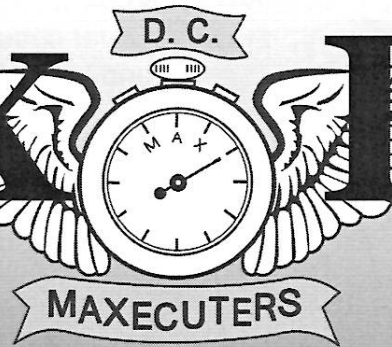


# MAX FAX

D. C.



MAXCUTTERS

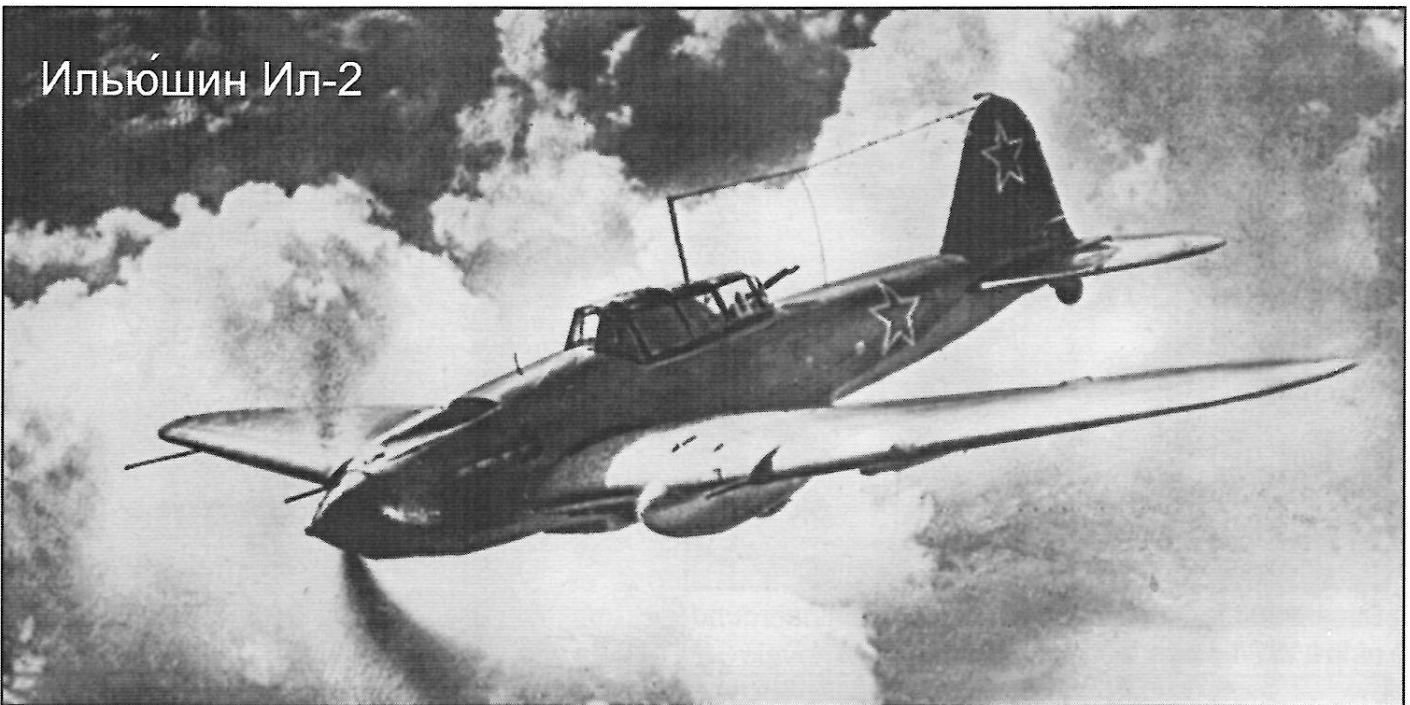
## Journal of the D.C. Maxcutters

...home of the dreaded Potomac Pursuit Squadron #6 of the Flying Aces Club

Editor: Dave Mitchell

2015-4

Ильюшин Ил-2



PORTERFIELD COLLEGIATE

# WAWAYANDA 2015

Oliver Sand launching his Staggerwing Dimer



photo: Tom Hallman

Oliver casually preparing to annihilate Wally, Dave and Vic in GA Racers with a 460 sec. flight.



photo: Ronny Gosselin



photo: Dave Mitchell

Stew with his Albatross, waiting for the final round of the WWI mass launch.

MEGAs aloft. What a sight, watching these three behemoths circle about! The weather settled at the end of the day Saturday and out came the big'uns.



photo: Dave Mitchell



photo: Dave Mitchell

Vance Gilbert, Tom Hallman and Tom Nallen II check to see whose MEGA is biggest.



photo: Ronny Gosselin

Dick Gorman's super SE-5 peanut took second in the WWI Peanut Mass Launch.

## REGIME CHANGE

Well, it finally happened. After more years at the helm than anyone (other than maybe Alan Schanzle) can remember, Stew Meyers has relinquished his title as editor of the MaxFax, and will be moving on to his new position as the editor of the Flying Aces Club Newsletter. Well done, Stew! At double the salary it's a no-brainer career wise, and I'm pretty sure that with so much experience under his belt Stew can summon an issue in his sleep.

Me? Not so much. I'm new to this editor thing, having previously kept myself to writing a pithy article here and there and the odd plan submission. That's an easy enough gig, and the joy with which editors, starving for content, typically receive your humble offerings makes you feel darn good about yourself.

When it's your job to put together a whole newsletter, though, where do you start? As I began to stare down my new responsibility, I felt more than a little intimidated. I don't have a stash of modeling magazines and plans stretching back into the 1930's and my aviation library is anemic. My modeling memories START about 1968, I was never a pilot or mechanic in the armed services, I don't really actually understand aerodynamics, at least not when they are expressed in equations, and I HATED Comet kits as a kid (Guillows man, through and through). In short, I am the Anti-Stew. But I sure like model airplanes!

What this means is that you can expect the character of the MaxFax to change somewhat. I'll be looking for your feedback as I start trying to cull together enough compelling content to hold your interest. We'll no doubt tread some familiar turf, but maybe uncover some new ideas too along the way. So there's nothing left for it but to "...begin at the beginning, then go on, until you come to the end". (Lewis Carroll)

Cheers, Dm

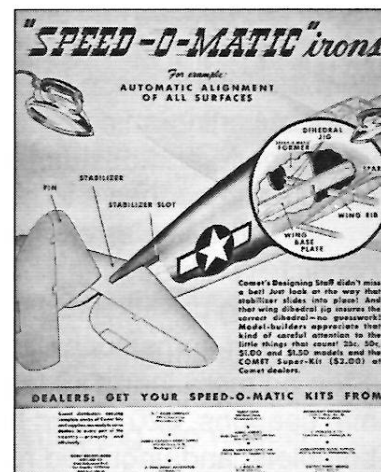
## TERNs & COMETS

Q: What do terns and comets have in common?

A: They share long tales...

Ok, so I'm a sucker for bad wordplay, but there's a point here. The Comet Model Aircraft Co. goes all the way back to 1929. What modeler of a certain age doesn't look back fondly at their body of work and count dozens of Comet builds among it?

Yet, as a kid in the early 70s I looked with disdain upon Comet kits--nothing there but skinny balsa sticks! More for me the substantial offerings of Guillows, Sterling, and the like. They flew like bricks if they flew at all...but I never made the connection at the time between light structure and improved flight.



A couple years later a small kit manufacturer called Tern Aero appeared with a compelling line of mostly walnut-scale models--Aeronca C-3, a Tiger

Moth, a Ryan STA.. all with nicely detailed plans, clever engineering, beautiful print wood...I was hooked. Built 'em all, fitted them with a Brown Co2 motor and had my first real Free Flight success. No more Guillows for me!

The ironic twist? The guy behind the Tern Aero Co. was the late Vito Garolfalo, who happens to have ALSO been one of the hotshot designers at Comet in their heyday. His fingerprints are all over the wartime Struct-O-Matic series that Stew started investigating with his Vultee build in the last issue. So I think we'll continue that line of investigation this month with the Comet II-2 Stormovik, toss in a Tern Porterfield Collegiate for contrast, and see where it goes from there...

## Ilyushin IL-2 “Shturmovik” Overview

By Dudley Prisel

For Germany the conflict was called the Eastern Front; in the Soviet Union, it was the Great Patriotic War. Beginning with the German invasion of the Soviet Union in 1941 the war raged for 4 years.

The Eastern Front stretched north-south from the Baltic Sea to the Black Sea. The Soviet cities of Leningrad and Moscow were threatened with capture and destruction by the German army.

This war was almost exclusively a land conflict. Yet through the blinding winter snows, the choking dust clouds of summer and the smoke and flames of battle flew an attack aircraft often no more than 150 feet above ground. Its 23 mm cannons, 220 pound bombs, shaped charge bomblets, and unguided rockets were employed against German vehicles and infantry in coordination with Red Army assaults against the Germans.

