



The Antenna

July 2020



Aerial photos at the Show & Shine taken by George Rehman using his DJI Quadcopter (can you spot George?)

Upcoming Flying Event: Dogfight over Benalto; Sep 19 & 20.

Next Club Meeting: 7:30 PM, Wed Aug 5 at the CARFF Field (Practice Safe Social Distancing!)

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**John Ferguson's
Strikemaster**

Found: 750 RPM

NEXT CARFF FLYING EVENT: Dogfight over Benalto: Sep 19 & 20. Details next month.

2020 Executive, Standing Committees and Contacts

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TBA

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COUNTY OF RED DEER BYLAW ENFORCEMENT

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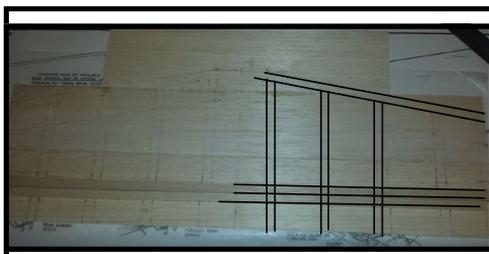
Field GPS Coordinates: N52° 12' 6", W113° 42' 18" (N52° 12.106', W113° 42.304')

CARFF on Facebook <https://www.facebook.com/groups/1418503868392501/>

Scratch Building (Super Strikemaster) Part two

John Ferguson

So here goes the next part of the build. The stab fin and controls. The original model used 1/4" balsa to make the tail feathers and I'm sure that would work just fine, however, I wanted a little thicker surfaces without extra weight so I opted for a built up tail. I made up some stab and fin skins with 3/32" balsa sheet. The sheet includes the stab and elevator as one construction as does the fin and rudder. Two skins for each and 1/2" x 1/8" balsa stick for the structure. This gives me a 3/8" thick surface, lots of strength and little weight difference. In fact I think they are a little lighter than the 1/4" sheet tail pieces would be. The other big advantage is the lack of warping in a sheeted structure.



Here is the glued stab/elev skin. I draw the ribs and spars directly on the Skins.



Here are the false ribs in place. Note the centre section is solid.

On the elevator and stab, the false ribs are sanded to be flush top and end with the stab skin. This is needed to create an airfoil of sorts and to allow the top skin to fully contact the bottom skin. With the rudder and the elevator sanded to a wedge shape I glue on the top skin. I have intentionally left the two elevator halves joined by the sheeting to make positioning of the hinges far more accurate.

Once that is done, I separate the rudder from the fin and the stab from the elevator. Leave the elevator halves joined till the hinges are marked and cut. Now just round over the leading edges and tips, and the trailing edge of the elevator and they are ready to hinge. A dremel diamond saw does a great job slotting the pieces for dubro style pinned hinges. Note the elevators are still joined. Makes it easy to make the piano wire joiner.



Next we start the fuse. Using the plan mark and cutout the fuse sides. Leave lots of material above the wing saddle. We will mark and cut the saddle in a little while. Match the 2

sides by taping together and sand the top and bottom till they match. Next add the triangle stock to the sides. **MAKE SURE THERE'S A LEFT AND A RIGHT.** Glue in the plywood fuse doublers. Epoxy the plywood firewall and formers to one side making



sure they are square and straight. Note I have drawn the position of each former on both fuse sides. Once dry, square up the two sides and glue the formers the rest of the way. This makes a square straight fuse box. Now begin placing and gluing the rest of the formers in place. **NOTE;** before I joined the fuse sides I carefully cutout the slot for the stab by taping both sides together and running them into my band saw. This will give

you a straight square fuse box. I have added a 4" piece of top sheeting to keep the tail straight. Also **NOTE** that its way easier to drill for the motor mount before the firewall is attached to the fuse.



I



Next I temporarily put the tail feathers and wing in place to check for incidence. also make sure the fin is square to the stab.

You will see in the picture that I have added the top and bottom sheeting and shaped the corners at this point.

Easiest way to square the wing and the stab is to measure from the centerline of the firewall to the stab tip at the hinge line. Once these are both the same measurement the stab is square. Similarly I measure from the centerline of the fin to the tip of the wing to square it up. This is where I finally fit the fuse and wing. Once satisfied I mount the wing and drill 2 1/4" holes through the fuse former directly into the wing for the mounting dowels. Now I can start on the top front of the fuse. You'll see my own method for building the canopy section . The hard part is next. Building and shaping the cowl and the canopy. This one took 2 tries, lol.

I have changed from piano wire gear to Dural aluminum gear. Helps to have a good fly-

ing buddy who can cut and bend them for you. Thanks Eraldo! I did have to change how the nose gear mounts so that I could have access for adjustments to the steering.

I have also made the cowl removable so that maintenance and hookup of the O.S. is easier.

Here you can see the beginnings of the covering process. Yes the roundel is a little big but that's because I screwed up on the size I needed and I'm too cheap to order a second set. Final shaping of the cowl is next. Just needs a little streamlining.



Also, don't forget to coat the firewall area and the cowl inside with fuel proofing. I use west systems epoxy for this but fiberglass resin also works great.

