/24/2012 - Hamburg, PA (E) TRI COUNTY WINGSNAPPERS SWAP MEET. Site: Hamburg Field House. Michael Renzi CD, Email: mrenz66@yahoo.com. Visit: www.tcws.org. Doors open at 6AM for vendors, 8AM for the public. Admission $5. Sponsor: TRI COUNTY WING SNAPPERS INC

3/24/2012 - Mechanicsville, VA (E) 10TH ANNUAL SWAP MEET AND INDOOR ELECTRIC FUN FLY. Site: Fairmount Christian Church. James Webb CD, Email: jimewebb@comcast.net. Visit: hanoverrc.org. Door prizes, concessions. Tables $10 each; contact keithcollier@comcast.net. Fun fly $10, contact tsracing@dragbike.com. Sponsor: HANOVER RADIO CONTROL FLYING CLUB

3/31/2012 - Oakdale, CA (E) 16TH ANNUAL SPRING SWAP MEET. Site: Club Field. Paul Klahn CD, Email: pbklahn@sbcglobal.net. Visit: www.rcflyersunlimited.com. Please join the Radio Control Flyers Unlimited for their 16th annual spring swap meet. 8AM until we're done. Seller spaces $15, first come, first served. Sorry no commercial sales. Visit website for directions. Sponsor: RC FLYERS UNLIMITED INC

3/31/2012 - Manchester, NH (E) NHFM ANNUAL RC AUCTION. Site: American Legion Henry Sweeney. Shane Schmidt CD, Email: shane.schmidt@myfairpoint.net. Visit: www.nhflyingmisfits.org. Seller registration 10AM, auction 11AM. Anything RC. Seller premium 10%, no buyback fee, cash only. $2 admission (under 12 free). Food concession, raffle. Sponsor: NEW HAMPSHIRE FLYING MISFITS

Wonder if anyone is flying?

3/2/2012 - 3/3/2012 - Glen St Mary, FL (C) DAWN PATROL AT THE GLEN. Site: Shadetree Field. Rod Gier CD, Email: mad-bomber@mindspring.com. Field open March 1 for flying. Landing fee $20 includes dinner Saturday. One day $10. Overnight camping, free, no hook ups. Sponsor: SHADETREE MINITURE AIRCRAFT ASSOC #25

3/3/2012 - Edgard, LA (C) 3RD WARBIRDS ON THE BAYOU. Site: Club Field. Raymond Miller CD, Email: rayjackiemiller@cox.net. Visit: www.ccrcc.com. Primitive RV parking, bathrooms, food, beverages. Lunch for all registered pilots. All types of warbirds welcome. Sponsor: CRESCENT CITY RC CLUB, INC

3/3/2012 - 3/4/2012 - Kansas City, MO (C) KANSAS CITY INDOOR RC EXTRAVAGANZA. Site: National Airline History Museum. Troy Hamm, Email: funflyr@juno.com. Visit: www.ahmhangar.com. Aircraft limited to 10 oz RTF. 9AM to 8PM Sat, 9AM to 2PM Sun. RC and food vendors. Proceeds to support the National Airline History Museum. Sponsor: FRANKLIN COUNTY FLYERS MODEL AIRCRAFT CLUB

3/9/2012 - 3/11/2012 - Las Vegas, NV (AA) FABULOUS LAS VEGAS FUN FLY. Site: William Bennett Air Field. William Roper CD, Email: lvrc@rockcopter.com. Visit: www.rockcopter.com. This event is for all levels of helicopter flyers. We will have an obstacle course for 450 size helicopters. We have contest for beginners, intermediate and advance flyers. Come join us in the fun. Sponsor: LAS VEGAS RADIO CONTROL CLUB

3/9/2012 - 3/11/2012 - Tucson, AZ (C) TUCSON JET RALLY. Site: Club Field. Debra Sherrow CD, Email: drsherrow@hotmail.com. Visit: www.tucsonwarbirds.com. Turbine, ducted fan, electric ducted fan only. No props. All must fly the pattern, taxi out and back. No hand launch aircraft. Please donate to Ryan Sherrow AMA Scholarship. Sponsor: TUCSON INTERNATIONAL MODEL PARK ASSN

3/9/2012 - 3/11/2012 - Palmetto, FL (C-Restricted) 21ST ANNUAL DICK COLES MEMORIAL FLY IN. Site: Club Field. James Holloman CD, Email: jhollo6540@aol.com. Visit: www.rcwebclub.com. 500x100' grass runway. RV parking, limited RV hook ups, food and beverages on site. No turbines, noise limits 96 dbs @ 9'. Sponsor: MANATEE COUNTY RADIO CNTRLRS

3/17/2012 - Huffman, TX (C) 16TH ANNUAL ANNIVERSARY FLY IN. Site: Club Field. Scott Goddard CD, Email: sgoddard@nctv.com. Visit: www.jetero.com. Come join Jetero RC Club to celebrate their 16th anniversary on March 17. Wheels up 9AM until the last pilot drops. Free food and drinks, no landing fees, this is a totally free event! Sponsor: JETERO RC CLUB INC

3/17/2012 - Bedford, VA (AA) BATTLE OVER BLUE RIDGE. Site: Club Field. David Smithgall CD, Email: ajs_dks@yahoo.com. RC combat - 8 rounds SSC and 6 rounds 2948. Start combat 10AM sharp. Sponsor: VIRGINIA AEROMODELERS

3/17/2012 - 3/18/2012 - Cape Coral, FL (C) GATHERING OF THE GIANTS. Site: Club Field. Edward Gamils CD, Email: egamils@hotmail.com. Visit: www.rseahawks.org. Giant scale rules apply. 600x60' paved runway. Turbines welcome. Basic camping facilities. $20 landing fee. Saturday night banquet. Sponsor: CAPE CORAL R/SEA HAWKS

3/23/2012 - 3/25/2012 - Jacksonville, FL (C) THE 3D BOWL. Site: Club Field. Andrew Griffith CD, Email: barracudahockey@aol.com. Visit: www.jaxrc.com. 3D aircraft flying with the Florida Free Style Aerobatics Association. Paved runways, modern restrooms, smoked BBQ lunch included for pilots with landing fee. No noise or time restrictions. Night flying. Camping and RVs okay, no hook ups. Raffle and pilot prizes. $20 landing fee. Sponsor: RC CLUB OF JACKSONVILLE