The IL-2 first became operational in the early days of the German invasion at a time when the Red Army was reeling backwards after the surprise attack in 1941. The IL-2 was not terribly fast (cruising speed about 250 mph) and had limited range. Operational range was of almost no consequence however as the IL-2 bases often were only tens of miles from the front line. It was very rugged (see the note from Bill Haddon in this issue) and could absorb a fair amount of damage from anti-aircraft fire and still return to base for repair. The Germans called the IL-2 “the Black Death” because of its devastating affect on vehicles and infantry when attacking in numbers. A favored IL-2 tactic was called the “Circle of Death” wherein a formation of IL-2s would fly a circular pattern, one behind the other and in turn swoop down and attack. This had the effect of a near continuous attack til the IL-2s ran out of ammunition.

However, the IL-2 in it's early single seat version was very susceptible to fighter attack from the rear. Accordingly a two-seat version went into production with a gunner armed with a .50 cal machine gun firing backwards and

somewhat to the sides. This version has been popularly dubbed the IL-2M though some sources indicate that IL-2M was not an accepted designation by the Red Army Air Force. For Soviet pilots an IL-2 was an IL-2. The weight of the gunner, the machine gun and ammunition necessitated a change in the location of the center of gravity. Thus the IL-2M had outer wing panels that were markedly swept back compared to the single seat version. Modelers take note!

More IL-2 aircraft were produced than almost any other piloted aircraft. The exception being the, ahem, Cessna 172. Of the 38,000 IL-2s produced between 1941 and 1945 fully 11,000 were lost to enemy action. Half of the 11,000 were downed by ground fire the other half succumbing to enemy aircraft.

Color and markings were drab compared to Allied and German aircraft. The predominant color being an overall dark green with light blue under surfaces. Often Irregularly shaped areas of black green were applied. In winter a chalky white tempera paint was often applied overall and allowed to simply wear off with time. Markings consisted only of the “Red Star” national insignia on the fuselage, fin and wing lower surfaces, and hand painted unit level numbers. Note that the national insignia was NOT applied to the wing upper surfaces. Again unlike Allied and German aircraft there were no “vanity” markings.

In closing: “You will produce more IL-2 aircraft. This is your final warning. -Stalin”

How's that for motivation?



Joe Stalin.

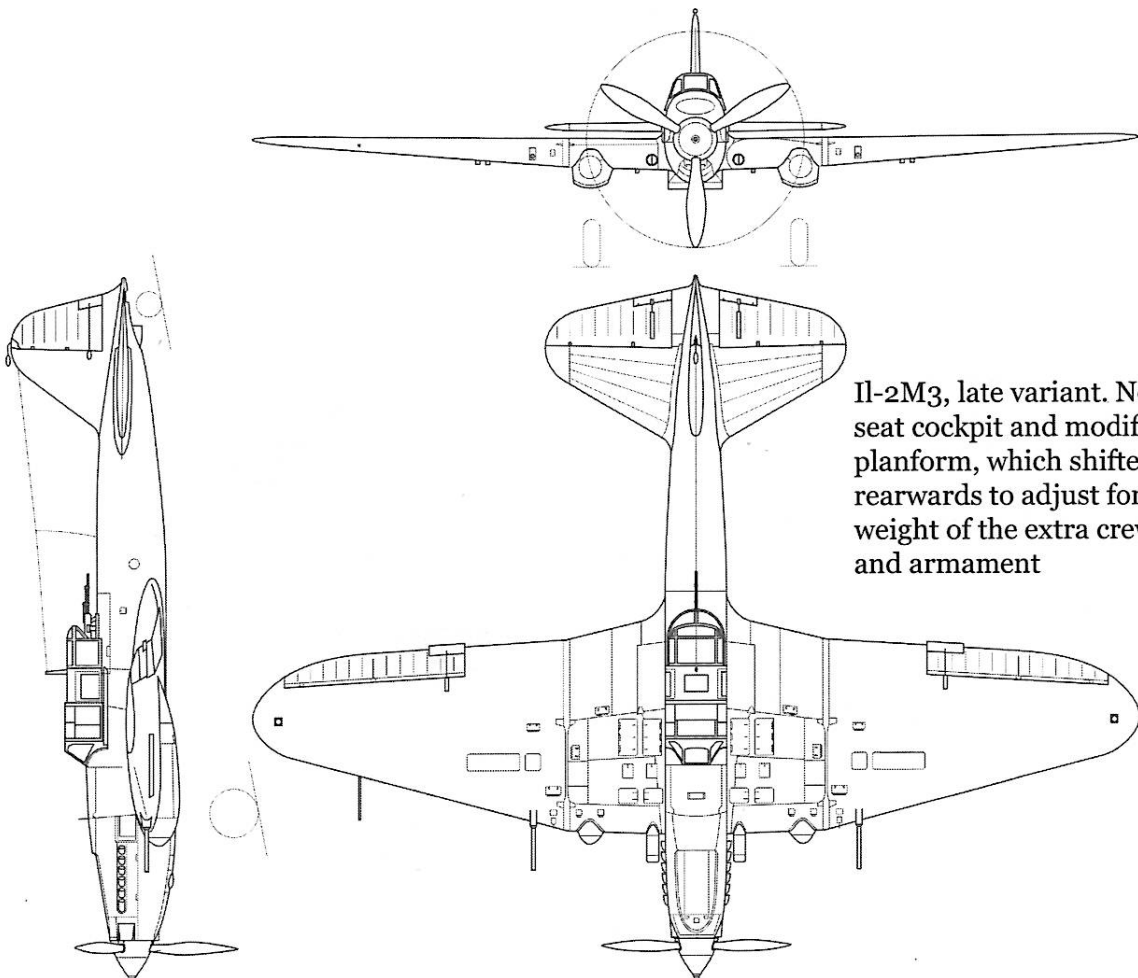
What a card!

## IL-2 UP CLOSE

From a conversation with Bill Haddon

It was fun talking with you recently about the Il-2 Sturmovik. I was actually able to spend some time with one in the 1990s. The National Air & Space museum had got one (it seems to have left the collection now) and I saw it at the Garber restoration facility in Silver Hill, Maryland. It had recently arrived from Eastern Europe on a shipping fixture that looked strong enough to carry a nuclear containment vessel. At first, the nose section looked similar to many of the other WWII era liquid cooled engine aircraft. A small access hatch under the nose was hanging open, and I pushed it up to close it. The panel that looked like it should weigh a few ounces felt like a pound or two. It was made of steel almost  $\frac{1}{4}$  inch thick. And it wasn't just the door, it was the whole cowl. This was not so much an armored airplane as it was an airplane made of armor. Where the muzzle of a cannon protruded from the wing root, there was even a small armored clamshell door to keep ground fire from damaging the gun.

Some checking on the internet shows the amazing extent of the armored construction. The engine cowl and cockpit were constructed of steel armor that was up to a half inch thick, and the total weight of armor was around 2000 pounds. The engine cooling radiator was largely buried inside the protected armor. It's easy to find stories of pilots ignoring ground fire when attacking. No wonder.



Il-2M3, late variant. Note the 2-seat cockpit and modified wing planform, which shifted the CG rearwards to adjust for the weight of the extra crew member and armament

## Ильюшин Ил-2 Plan Notes

By Dave Mitchell

When I decided to feature the Comet Stormovik plan in this issue, Stew suggested that "I might need to redraw the formers". Looking at the plan that's circulating around on the internet, there were a lot of asymmetries and a lot of information missing too—formers, paper templates, etc. Dan Driscoll had an actual, original plan but it didn't seem any better. So I imported the e-plan into my CAD drafting program and began to subject it to the merciless rigors of orthogonal review.

Hoo boy, is this plan a DOG. It's no wonder people have so much trouble building a straight fuselage. Maybe I'm just oversensitive to this stuff, having wed myself long ago to CAD drafting and its unrelenting precision. Maybe I'm too hard on the guys who drew this up in the first place—it's not like there was ever a ton of money to be made kitting model airplanes, even back in the day, and time is money. But using the former templates and general arrangement outlines provided on this original plan will result in a badly misaligned structure. It was clear a major redraft was needed.

Whether or not it was WARRANTED is a question that is yet to be seen. You don't see many Il-2 models on the FAC flight line. Maybe because this plan bites, and there don't seem to be many others? George White built one from the GAR kit, which is the other contender, but says he never got much out of it, insofar as it built into something more like a brick than a model airplane. Personally, I like the layout of the plane. Seems like it has potential. I like the Il-2M3 even more, with its "arrow" wing and potential for more aft CG.

Despite every fiber of my being wanting to ditch the stupid Comet plan and draft up a new, more scale plan from scratch, I reasoned that to do so would be to disrespect my foremodelers; in addition, I wanted to keep the model close enough to the original plan that it could qualify for the OTPKS 10 bonus points allowed in FAC Simplified Scale should one care to fly it in that

event. So I decided to follow the outline and general methods of construction very closely, limiting myself to correcting misalignments, asymmetries and scaling problem. I made a couple of very minor revisions to where scarf joints fall on the top and bottom fuselage longerons. I drafted up the formers that are missing from the original plan, and provided plausible stringer slots locations for all formers. In the absence of clear directions, I made some subtle suggestions as to how a thing might be done; examples would be the stab slot, and the wing saddle. Stew provided the paper template patterns for the fillets and odd scale details. Note that I have made an educated guess as to the proper scaling of these paper templates—some adjustment may be necessary.