To get the invasion stripes I covered from the aft to the first white stripe with the grey covering going 1/2' past the measurement for overlapping the stripes. Then I ironed on the white, back to front, again allowing a 1/2" overlap at the front. Next I covered the front fuse. This gives me a nice white band around the fuse. The fin is just fitted and not glued yet. Finally the black stripes were cut 1-1/4" wide and ironed on one at a time. The decals really make it all pop.

Now I will do the final mounting of the engine and accessories and the cowl fit. After that it's time to finish the wing. I'm working on the wing bombs using rocket tubes and nose cones. Hard to get except online. The bomb mounting racks are ready to cover. I will be using different hinges for the control surfaces because like Vince said in his article, the more accurate the surfaces the better the flier she'll be. Stay tuned for Part 3.

EDITOR'S SOAPBOX - Eraldo Pomare

Ron Hall's "Show and Shine" event was a huge success. Lot's of planes, lots of people (safe distancing) and some new planes out for their first flights. Dennis Carney was out with his newly built Fly Baby - a really nice scratch-build from my plan first published in the June 1983 edition of RCM&E.



Rob McCoy brought out his Airco DH-1a (featured on the cover of the May 2020 edition of our club newsletter). Just an incredibly good build but unfortunately a non-compliant engine kept it on the ground. I am really looking forward to seeing it fly.

John Ferguson's Super Strikemaster was there, with an incomplete radio installation, so not yet flyable.

Ron Hall had a couple of great tows behind my trusty old Super Cub with his David Smith designed & built yellow 1/4 scale Hall Cherokee sailplane.

Apologies for missing so many other great planes and names of pilots at the event.



Note: "The Antenna" needs your articles, photos and sketches! Previously published articles must be accompanied by a release (permission) from the copyright holder.

NEXT CARFF FLYING EVENT: Dogfight over Benalto: Sep 19 & 20. Details next month.

Found: 750 RPM

The Farmhand 90 tow-plane has been flying and towing on a 24X8 prop for a couple of years now. For this season, I wanted to try a 24X9 to get a little more speed - or so I thought. We noticed right away on start-up that the RPM were a lot lower than expected; since Ron Hall has the most "hours" on the Farmhand, he took it up for a test: marginal at best. Back on the ground, we measured 5,700RPM - way off the expected ~6,500RPM.

Decision time at the Show & Shine: re-install the old 24X8 which had its own issues and was still at home, or rush home to pick up the old Super Cub. The Cub is well proven for sailplanes in the ~3.5m - 4m range that were at the field that day.

In the following week(s): How to get the engine to perform? The 180 degree sweep exhaust system I had installed to clear the candy-drop chute has worried me for some time, as has the cheap header pipe I bought on eBay. After some rethinking, I managed to install an OEM header and the same muffler in a conventional, straight back layout (no 180° sweep). And the candy-drop chute is still clear!

Yup, you guessed: the EME 60 now runs at >6,500RPM, exactly where the book says it should run with a 24x9: a gain of some 750RPM. Yay! I estimate that the 180 sweep was about 18 to 20 inches of equivalent hydraulic length. It's unknown if the header swap made any difference.

750 RPM between these two before and after photos



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CARFF FIELD MAINTENANCE CREWS (subject to confirmation for 2020)

TEAM 1

ROB McCOY 403-396-5747
 RON MUNRO 403-346-4721
 GEORGE REHMAN 403-227-4947
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 WAYNE HOPP 403-447-3790
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TEAM 4

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 HERB DER
 TIM HERGERT 587-457-7229
 JOHN CAMERON 403-350-8424
 Vacant (person no longer a member)

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 CRAIG PARKER 403-590-9897
 RENE WEBER 403-346-5956
 ERALDO POMARE 403-343-2072
 MIKE TREVORS 403-506-6829

Teams, when finished mowing:

- Clean, grease & refuel the machines
- Contact the next team and they will mow when next needed.

Editor's Note: This list was forwarded by Rob McCoy for publication, but has not been updated for 2020. Please advise the editor of changes, errors or omissions.

2020 Calendar of CARFF Events

Aug 05, 2020 (Wed) Club Meeting, CARFF Clubhouse, 7:30PM
 Sep 02, 2020 (Wed) Club Meeting, CARFF Clubhouse, 7:30PM
 Sep 19 & 20, (Sat/Sun) Dogfight Over Benalto - 40th Anniversary Event. Organizer: Gary Hillman
 Oct 03, 2020 (Sat) CARFF Auction, Sylvan Lake. Organizer: Rob McCoy <Tentative New Date>
 Oct 07, 2020 (Wed) Club Meeting, CARFF Clubhouse, 7:30PM
 Nov 04, 2020 (Wed) Club Meeting, Red Deer Flying Club, 7:30PM
 Dec 02, 2020 (Wed) Club Meeting, Red Deer Flying Club, 7:30PM ***Executive Election Night***

NOTE: If you know of other clubs who would like to have their events listed in the CARFF newsletter, please have them send the info to the [editor](#)



5.3m, 1/3 Scale ASK-18 sailplane frame-up nearing completion; wings and stab also 90% complete

Design by Jilles Smits, laser cut short-kit by [Laser Cut Sailplanes](#) North American partner Marc Beaupre (no longer cutting kits).

Two 4' x 4' sheets of 1/64" ply (wing skins), one 4' x 2' sheet of 1/32" ply and lots of 5' long spruce cap strip stock, all from [Aircraft Spruce Canada](#).

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