3/24/2012 - Rosenberg, TX (C) SPRING SWAP MEET AND FUN FLY. Site: Club Field. Richard Jackson CD, Email: rc.aviator@comcast.net. Visit: www.fortbendrc.com. 2 paved runways 700' and 525', air conditioned club house, covered pavilion and pit area. Tables available on a first come basis. Concession stand for burgers and hotdog and drinks. Donations accepted for parking. Swap meet starts at 8AM. Sponsor: FORT BEND RADIO CONTROL CLUB

3/24/2012 - Wittman, AZ (C) RC PRO WARBIRD RACE. Site: Speed World. Jerry Widmer CD, Email: jwidmer3@cox.net. Visit: www.speedworldrcf.com. Pre-registration is required by contacting CD. No on the field registration is allowed. Sponsor: SPEEDWORLD R.C. FLYERS

3/31/2012 - 4/1/2012 - Phoenix, AZ (C) 1/8 AIR FORCE SPRING FLY IN. Site: Cave Buttes. Gene Peterson CD, Email: az49er@cox.net. $20 landing fee, 400' ceiling, 3D flying not allowed. Camping overnight not allowed. All scale aircraft welcome. Sponsor: ONE EIGHTH AIR FORCE

3/30/2012 - 4/1/2012 - Venice, FL (C) VENICE 3D FLY IN. Site: Club Field. Robert Shapiro CD, Email: bob@arfplanes.com. Visit: www.venicerc.com. Open to all models capable of 3D flight, helis welcome. Join us for a great weekend. Primitive camping okay. Sponsor: R/C FLIERS OF VENICE INC

3/31/2012 - Greer, SC (C) WCRC SPRING FLY IN. Site: Club Field. Mark Sumner CD, Email: marksumner@charter.net. Visit: www.wcrcskyhawks.com. Come fly with us on April Fool's eve at our spring fly in. Fly what you bring. $15 landing fee. $5 lunch. Two 450x50'grass runways. Sponsor: WESTERN CAROLINA RC

Hope this is enough to keep you busy until we meet again next month!

You all know that sometimes Mom forgets things… (I love her anyway)…so I need to make sure that you **DON'T MISS THE PRODUCT REVIEW FROM RTL FASTENERS IN THIS ISSUE!**

Charles Krempin sent me some follow up information on the Hico, Texas's 9th annual swap meet that was held on December 5, 2011. He writes: We ended up with 53 venders - the most we have ever had. The venders began showing up at 7AM and we had to ask everyone to tighten up, because we were getting short of space. People really brought a lot of items for sale. We ran the meet until 12 noon and had hamburgers with all the trimmings. Everyone seemed to have a good time and it seemed like many items changed hands. Sometimes, we get to fly afterwards, but the wind didn't cooperate this year.

A few of you have shared pictures with me recently. Allow me to introduce Lulu Tivel, an elderpom, who hangs out with our friend and contributor, Royce Tivel. Royce writes: As I mentioned, it is getting cooler. I've attached an image of Lulu, my 14-year-old Pomeranian. She doesn't have much fur left and is at the age where she really appreciates "three squares and a warm flop." She is always good company during my afternoon snoozes.

Here's a picture of Tegan and Boss, the grand-dogs of Dick Sprau in Montana. Dick tells me that the little one is the alpha dog.

Dick also shared some recent pictures of all the great weather he is having. I'll let you decide on how great it is.

Let me hear from you! Send in your event information by email, via the office: juliac@rcreport.net, with information concerning upcoming events that you are aware of – no matter how big or small! Attach a flyer, too! If you don't tell the RC world about it, the RC world will never know to visit and fly with you in your part of the country!

Isabelle

Spay and neuter your pets and ADOPT – don't buy!
Rescued is my favorite breed!

February 11 & 12, 2012
Champaign, Illinois

SUNDAY SCHEDULE	
7:30am	Doors Open / Registration Begins
8:00am	OPEN FLYING
8:30am	
9:00am	
9:30am	3D Airplanes (Area 1) • Slow and Micro Flyers (Area 2)
10:00am	Helicopters (Area 1) / Jets (Area 2)
10:30am	ElectriFly Air Race "Finals"
11:00am	"PRIZEATTA"
11:30am	OPEN FLYING
12:00pm	
12:30pm	
1:00pm	
1:30pm	
2:00pm	
2:30pm	
3:00pm	Show Closes

SATURDAY SCHEDULE	
7:30am	Doors Open / Registration Begins
8:00am	OPEN FLYING
8:30am	
9:00am	
9:30am	
10:00am	3D Airplanes (Area 1) • Slow & Micro Flyers (Area 2)
10:30am	Helicopters (Area 1) / Jets (Area 2)
11:00am	OPEN FLYING
11:30am	
12:00pm	ElectriFly Air Race / Scale Contest (Area 2)
12:30pm	OPEN FLYING
1:00pm	
1:30pm	
2:00pm	
2:30pm	
3:00pm	3D Airplanes (Area 1) • Slow & Micro Flyers (Area 2)
3:30pm	Helicopters (Area 1) / Jets (Area 2)
4:00pm	OPEN FLYING
4:30pm	Make It Take It Airplane Launch
5:00pm	OPEN FLYING
5:30pm	The following events will take place between 5:30 pm - 10 pm: Indoor Scale Contest Freestyle Airshow Helicopter "Smackdown" Combat & Blackout Night Fly
6:00pm	
6:30pm	
7:00pm	
7:30pm	
8:00pm	
8:30pm	
9:00pm	
9:30pm	
10:00pm	Show closes for the day

RLT Master Assortment #5000 Updated!

- $159.95

RTL Fasteners is constantly listening to consumers and updating their popular assortments to meet the needs of today's modeler. I received the newest incarnation of RLTs Master Assortment #5000 and here is the skinny! Also a few little recommendations to add to your Master Assortment!

The following is a long list of everything included with the Master Assortment for 2012!