In an ideal world, I would have done a test build and would have photos to illustrate some things, but I've yet to be able to actually start construction on the beastie so you'll have to summon your modeling prowess and try to interpret my intentions.

And here, I must be clear: when I build mine, will NOT slavishly follow the Comet plan. I will make the top, bottom and side fuselage longerons much less beefy, no more than 1/16" x 1/8", and in some places such as aft of the rubber peg less than that. I'll run the upper fuselage longeron straight through the canopy area, and dispense with all the silly build-up in this area. I'll build in down thrust, as shown on the redraft. I'll give some thought as to how the air intake on the top of the nose ought to be modeled. I'll probably scale the stab up a bit. I'll redesign the wing and canopy and make it into the Il-2M3. I'll...

...WAIT! It's becoming a whole 'nother project! KISS. If a Ki64 flies like stink, this ought do pretty well too, warts and all...right? Never mind that in the end it took as much time to "correct" this plan as it would have to start from scratch. Yeah, I'll work from my redraft, but the planform will be pretty much as Comet presented it. Including the 8 RS-82 anti-tank rockets. And don't forget the spinner.

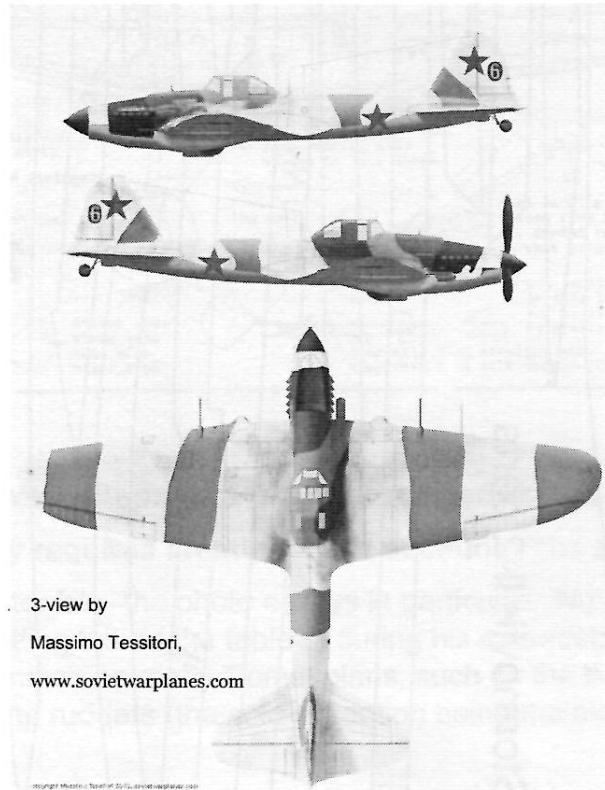
--DM

## IL-2 COLOR NOTES

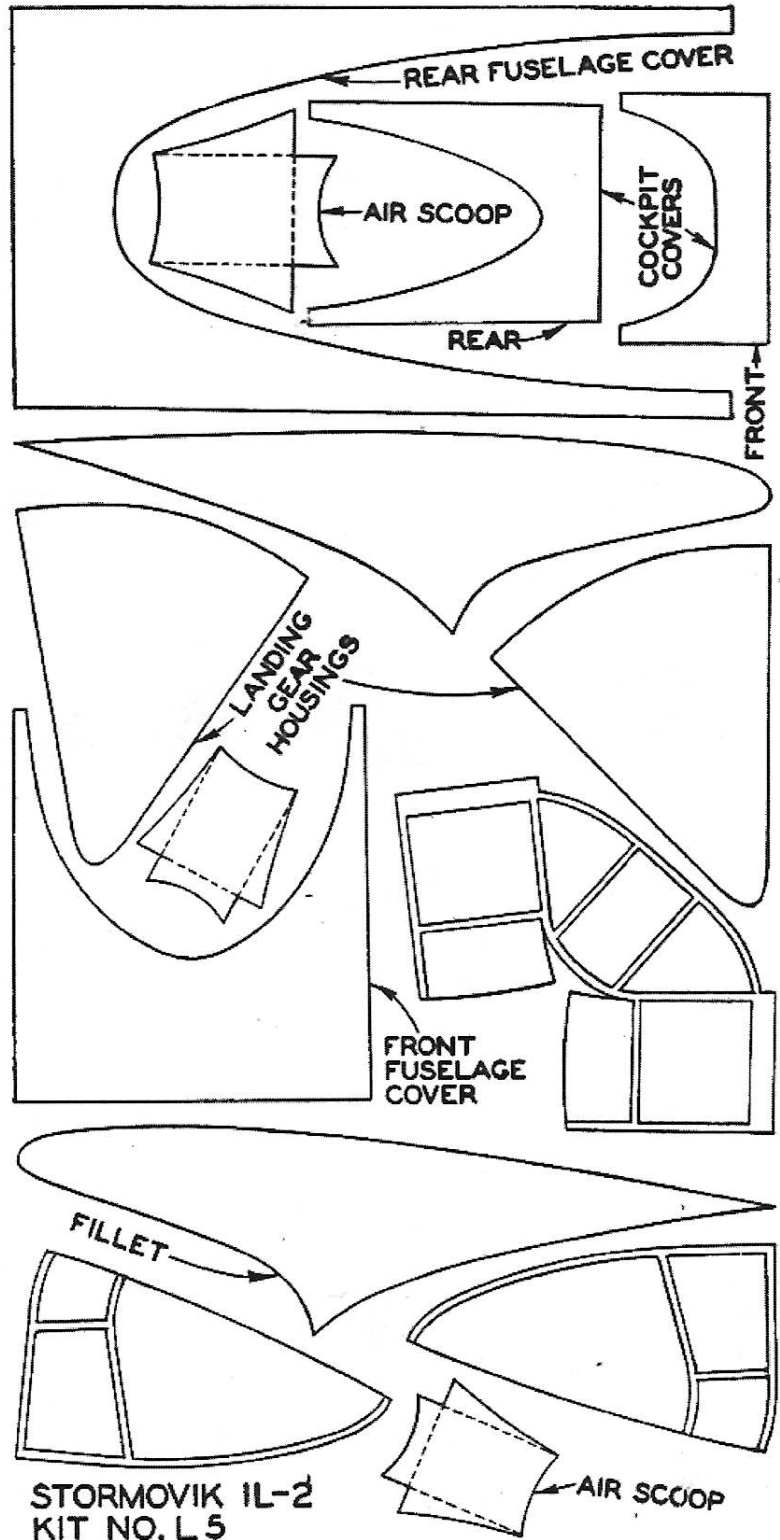
There's a popular computer flight simulator called, appropriately enough, "Il-2 Sturmovik", so this aircraft is more prominent on the Web that you might otherwise expect. Google "Il-2 color schemes" and you'll see all sorts of variations on a theme. I find the mixed winter white / spring earth schemes very attractive. For those of us who prefer keeping it simple, there are the full winter white schemes, or how about a captured Il-2 painted all yellow, with German crosses? I recommend the **VVS Research Page** site, run by Massimo Tessitori:

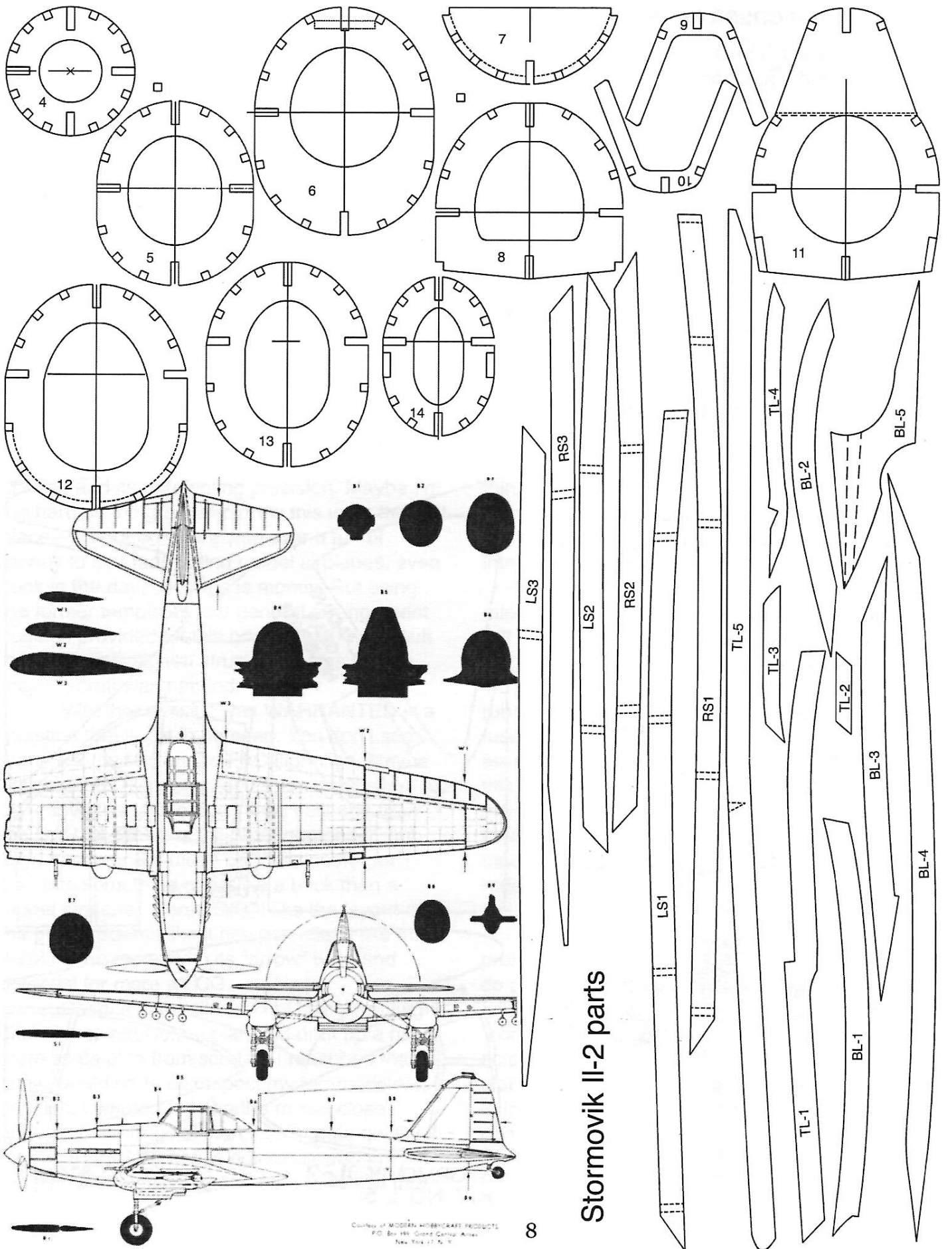
[www.mig3.sovietwarplanes.com](http://www.mig3.sovietwarplanes.com)

Tessitori presents a wealth of photos and three-view color schemes on a variety of Soviet aircraft, including all the variants of the Il-2. If you dig a bit deeper, you'll find there is a great battle raging between the color historians as to what were the "true" colors used by the Soviets. It's mostly scholarly, but as these things go be prepared for some invective, choose your poison, and stand your ground. -DM



**NOTE!** Slavishly follow these paper templates at your own risk. I have attempted to scale them to proper size, but have very little against which to reference them... -Dm





Stormovik Il-2 parts

COURTESY OF MODERN AIRCRAFT PRODUCTS  
 P.O. Box 199, Grand Central Station  
 New York, N. Y.



## PORTERFIELD COLLEGIATE: A TERN FOR THE BETTER



Stew ran an article on Tern Aero Co back in 2012, providing a little historical background on the company and focusing on the Tiger Moth and the Gone Goose. Since the Tern kits were dear to my heart as a kid in the 70's I thought it might be nice to explore some of their other models. So let's look at their Porterfield Collegiate.

I built one of these when I was maybe 15 and set it up for Co2 with a Brown A-23. Pale yellow tissue for the wings and stab, and robin's egg blue tissue for the fuselage, rudder and registration markings. I sure remember that blue tissue--it was lovely. Back then I didn't give a hoot whether the model was "properly" scale or not, but it should be noted that the plan IS pretty true to scale.

Compare the Tern plan with the three view and the Dave Rees Porterfield plan also in this issue. It was a fine flyer; the A-23 was a perfect match, and it would putter about in a very satisfying fashion. So when I won a "vintage" Tern Collegiate kit at one of the FAC raffles, I figured I would get to it some day, for old time's sake.

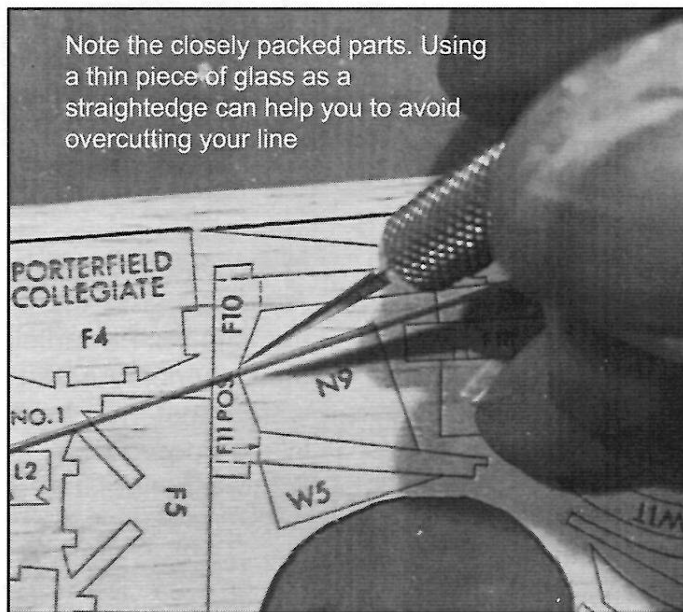
Several things struck me when I opened up the kit. First of all, whoever had the kit before me had nicked the nifty wheels and the famous Tern prop, as well as the pretty tissue! \*sigh\* The plans are very clean and well organized. The printwood is exceptionally well rendered.

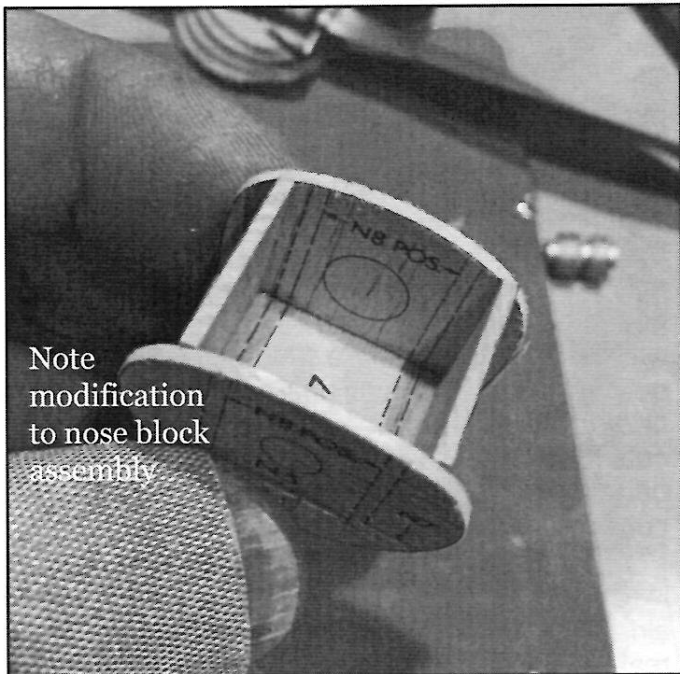
These qualities were attractive to me as a kid, and as an adult (well, sort of) it's no different. The next thing I recalled was how densely packed the parts were on each balsa sheet. There are many instances where in cutting out one part you are making at least one cut for an adjacent part. Vito wasn't about wasting good balsa! It was good training for a kid with an X-acto blade---you have to think about how you're going to approach getting those parts released without boogering up the works. And since the outlines were so crisply printed on the balsa, you had confidence in where you were placing your cuts for things like stringer slots. The Tern kits in general would seem to be ideal candidates for conversion to laser cutting, hint hint...

A Tern Collegiate built straight out of the box is not a bad design by any stretch. It features an 11% airfoil with a slight Phillips entry, and the structure is reasonably light. I recalled how much I liked some of the engineering touches common to many of the Tern kits, such as the use of laminated formers to create pockets for hard dowel landing gear. The use of wire is kept to a minimum, generally limited to the prop shaft and bent straight pins for the wheel axles. There's some nicely thought out tabbed construction parts, a nod to Vito's Comet "Struct-O-Speed" legacy.

Having said all these nice things about the Collegiate, there are some issues that want addressing. The nose block is designed as an integral part of the entire cowl, which separates from the fuselage at F1 for winding. This would force you to make the prop shaft much longer than necessary in order to get to the hook. It would make much more sense to have the nose block separate at N5. Also, the cowl assembly N5 to N6

features tabbed internal formers that make up a rigid and well-aligned structure. This is great, except that the resulting interior box is much too small, and is bound to cause rubber bunching on all but the shortest of motors. Modification is in order--see the next picture.





Note  
modification  
to nose block  
assembly

The cabin sides are made up from parts F9L and F9R. The cross-grain vertical posts on each part are very weak; a thin inside lamination of 1/16" x 1/32" would do the trick to stiffen the rear post, and the front one gets glued to F10. It might be a good idea to hold off on making the cutouts for the side windows until F9L and F9R are in place on the fuselage.

As drawn, the design has about 2 degrees of decalage, due entirely to the Phillips entry of the airfoil. It might be a good idea to give yourself some adjustment at the stab, and also to build in a couple degrees of down thrust at the nose. The dihedral as spec'd on the plans is excessive, especially for a high-wing model, but whatever...And of course, move the rear rubber peg up a bit—they don't call it the "Skinny Bird" for nothing!