Socket Head 2-56 Cap Screws:

- 24ea-2-56x1/4'
- 24ea-2-56x3/8"
- 24ea-2-56x1/2"
- 24ea-2-56x3/4"
- 12ea-2-56x1"

Socket Head 4-40 Cap Screws:

- 24ea-4-40x1/4
- 24ea-4-40x3/8"
- 24ea-4-40x1/2"
- 24ea-4-40x5/8"
- 24ea-4-40x3/4"
- 24ea-4-40x1"

- 12ea-4-40x1-1/4”
- 12ea-4-40x1-1/2

Socket Head 6-32 Cap Screws:

- 24ea-6-32x1/2”
- 24ea-6-32x5/8”
- 24ea-6-32x3/4”
- 24ea-6-32x1”
- 12ea-6-32x1-1/4”
- 12ea-6-32x1-1/2

Socket Head 8-32 Cap Screws:

- 12ea-8-32x3/4”
- 12ea-8-32x1”
- 12ea-8-32x1-1/4”
- 12ea-8-32x1-1/2”

Button Head Socket Drive Screws:

- 24ea-#2x3/8”
- 24ea-#2x1/2”
- 24ea-#4x1/2”
- 24ea-#4x3/4”

Servo Mounting Screws:

- 24ea-#2x7/16”
- 24ea-#2x9/16”

Miniature Brass Pan Head Phillips:

- 50ea-#0x1/4”

Nylon Insert Lock Nuts:

- 100ea-2-56 Nylon Insert Lock Nuts
- 100ea- 4-40 Nylon Insert Lock Nuts
- 100ea-6-32 Nylon Insert Lock Nuts
- 50ea-8-32 Nylon Insert Lock Nuts

Hex Nuts:

- 100ea-2-56 Hex Nuts
- 100ea-4-40 Hex Nuts
- 100ea-6-32 Hex Nuts
- 50ea-8-32 Hex Nuts

Blind Nuts:

- 12ea-4-40 T-Nuts
- 12ea-6-32 T-Nuts
- 12ea-8-32 T-Nuts

Locking Split Washers:

- 100ea-#2 Split Washer
- 100ea-#4 Split Washer
- 100ea-#6 Split Washer
- 50ea-#8 Split Washer

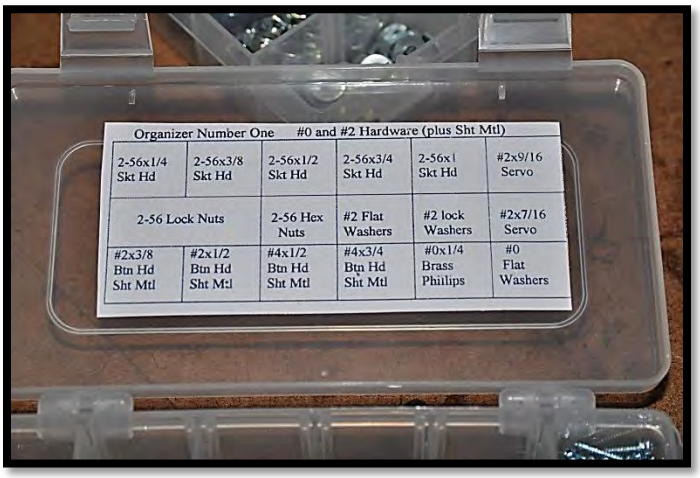
Flat Washers:

- 50ea- #0 Flat washers
- 100ea-#2 Flat Washers
- 100ea-#4 Flat Washers
- 100ea-#6 Flat Washers
- 50ea-#8 Flat Washers

4 organizers for all hardware

Magnetic pickup tool

I was initially surprised by the fact that I had to put the assortment together. Each set of screws was packed in its own little sealed zipper top bag. The entire kit of fasteners was in a good old paper bag, reminds me of lunch back in Montana! With everything spread out on the bench it only took me about 25 minutes to get all the bags emptied into the trays. It was actually kind of therapeutic!



The Master Assortment comes with four organizers to separate out your fasteners into their various sizes. The organizers come with a suggested layout for the different pieces. What I did was scan in the recommended layout and then printed the sheet on a piece of pressure sensitive paper; basically a full sheet of sticky labels. I then cut the label into four pieces and stuck inside each of the organizers. Now if I am getting a little low on something I can reference what should have been in that particular spot so I can order more later! Finally I labeled the outside of the containers with the different basic sizes inside: 2/56, 4/40, 6/32 and 8/32.

Now I know there are those of you they say they cannot justify spending $159.95 on something that doesn't even fly! Well think of it like this. You may NEVER need to buy a screw again with this Master Assortment #5000 in your shop. Come on, bite the bullet and buy it, or continue going to the local hobby shop and spending $5.00 for four screws!

Tony Coberly

Tonyc@RCReport.Net

Other handy sets to add to your Master Assortment:

Miniature Wood Screw (Brass) included:

$36.75

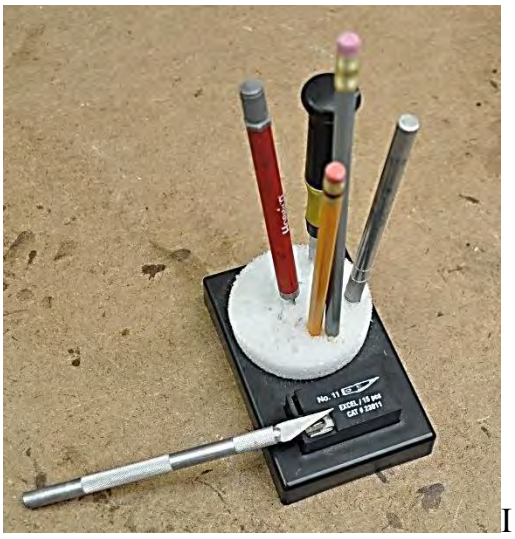
- 50ea- #0x1/4" Brass Pan Head Phillips
- 50ea- #0x3/8" Brass Pan Head Phillips
- 50ea- #1x1/4" Brass Pan Head Phillips
- 50ea- #1x3/8" Brass Pan Head Phillips
- 50ea- #1x1/2" Brass Pan Head Phillips
- 50ea- #2x1/2" Brass Pan Head Phillips
- Additional plastic Organizer

Stainless Steel Bonded Washers:

- 24ea-#4 Stainless/Rubber $4.35
- 24ea-#6 Stainless/Rubber $2.95
- 24ea-#8 Stainless/Rubber $2.95
- 24ea-#10 Stainless/Rubber $3.35
- 24ea-1/4 Stainless/Rubber $3.45
- #4 Washers Pictured

Scratchin' Buildin Itches

This month I am starting my first scratch build, so I thought I would take you along for the ride! Last year I wanted a larger powered sail plane so I went to my local hobby shop and had them order me a Sig Riser 100. Now it is getting very hard to find kits these days, but SIG still has a lot of the classics. The Sig Riser 100 was a very easy build that was completed in 3 weeks! Now this was not intended to be show stopping, award winning sail plane, so the covering was just a bunch of pieces of short rolls that I had laying around. Unfortunately the Riser 100 had a short life due to a failure of a factory built Deans Ultra Parallel connector. The Riser turned into a lawn dart! Right then I decided I wanted a larger glider that I can hang a FEW cameras off of.