### TURNER. ROSCOE TURNER.

Notice the "-Turner" part of the keen letterhead in the following column. That would be none other than Col. Roscoe Turner, dashing air racer extraordinaire, who served as VP in charge of Sales and Marketing at Porterfeld for a short time. According to a document posted at [www.porterfield-turner.net](http://www.porterfield-turner.net) this particular logo was applied to Porterfield aircraft from early 1939 to early 1940, with Turner's name added to the company identity to "up" the prestige factor. It's hard to imagine Col. Turner getting his kicks in a Collegiate—he resigned his position

in 1940—but maybe by then he'd had enough of blasting about in his LTR-14. Indeed, he retired from air racing in September of 1939 after winning the Thompson Trophy race for the third time, declaring "This is a young man's game".

E. E. PORTERFIELD, JR.  
*President*
COL. ROSCOE TURNER  
*Vice President*

**A T T E N T I O N**  
**DEALERS AND DISTRIBUTORS**

**IT COSTS LITTLE TO OWN AND OPERATE PORTERFIELD-TURNER AIRPLANES**

Private owners who fly for pleasure, and operators alert for new income opportunities, will find in PORTERFIELD-TURNER aircraft qualities which extend far beyond their price. Successful, safe airplanes, their overtones of engineering value permit a delivery of performance that cannot be equalled.

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All are designed for comfort, ease of operation, low maintenance cost and—above all—complete safety.

We are happy to announce the appointment of Col. Roscoe Turner as Vice President in charge of Sales and Advertising.

PRICES FROM \$1495

**PORTERFIELD**

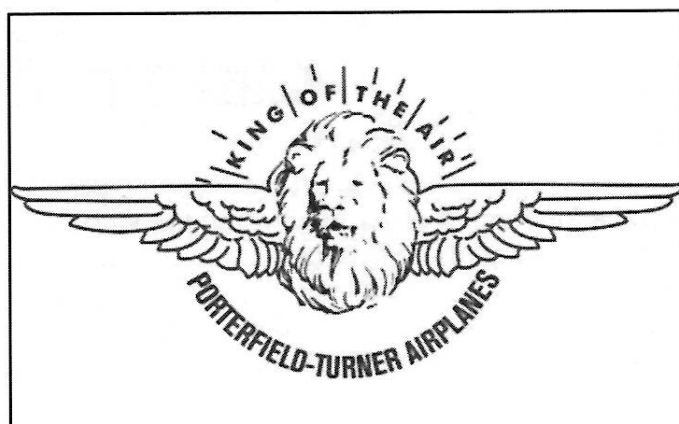
**AIRCRAFT CORPORATION**

1720 Wabash Ave.  
Kansas City, Missouri

Write today for literature, prices and our new easy payment plan. You pay while you fly.

MARCH 1939
89

In any event, Turner's name wasn't enough: with America's entry into the Second Big Fuss, the rights to the Porterfield company were sold to the Columbia Aircraft Co.; Porterfield operations were transferred to Ft Smith AR to produce Waco troop gliders, and another small American lightplane manufacturer faded into the ether. --DM

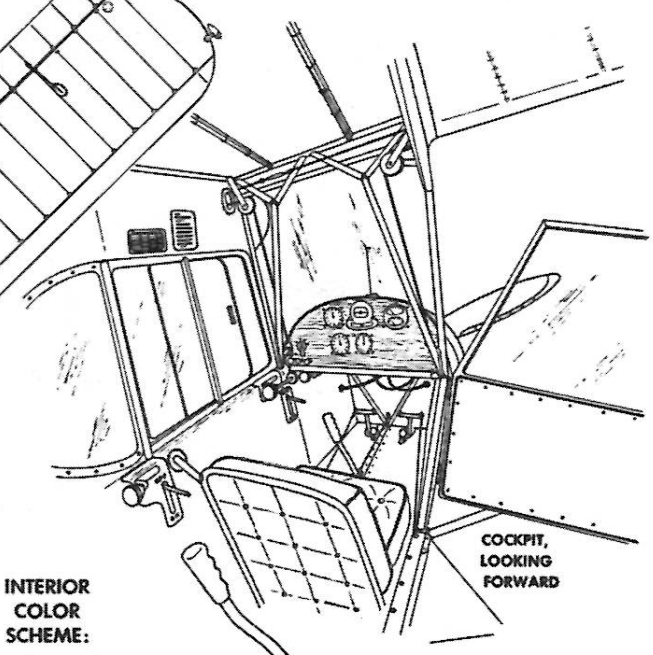
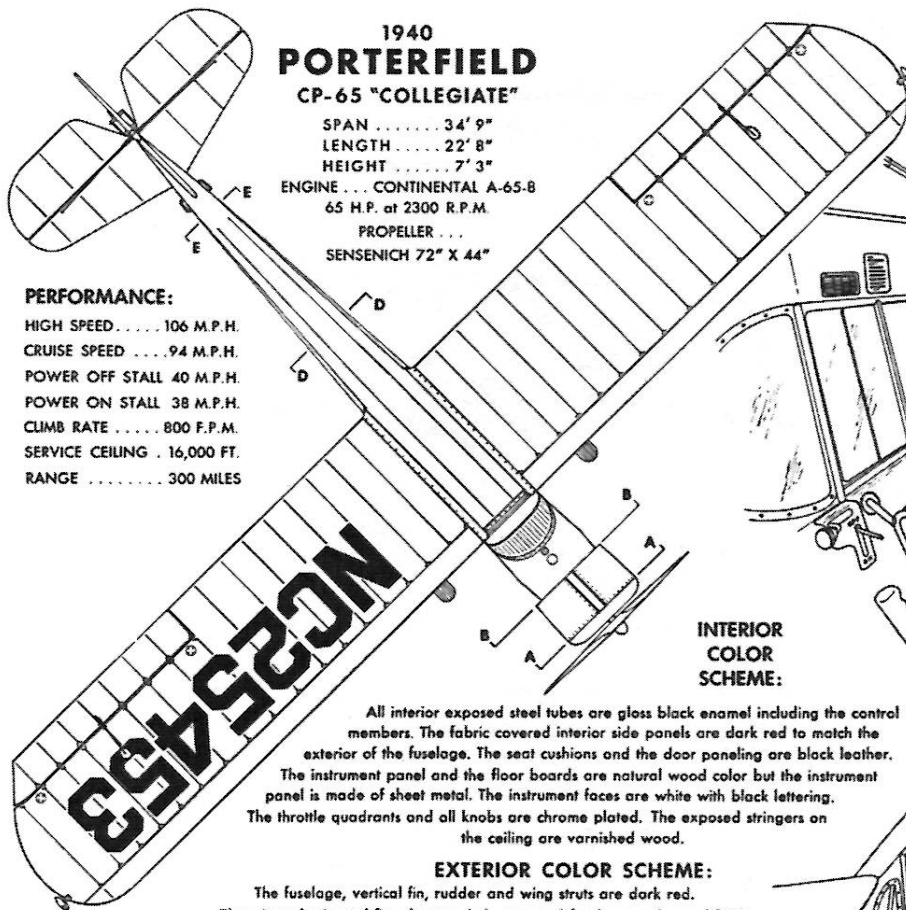


1940  
**PORTERFIELD**  
CP-65 "COLLEGIATE"

SPAN ..... 34' 9"  
LENGTH ..... 22' 8"  
HEIGHT ..... 7' 3"  
ENGINE ... CONTINENTAL A-65-B  
65 H.P. at 2300 R.P.M.  
PROPELLER ...  
SENSENICH 72" X 44"

**PERFORMANCE:**

HIGH SPEED ..... 106 M.P.H.  
CRUISE SPEED ..... 94 M.P.H.  
POWER OFF STALL 40 M.P.H.  
POWER ON STALL 38 M.P.H.  
CLIMB RATE ..... 800 F.P.M.  
SERVICE CEILING . 16,000 FT.  
RANGE ..... 300 MILES

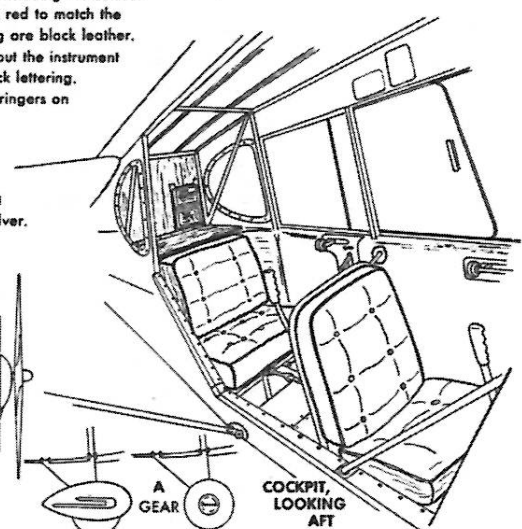


**INTERIOR  
COLOR  
SCHEME:**

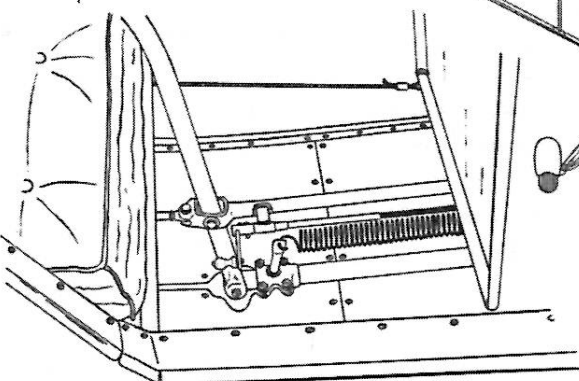
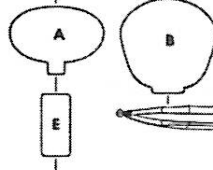
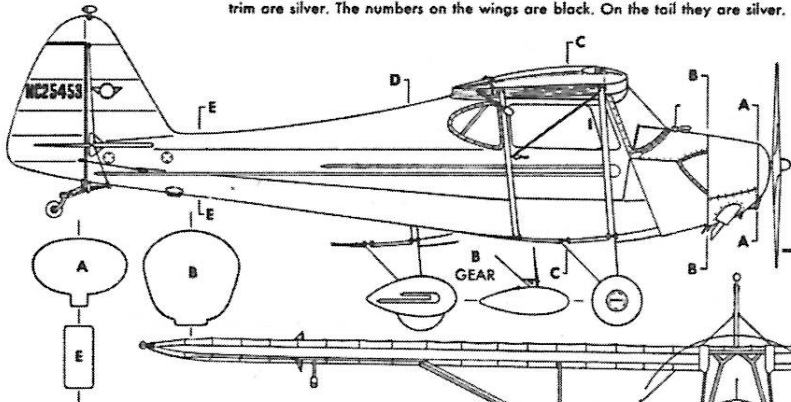
All interior exposed steel tubes are gloss black enamel including the control members. The fabric covered interior side panels are dark red to match the exterior of the fuselage. The seat cushions and the door paneling are black leather. The instrument panel and the floor boards are natural wood color but the instrument panel is made of sheet metal. The instrument faces are white with black lettering. The throttle quadrants and all knobs are chrome plated. The exposed stringers on the ceiling are varnished wood.

**EXTERIOR COLOR SCHEME:**

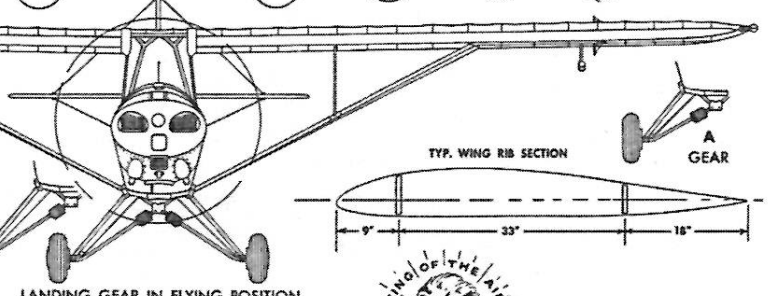
The fuselage, vertical fin, rudder and wing struts are dark red. The wings, horizontal fin, elevator, hub caps and fuselage and speed fairing trim are silver. The numbers on the wings are black. On the tail they are silver.



**COCKPIT,  
LOOKING  
AFT**

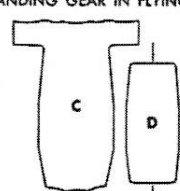
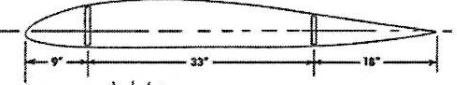


**REAR COCKPIT FLOOR SHOWING TRIM ADJUSTMENT MECHANISM**



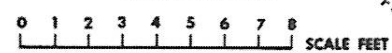
**LANDING GEAR IN FLYING POSITION**

**TYP. WING RIB SECTION**

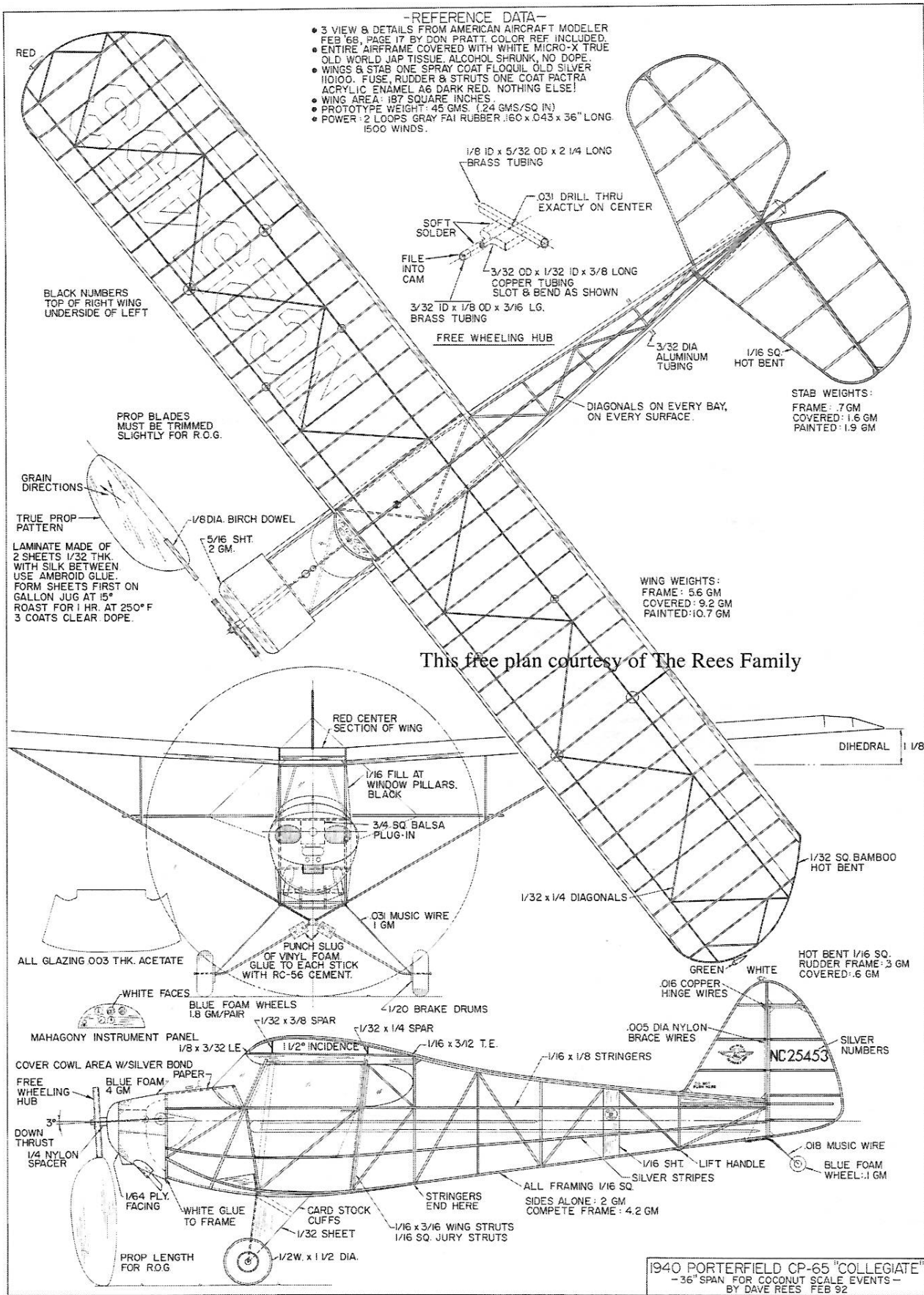


**VERTICAL FIN DECAL**

*Don Pratt*  
2/20/68



**SCALE FEET**



Dave Rees' classic Porterfield Collegiate Coconut. Note the weight call-outs for each assembly...

## RADIO INTERCEPTS

*Collected musings from the internet...the names have been deleted to protect the innocent*

### On Prop / motor combinations:

"I just finished building this model. Plans are by Tom Nallen 1, and the parts were laser cut by Volare Products as a prototype -- it will be available as a kit soon. The plane weighs 13 grams without prop or rubber, and the wingspan is 16". I'm thinking of using a 7" plastic propeller and two loops of 3/32" rubber. Any thoughts on prop/rubber?"



"I wouldn't shy away from a 7" prop. I use one on all of my dimers. I'd go 3-4 times peg to peg."

"I feel that 7" may be over the top for prop diameter. It might be hard to tame with a prop that large. Maybe 6" or 6.5". Just a hunch. As \*\* says, "40% of span is about right."

"Thinking way back, I believe that TN1 flew his original on a 7" North Pacific so you may be on the right track. His flew with what he called a bit of "top rudder" (breathed in) offset to the left. My suggestion would be to start with your own sense of what's right and go from there. Don't be afraid to hit the reset button, or try something other than what "the experts" suggest. Your own experience is your best guide.