I immediately took my spare copy of the Sig Riser 100 plans (I always make an extra copy of full scale plans before I build a kit.) to my local commercial plan copy service provider, Datatek-USA. I had Danny at Datatek enlarge the Riser up to 150 inches and off to the shop I went. This monthly column will follow all the steps to cut out parts from the enlarged plans, select the wood spars and sheeting, configure the ailerons, flaps and spoilers, and in this case set the motor size because this will be a powered glider.

Scratch build preparation:

Well in order to scratch up this kit we are going to need some things first. This first list is what I believe are the minimum tools needed to scratch build a kit using only a set of plans.

Minimum tool set

- Flat building area that can be pinned into
- Exacto knife or some other razor blade knife
- Hand saw for cutting plywood
- Coarse and fine block sander
- T-pins to hold parts in place-NOT HOBBICO brand-they are too soft steel
- 90 degree squares of some sort
- Metal rulers, short and long
- Plastic or masking tape

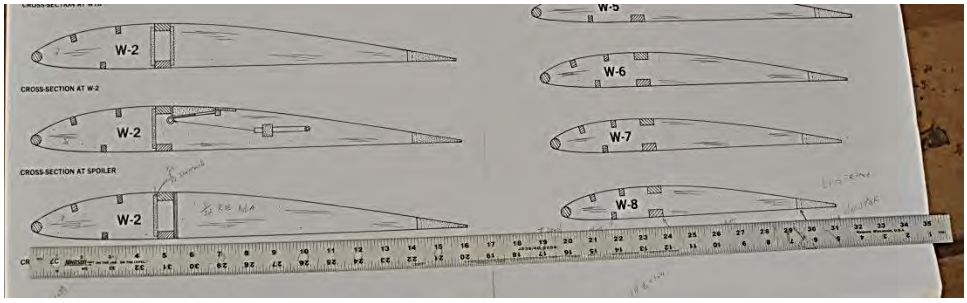
Now to make your job easier I recommend adding the following tools to your workshop. Having these additional tools will make things much easier when scratch building and you will find yourself much more willing to build or rebuild parts from other substandard ARF type planes.

Better tool set

- 9 inch or bigger Band Saw
- Belt sander
- PermaGrit hand sanders
- Pin pusher
- Stick cutter
- Master Air Screw Balsa Ripper
- CA glue Pipettes
- Digital Caliper
- Hollow core door for building board on a perfectly Flat surface

Now we need to talk about adhesives. I will start by stating that I don't think there is a wrong type of glue to use. There was a time when there was only one type of glue to use and that was aliphatic glue. This glue was great then and it is great now, but it takes time. Aliphatic glues require the water that carries the resins to evaporate off as the glue absorbs into the pores of the wood and sets up. Since the advent of CyanoAcrylate based glues, referred to as CA glue, the build time has been shortened considerably. CA glues dry much faster and allow us to assemble parts in less than half the time of aliphatic glues. But with fast drying glues we need to be more careful and mindful of what we use and where. CA glues create very bad odors so make sure your shop is well ventilated. I like to keep a small high speed computer fan on the bench to help disperse the odors. I keep Bob Smith Thin and Medium CA glue in my shop at all times. When building kits I use both of these glues most all of the time. The medium glue is obviously slower to setup, which allows it absorb into the wood rather than just sitting on the surf ace. Thin CA is nearly an instant set so I will use it as kind of a clamp or pin when building. An example is when I glue a wing rib to a spar I will put medium CA on the bottom spar first, and put more medium CA on top of the rim before adding the top spar. While the medium CA is still wet and moveable, I can make sure the wing rib is vertical and in line before adding just a drop or two of thin CA. This thin CA hardens immediately and holds everything tight while the medium CA sets up several minutes later. Also adding a drop of thin CA on top of medium CA will act sort of like a flux and cause the medium CA to move deeper into the pores of the soft balsa wood. If for some reason the CA glue is not setting up, you

can always add a spritz of CA accelerator to chemically "kick off" the glue, but use it sparingly.



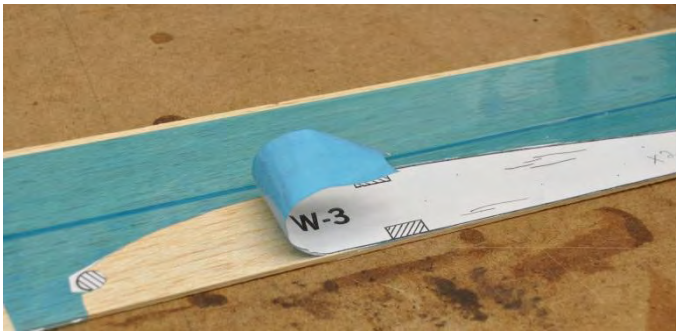
Now there will be times where we will need to use something stronger to hold the high stress areas together in the model. This is the area for epoxy glues. Epoxy glues are normally reserved for landing gear, firewalls and wing joiners. Again I use Bob Smith epoxy for most of my wood kit building. I have found that 30 minute and 1 hour cure times are normally more than adequate. (Now I use something VERY different when building up composite pattern aircraft, but that's another column for another time.).

Step one in this scaled up scratch build is to size the required balsa, lite plywood and hardwood for the project. Considering that this kit is 50% larger than the original, one might think that we just need wood that is 50% larger than the original, but that is not always the case. Let's go through the wood that was included in the original kit, starting with the wing. The original die-cut balsa wing rib sheets on the Riser 100 were made from 3/32 inch balsa wood that was quite soft. I decided that the 3/32 inch thick balsa would be sufficient on the 150 inch version, but I did choose slightly harder (and heavier) balsa sheets from my local hobby shop. The first and second wing ribs were made from 1/8 inch die-cut lite plywood originally. When I built the kit the first time, I just didn't really like how soft this plywood was, so in the 150 inch Riser I am upgrading the W1 and W2 ribs to a stronger and stiffer 1/8 inch thick hard 5-ply birch plywood. Now you could, of course, just measure the scaled up ribs on the plans, but with the up scaling of the ribs, the black lines of the plans are also made bigger. So you end up with parts that measure out to some very odd sizes of wood that we cannot readily get, and the line makes up about 1/16 inch or better on the plans. Now, moving onto the wing spars I am upsizing them by one size. Originally the spars were made of 3/16x3/8 spruce hardwood. I am using a 1/4x1/2 inch spruce hardwood, which is only just smaller than that is printed on the enlarged plan. I will also be making a few modifications to the D-tube (the term for the spar area created when the top and bottom spars are bridged together with shear webs) later, but we will get to that. The leading edge of the wing was a ¼ inch diameter hardwood dowel, so I just measured the wing ribs on the up scaled plan and found that a 3/8 inch dowel was just right. The tabulators are three small sticks that run the length of each of the wing panels. There is one tabulator on the bottom, and two on the top of the wing panels. I chose to scale these parts out and I found that they came out to be very close to 3/16 inch. Rather than try to buy sticks of balsa that are 3/16x1/4 inch, I just used sheets of 3/16 inch that I could rip down with a razor blade. Finally I looked at the trailing edge of the wing panels. The trailing edge is a triangle shaped piece that is the shape of aileron stock. I found that a 2 inch deep piece of aileron stock was nearly perfect fit, if not quite long enough! I believe we have more than

enough parts to get started on the wing panels, so let's get started making our parts.

First thing I am going to do is start with the wing ribs W2 through W8. According to the plans I need a total of fourteen W2 ribs and then two each of ribs W3-W8. Now there a lot of ways to cut out ribs by using a template, rotary tool with a collet sleeve adapter, but in this case I don't think it is warranted. I'll start with the W3 ribs first. (I used the W3 ribs as an example.) I cut out the W3 rib from the plans with a simple Exacto knife and #11 blade. Now do yourself a favor and mark the W3 cutout with the number of parts you need. This mark will

make it easier to reference the parts without having to pull the plans out and count the parts. I then take a piece of the 3/32 inch balsa sheeting and cover it with a thin layer of some kind of plastic tape. In the example I used an Airtech Blue tape so it is more visible in the pictures, but any tape will work so long as you can get it off later. Just apply the layer onto the sheet and lightly pat it down. Now I use some spray adhesive to hold the plan cutout onto the tape attached to the balsa. I keep the high tack version of the 3M Super 77 adhesive on hand, but the lighter Super 33 works fine too. Do NOT try to just glue the plan cutout without applying the tape first. No matter how low tack the spray adhesive is, I have found that plan cutout will tear off when you try to remove it.

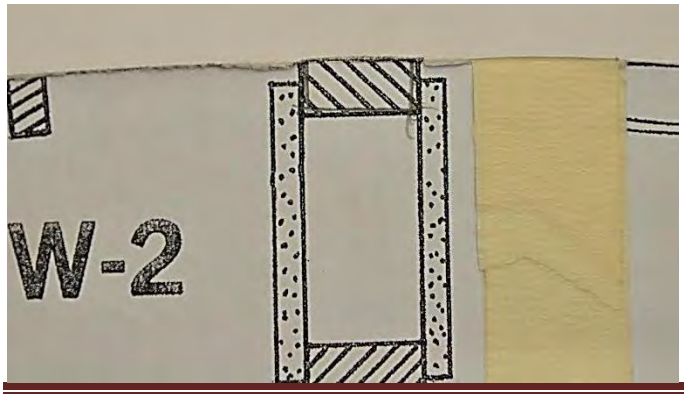


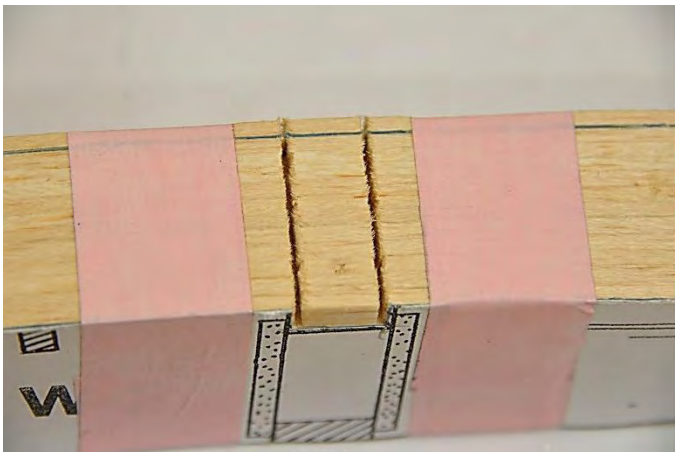
Then we have to attempt to sand off the paper and adhesive. There is no reason to make things harder since we are already making our own kit! Now we can cut out the 1st of our W3 ribs with the Exacto knife, but don't try to be too precise. I like to cut outside the line just slightly because in a later step we will use a sander to finalize the process.

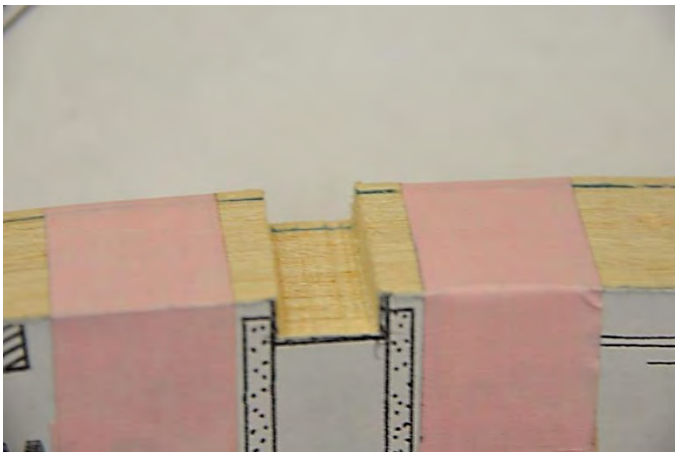
With the 1st W3 cutout, just place it on top of the balsa sheet and use it as a template. Make sure you keep the knife blade as vertical as possible to prevent undercutting the template