"Don't listen to those guys telling you to follow your instincts. You should start by adding some weight to that poor thing. Nothing's less attractive than a starving rabbit. I also recommend putting the prop on backwards to eliminate the risk of fly-aways. Begin test flying, starting at one wind and increasing by 1/2 wind each week until the plane is comfortable in your hands and will accept more CA dripped onto the tissue from an eye dropper (Jackrabbits are notoriously skittish, this may take a while). When

you've got it fattened up and are satisfied with the motor run (it should be VERY SHORT and VERY POWERFUL) you can release it into the wild, but you should not be surprised if it decides to stick around---especially to your fingers, with all that CA running off of it."

"This recent discussion about what size prop to use on the Jackrabbit has me pondering the combination of prop size and hook to peg length of the motor. \*\* is encouraging \*\* to use a seven inch prop on the 16" Jackrabbit and a 3 to 4 times hook to peg motor. My experience with prop diameters that are maybe 45% of span (such as 7" on a 16" dimer) has not been good. But I am wondering now if using a shorter, torquier motor (maybe only 2 times hook to peg) with the very large props could be my problem. \*\*'s longer motors would certainly not have the extreme torque of the shorter motor. With that extra torque comes bad behavior, at least on my planes, and I end up going to a smaller prop to tame the wild beast. But then I think about glide after power runs down. On my planes very large props lead to steep glides or even spiraling in that seems only to be cured by cutting prop diameter."

"I like your prop/rubber combination as a starting point but you might also consider a loop of 1/16+3/32 with a 6" prop. I rarely go over the prop being 40% of the wingspan, but one can't argue with \*\*'s success rate. I do agree that longer props do make the plane go to the right a little more in the glide phase, but I can usually counteract this with a left wing tip weight or a right hand lower gurney flap to get the glide to flatten out. I like to run long motors especially in racers, it is one of the things that makes them fun. I would disagree with \*\* on the issue of torque on long vs short motors. The actual torque value of a fully wound loop of for example a loop of 3/16" is going to be the same whether it is 20 or 30 inches long, you are just going to get more turns in the longer motor....at least that has been my experience."

## WOOD MUSTANG SQUADRON

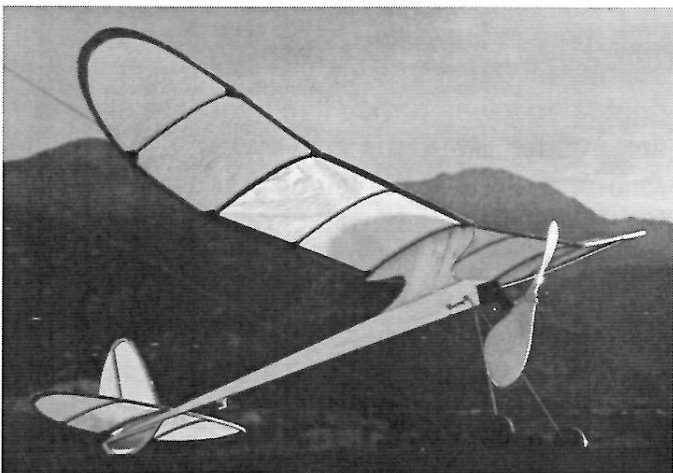
Doug Griggs, Wood MS, Rockville MD

We had our second session at Wood Middle School on Thursday afternoon, with 2 kids from 6th grade and 8 from 7th grade. The kids filed in and got right to it, and for the first time I had ALL the kids get all of the wood work done on the first session! Im psyched! We will be cutting them out and assembling them next session. I saw Scott's (Scott Richlen, VA. instructor) first post about the Mountain Lion kit and I scrambled to see if i could get some too. I contacted John McGrath of Laser-cut Planes and he was extraordinarily helpful. He shipped me 20 kits to arrive by wed, and even included some offcuts for spares and notes on his experiences building the kit with groups. -DG

## ABOUT THAT MOUNTAIN LION...

**Laser-Cut Planes ([www.lasercutplanes.com](http://www.lasercutplanes.com))**

...is a company run by John McGrath in Colorado Springs, CO. that markets a neat line of FF rubber kits, unusual in that the majority are designed to be constructed using no plans; all parts are laser-cut and jiggged to ensure correct alignment, and photo-essays are provided to ensure great results. In addition to the Mountain Lion mentioned above, he has a number of sport flyers that caught my eye, among them a neat 22" Elgin Playboy-inspired design. John also sells Ikara props and a neat jig for setting twist in wooden prop blades. Check out his website!



## FABULOUS FOO FIGHTERS FAC # 75

Scott Richlen and John Murphy, Frost Middle School, Fairfax VA

We kicked off this year with 6 kids: 3 from last year and 3 newbies. We decided to start out using a laser-cut kit called "The Mountain Lion". Sort of a funny name for a free-flight plane, but I built one last summer and it was a terrific flier. Since we don't use CAs in our class, here's how we did the Mountain Lion joints: We used the stick-on circles per the instructions. But then, when we flipped the part over, we applied our aliphatic to the joint and rubbed it in a little (we always add a little water to our aliphatic so it penetrates better). Once the joint is dry, we flip it back over, remove the stickers, and then add a little aliphatic to that side of the joint. The kids have already demonstrated the strength of these joints by stressing the wing and breaking the wood, not the joint!



Here's one of our Bens (must have been a popular name a few years ago, we've got three Bens in our class) admiring his Mountain Lion plane. Unfortunately, this plane was one of two lost in our flying session. Never had that happen with Delta-Darts! He was very unhappy over losing his airplane, but that created a "teaching moment" about what happens with planes that don't fly so good and are a constant disappointment versus those that fly great (and sometimes get grabbed by Hung!)

We are continuously looking for incentive/

motivation awards to give out. Eddie and I visited a school resource center a few weeks ago and we will soon be using it to make various pins to give out beyond the Flying Aces pin. By the way, the various kits and Flying Aces and Maxecuter newsletters that we have been given are much appreciated. It seems that the second year kids appreciate the newsletters more (I think because they have begun, at that point, to understand plans and can visualize better), but they all like kits. Simple Peck or Sig kits are probably best. Guillows are almost a non-incentive for the kid's stage of building ability.

For Show-and-Tell I brought my Brewster Buffalo No-Cal. It was built from a very nice laser-cut kit by Howard Littman. I want to make sure that when we get to the No-Cal build that the kids are familiar with the concept of things other than flat wings and motor sticks. John and I got to laughing because some of them had a hard time understanding what No-Cal meant!

--SR



Foo-Fighter Forrest holds his scratch-built Delta Dart. A beauty!

## BARRON FIELD AIR RACES REPORT!

MaxFax Exclusive by O.Leo Strutt, Boy Reporter

Wawayanda, NY--Dawn awoke chilly and dry upon Barron Field October 10-11th where a few intrepid Maxecuters and other modelers from around the nation converged, seeking to cement their place in Free Flight modeling history.

Tension was in the air, however, as the unsettling weather forecast called for wind and didn't disappoint, exceeding expectations! This was no country for fair weather flyers!

Contestants who unwisely placed their faith in the weatherman and sandbagged on Saturday gripping tightly to the prediction of lower winds on Sunday which was in contrast to Saturday, supposed to be the ideal conditions, were sore dismayed when Hung laughed and only girded his loins and blew his breath up and down the length of the field carrying models across the dank trenches to the distant hereafter and beyond practically all day both days and tested the resolve of all who dared to challenge his will as if they could! NOT!

And yet there were heroic feats of flying nonetheless! Such as Dave Mitchell being heroically defeated in the Flying Horde by Wally Farrell, but both of whom were heroically defeated by Oliver Sand in GA Racers, and who (Wally) went on to win anything Tom Hallman or Tom Nallen II didn't including the Grand Champs anyway over among other people HIM (Oliver) who is just a teenager anyway and an inspiration to all us young fellows who are tired of the old guys (Wally, Tom) winning everything. Stew Meyers came in fourth heroically in the WWI Mass Launch. Dave heroically defended his WWI Peanut title, graciously and nobly pounding Dick Gorman's SE5 and Pete Kaiteris blew up his D8 motor again. Tom Hallman and Vance Gilbert and Tom Nallen II were wimps and waited until the wind stopped finally to fly their MEGA models which have rubber motors as big around as your tongue but they were really cool and really slow! And there were hotdogs and cookies and sauerkraut thanks to the Houks and this is O.Leo Strutt signing off from Wawayanda!

-OLS

# MaxFax 2015-4



D.C. MAXECUTERS  
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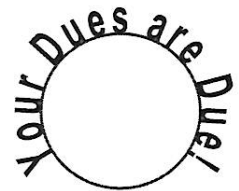
REGIME CHANGE  
COMET IL-2 STORMOVIK WORK-UP  
PORTERFIELD COLLEGIATE STUFF  
FOO-FIGHTERS AND MUSTANGS  
BARRON FIELD AIR RACES 2015 REPORT

## EDITOR; ARTICLES & SUBMISSIONS

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RENEW ON LINE!