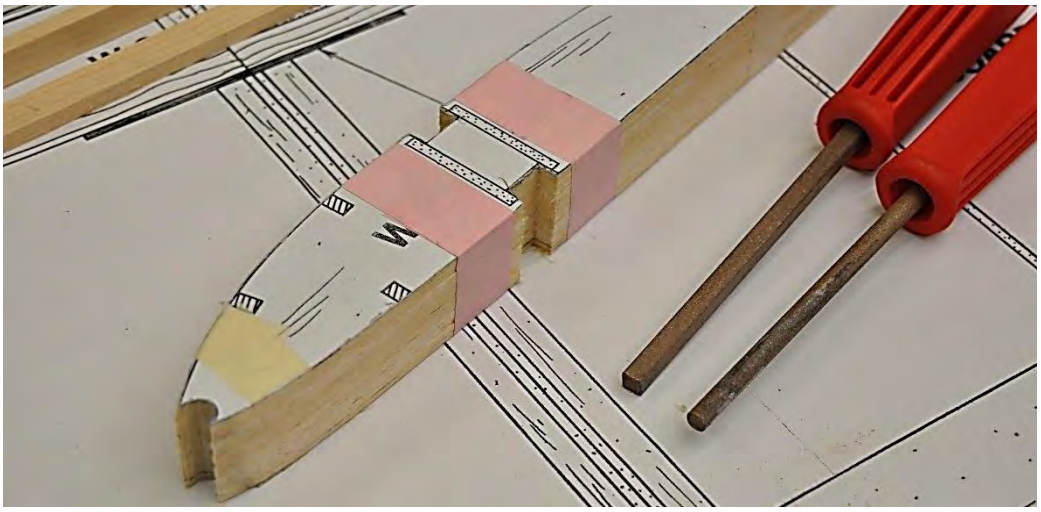
and ending up with a part that is too small. We only need two W3 ribs, but now just tape them together with some masking tape. So now we have two W3 ribs stacked up and now just use a sanding block, or belt sander to bring the ribs down to the line on the plan cutout. Here is where you need to make a choice though. How far do you want to sand the parts down? The line is slightly more than 1/16 inch wide so you need to sand too the line and stop, or sand until the line is gone and stop. I chose to sand my ribs until the line just about to disappear. Now in this case it really is not a big deal as long as you do the same for all wing ribs being built. As you sand the ribs do not worry about the tape holding the ribs together, just sand it away and add another piece when you flip the rib from top to bottom. Now just repeat for all the balsa ribs from W2 to W8. This phase of the build took me about 3 hours to get the entire set of balsa ribs cutout. So that's about 7 minutes for each wing rib, but that also included getting all the balsa together and verifying the number of parts needed! Now cutting the W1A and W1B out of the 5-ply birch is going to take a bit more time and the need of the band saw, or school saw if you have one!

Now we need to address the slots needed in the wing ribs for the spar and the turbulators. I started with the notch for the top wing spar in my stack of W2 wing ribs that are taped together. Earlier in this column I talked about the fact that when scaling up plans, the size of the parts needed are not usually standard size wood. I am using a 1/4x1/2 inch spruce spar. The plan marking when scaled up is slightly larger than the stick I am using so we cannot just follow the lines on the paper. I marked the actual size of my spar, trying to keep the spar centered in the slot. I use my band saw and carefully freehand cut slot down into the ribs. I used the curf of the saw blade to make several cuts straight down to my pencil line and then test fit my spar. It is very important that you test fit here, because don't forget that we are working with a lot of W2 ribs here. If you miss cut one rib, you have miss cut 14 ribs and must fix them all! Fine tuning the notches with a sander or file is much better that having to repair or recut the pieces.





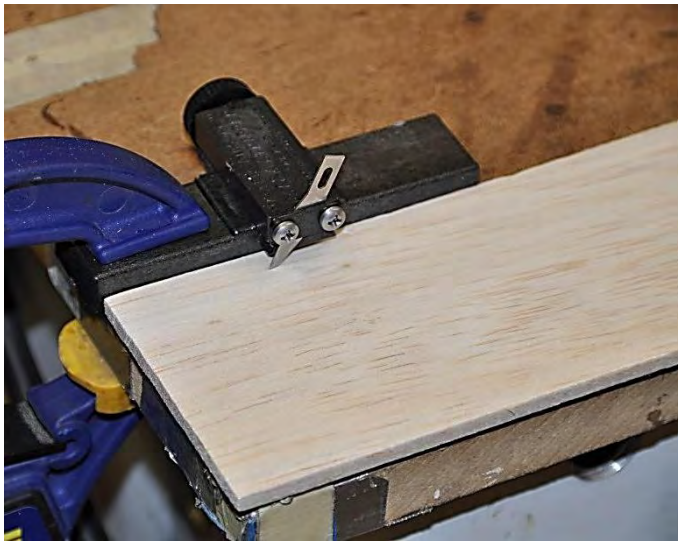




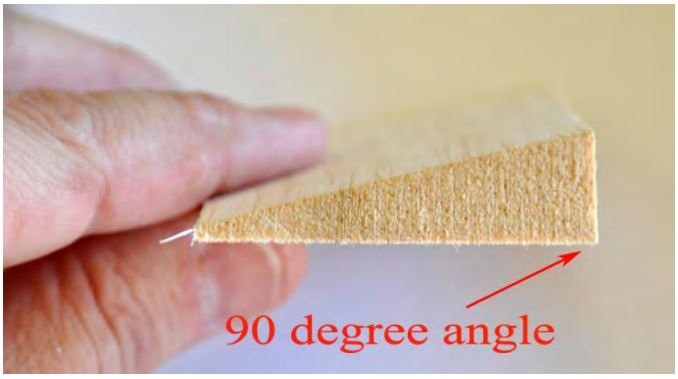
Now we can work on the notches for the turbulators, or can we? Not really because we still have to cut the turbulators from the 3/16 sheets we have. The notches for the turbulators are 3/16 inch wide as I said but they are also ¼ inch deep. Now you can just use a long aluminum ruler and set it atop the 3/16 balsa sheet. Then mark the ¼ inch from the edge of the balsa sheet on each end and run your razor blade down the ruler, being careful not to cut your finger tips off! I believe that instead this is where we can go to the hobby shop and spend less than $8.00 for the Master Air Screw Balsa Ripper.

The balsa ripper holds a #11 razor blade and is adjustable specifically for ripping balsa sheets down to size. You can use the stripper in two ways. First you turn the adjustment wheel in and out until it is set at the required thickness, in our case it is ¼ inch. Second you can hold the balsa sheet in place with one hand, and slide the ripper down the edge of the sheet cutting a full length of the sheet. I prefer to mount the ripper to the bench with a clamp. I can then maneuver the balsa sheet in both hands across the ripper more carefully.

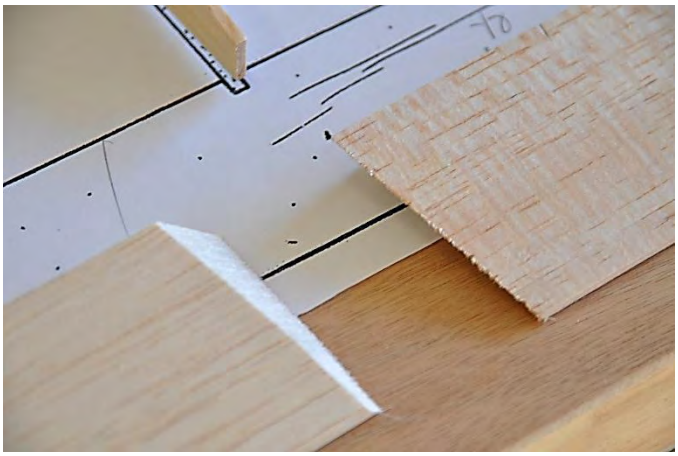
Now we can cut the notches into the top and bottom of the wing ribs where the turbulators balsa sticks will go. I used the band saw to cut the notches where I could reach, but because the wing ribs are deeper than the 9 inch throat of my saw, I had to use the hand saw to finish them off. Now to work on the last balsa piece and that's the trailing edge stock.



As I mentioned earlier the trailing edge stock measured out to be a 2 inch piece of aileron stock. Now a consideration here is that aileron stock like this is not just a triangle, but a right triangle. That means that depending on how it is placed on the building surface, the thicker side

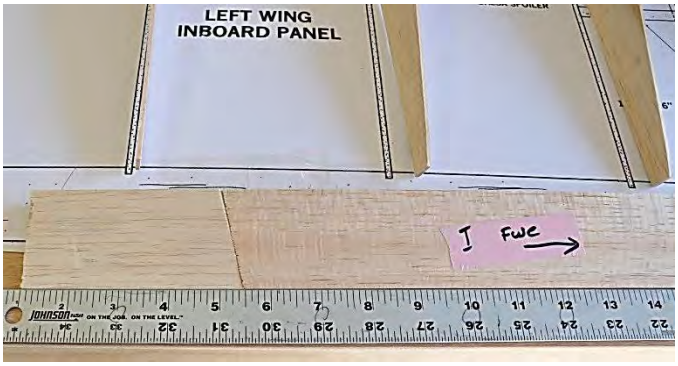


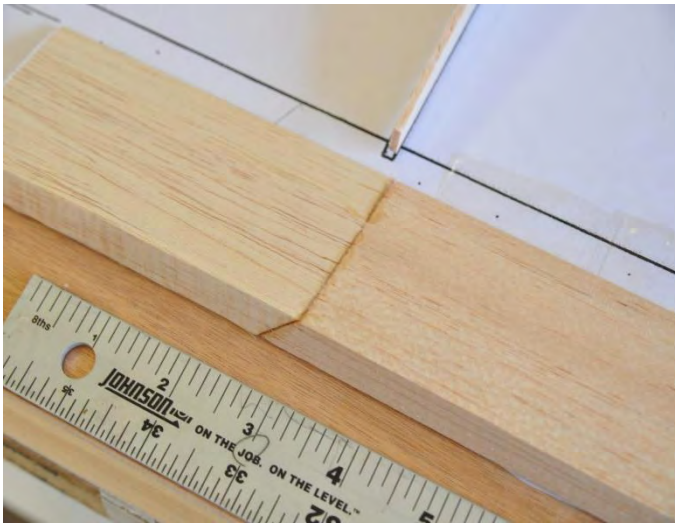
of the triangle will either be at 90 degrees to the table surface or slightly more than 90 degrees. In this case you want to make sure that the thicker side of the surface is set at 90 degrees. It is a good idea to put a piece of masking tape on

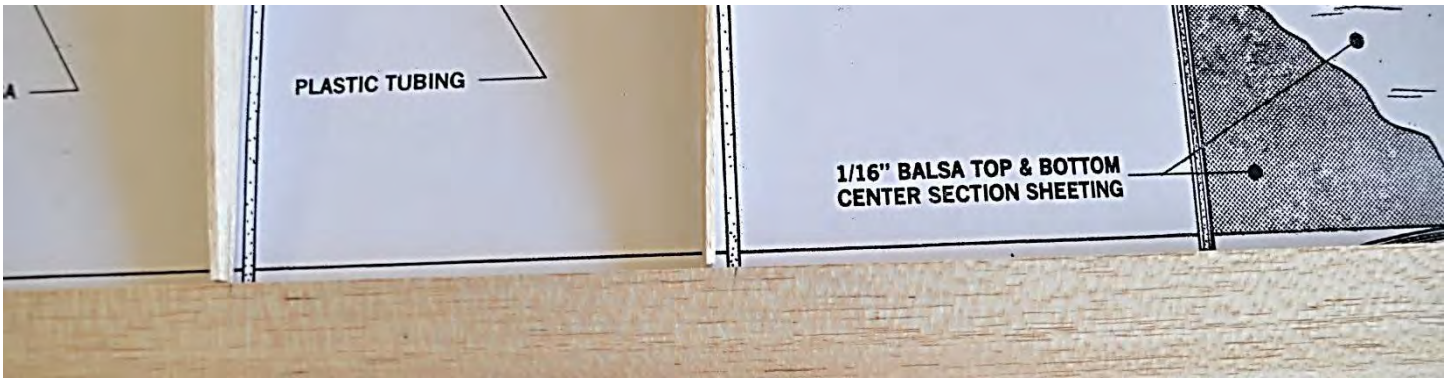


the surface once you have it oriented correctly, this will save time later. Now this piece of aileron stock is a good choice, but as is common with a larger kit build like this, the local hobby shop may not have exactly what you need. The aileron stock is too short!! We need to splice in another piece!

First thing to note is that we cannot just butt the ends of the trailing edge together. We need to cut an angle cut in the thick end of the trailing. By cutting a 45 degree angle in the thick side of







the trailing edge to the thin side of the trailing edge we are left with is called a compound cut. The angle of the taper of the aileron stock and the 45 degree cut in the thick side ends up with a nice sweeping cut across the stock and give much more surface area to glue with. Now we can just line up the trailing edges to a straight aluminum ruler and glue the ends together with medium CA inside the joint and a few drops of thin CA along the cut line. When the CA is dry just use a fine sanding block, or sanding bar with fine sandpaper glued to it to smooth out the surface. Now to line up the trailing edge with the plan and make some marks on it.