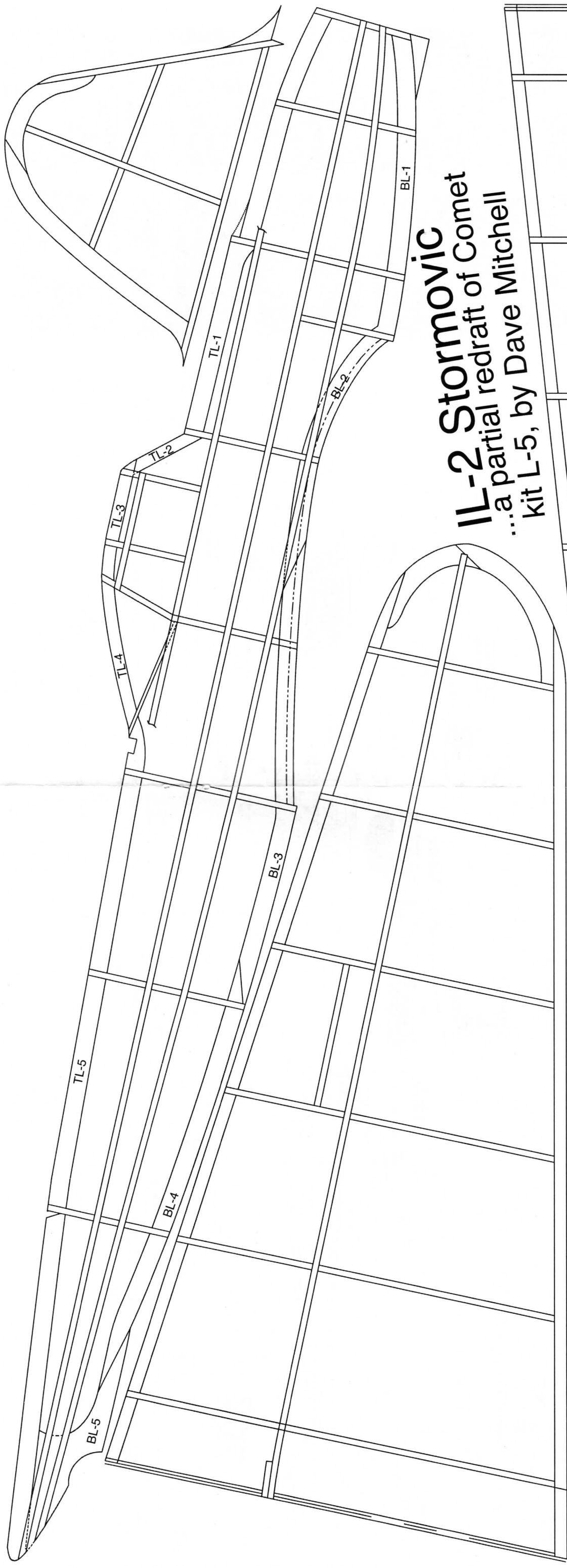
Go to [www.dcmmaxecuter.org](http://www.dcmmaxecuter.org) and click on **MaxFax** at the top of the page.

Octavian Aldea launches his superb own-design Tupolev TU-124 at the Barron Field Air Races this past October. Windy conditions made for a challenging contest, but a good time was had by all nonetheless!

photo by Ronny Gosselin

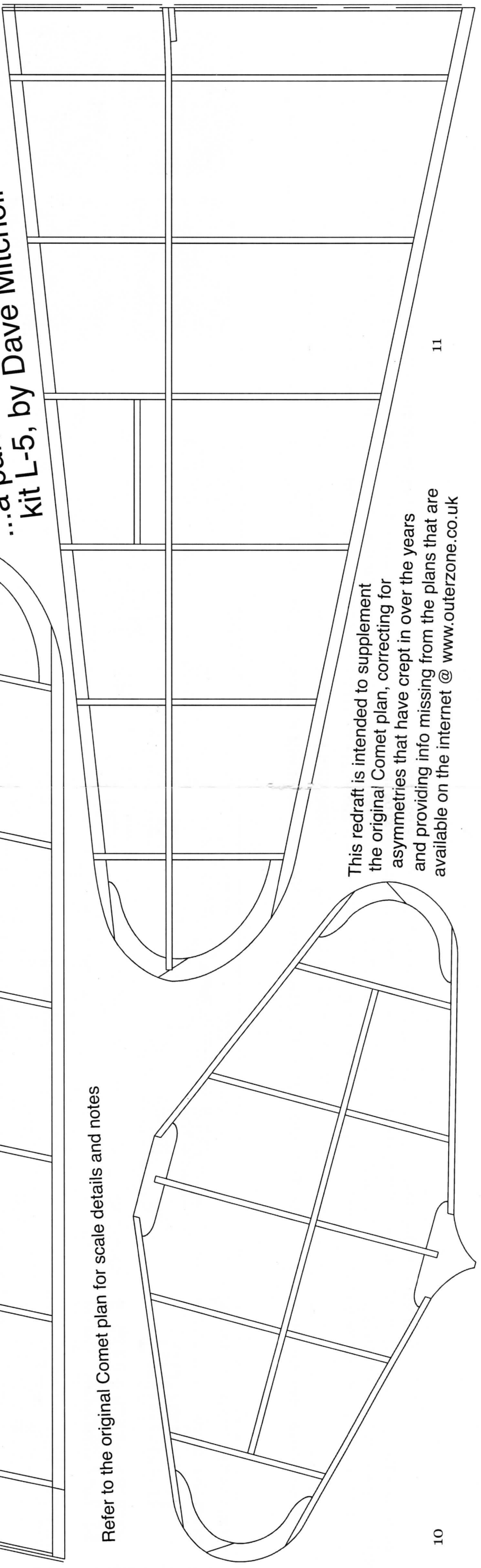






**IL-2 Stormovic**  
 ...a partial redraft of Comet  
 kit L-5, by Dave Mitchell

Refer to the original Comet plan for scale details and notes



This redraft is intended to supplement the original Comet plan, correcting for asymmetries that have crept in over the years and providing info missing from the plans that are available on the internet @ [www.outerzone.co.uk](http://www.outerzone.co.uk)

**PORTERFIELD Collegiate**  
**KIT NO. 107**  
 FLYING SCALE MODEL  
 TERN AERO CO., INC. P.O. BOX 80396  
 CHICAGO, ILL. 60688

**RIGHT WING**  
 Glue W2F on top  
 Glue W2T on top  
 Stabilizer  
 Stabilizer-elevator separation  
 Rudder  
 Motor peg  
 Stabilizer and rudder have glue tabs or covered with tissue  
 After fuselage is finished cut thru bridge in F15 and install stabilizer  
 Paint tailwheel fork silver - wheel black  
 Keep this area open for rubber motor access.

**LEFT WING**  
 Make 4 wing struts to this length. After shaping, paint struts same color as wing with dope.  
 Trailing edge 1/16" x 1/8" - a  
 Rear spar 1/16" x 1/16" - a  
 Front spar 1/16" x 1/8" - a  
 Leading edge 1/16" x 1/8" - a  
 Glue W1F on top  
 Glue W1T on top

**FUSELAGE**  
 FUSELAGE TOP VIEW  
 FUSELAGE SIDE VIEW  
 FUSELAGE FRONT VIEW  
 FUSELAGE REAR VIEW  
 FUSELAGE BOTTOM VIEW

**DETAILS:**  
 Propeller blade template  
 Windshield template  
 Landing gear  
 Propeller  
 Landing gear  
 Landing gear  
 Landing gear

**ASSEMBLY INSTRUCTIONS:**  
 1. CUT OUT EACH PART CAREFULLY FROM THE PHOTO...  
 2. PREPARE THE WING...  
 3. GLUE THE WING...  
 4. GLUE THE FUSELAGE...  
 5. FIT THE WING OVER THE FUSELAGE...  
 6. BRUSH THE FUSELAGE AND WING FRAMES WITH A...  
 7. SAND THE FUSELAGE...  
 8. BRUSH THE FUSELAGE AND WING FRAMES WITH A...  
 9. COVER THE WING FRAMES IN THE SAME MANNER...  
 10. BEFORE GLUING THE LEFT AND RIGHT WING...  
 11. SAND THE FUSELAGE...  
 12. ATTACH THE WING TO THE FUSELAGE...

The Tern Porterfield Collegiate plan can be downloaded for free from the Outerzone or Hip Pocket web sites. This plan is reduced--scale it up 142% to get to the original wingspan of 17".

[www.outerzone.co.uk](http://www.outerzone.co.uk) [www.hippocketaeronautics.com](http://www.hippocketaeronautics.com) (Note that access to the Hip Pocket Plans Gallery requires creating a site account. The site account is free.)

Note similarity in overall presentation between this plan, which is typical of Tern Aero's kits, and those of Comet's later kits--the photo essays in particular. Note the lovely pen and ink illustrations of launch and trim techniques, which are specific to each of the individual models in the collection. Whatever Vito Garofalo felt was getting left on the table at during his extended involvement with Comet, he clearly wanted back on it with his Tern Aero Co.; the plans are superbly drafted, consistent, and complete in every detail. The asymmetries so common on many Comet plans, such as the Il-2 Stormovik, are nowhere to be seen. Stringer locations are well placed. Wing airfoils are sensible. It's interesting to note that all of the Tern kits feature sheet-wood stabs and rudders (the sole exception being the much larger Super Starduster).