The trailing edge needs slots to accept the trailing edge of the wing ribs. Pin the trailing edge over the plans, using some blocks of scrap balsa as spacers to prevent marring the freshly sanded trailing stock. We want to put notches where the ribs intersect the trailing edge so a pencil mark in the CENTER of the rib is all we need. Using the center as a mark will prevent us from bending the ribs one way or the other to get them to line up. Remove the trailing edge and cut a 3/32 notch 3/16 deep to accept each of the wing ribs. Well we can finally begin building!

On our hollow core door or work bench we can spread out the plans and get started. Now if this was a scale model or something like that, I would have my print shop laminate my plans. This prevents glue from sticking to the plans and destroying them, but instead I just run a few pieces of plastic tape over the areas of the plan where the spars will be glued to the wing ribs. With the plans taped down to the board we can start assembly by pinning or screwing the bottom spar down on top of the plans in the CENTER of the spar area noted.

OK..Enough for this month.

Next month we will continue with the build by actually assembling the wing panels and moving on from there!

Tony Coberly

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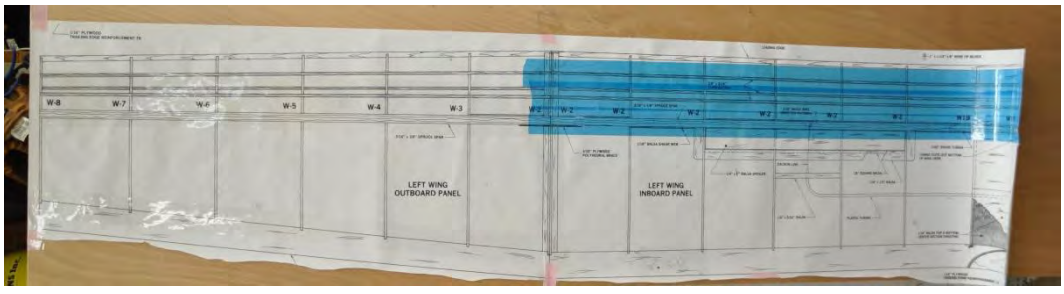

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Distributor: Hobby Lobby International

Manufacturer: eRC

Cheers:

- Old school classic Stick look
- Much more powerful than expected
- Lightweight
- 2 batteries included

Jeers:

- Servo centering suspect
- Battery charger in transmitter

Specs:

Advertised Wingspan: 16.675 in

- Measured: 16.75 in.

Advertised Length: 14.75 in.

- Measured length: 15.75 in.

Advertised Weight: 1 oz.

- Measured weight: .9 oz.

Batteries included: 130mAh 3.7V LiPo, 150mAr 3.7V LiPo

Charger included: Yes imbedded into transmitter

Transmitter required: Included 2.4 GHz Mode

Required tools: None

Assembly time: NA. Charge battery

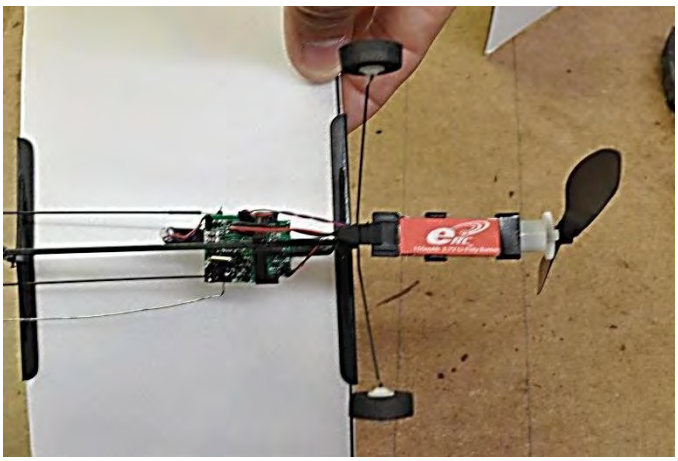
Accessories: Combat streamer

Retail: $99.99

- Street: $74.99

Hobby Lobby has thrown out yet another instant fly plane for those of us that must always have a plane in the car, truck or van. The MicroStik is an ultralight full aerobatic plane for indoors and outdoors. Opening up the box is the now familiar foam cutout with several blocks securing the airframe for shipping. Provided with the airframe is a somewhat generic looking 2.4 GHz transmitter and the required four dry cell batteries for power. A closer look at the transmitter reveals a charging jack included in the lower left corner under a small door. Inside the door there is a battery lead used for charging the LiPo batteries provided.

The MicroStik comes with two different flight packs. One flight pack is a 3.7V LiPo with a capacity of 130mAh. The second flight pack is a 3.7V LiPo, but has a higher capacity of 150mAh. These Flight packs look suspiciously like those that come with the E-flite family of micro fliers. Can you say knockoff? In order to charge the flight pack we just insert the dry cell batteries into the transmitter and plug the LiPo pack into the dongle. The transmitter illuminates an amber light that indicates that charging has started. It actually appears that if you can maneuver your hands around the charging LiPo you can actually fly the little Stik while charging the extra battery pack.



The Micro Stick has a multifunction controller onboard that controls all aspects of flight on the airframe. Imbedded on the board are the 2.4

GHz receiver, two actuator servos, elevator and rudder only, as well as the brushed speed controller. On the front, for power, there is a small gear reduction unit and a brushed motor. The 5 ½ inch propeller appears to have 3 inches of pitch in it. It is really hard to tell with this little park flyer props if they are not marked. The landing gear is the smallest of micro wire and it actually has a tiny ¼ inch tail wheel!

Well let's go fly.

Flying the MicroStik at RCRC was to be rather eventful due to about 4 knots of wind, but off we went. I decided to forgo the taxi and hand launch due to the wind. A little toss and into the sky we go. The little motor on the Stik is turning plenty of RPM and pulls through the wind quite easily. No trim was needed on the transmitter so first thing I try is a full elevator loop. Too my surprise, it pulled through the first loop with authority, as well as the second and the third. The MicroStik has plenty of power so now we can buzz around and do touch and goes off whatever we can find! With only a rudder for turning there is some wobbly turns, but that's to be expected with rudder only. The first battery petered out after about 4 minutes of flight time. Now I installed the larger higher capacity 150mAr pack and was ale too fly for another 5 minutes.

Now of course this is not a precision flying machine, but it is quite fun, and has enough power for decent flight in wind. For $74.99 you could hardly expect any more performance or capabilities.

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