Cloudbuster membership and subscription to the newsletter is \$16.00 per year (\$6.00 membership without subscription). All memberships expire on Dec. 31. Subscription membership includes all Newsletter issues for the year.

Send subscription money to: John Jackson Cloudbuster's MAC 5228 Lorin Shelby Twp. 48316

Address all regular correspondence to: Davis Gloff 76 Amherst Pleasant Ridge, MI 48069

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Safety Officer: Bruce Thoms

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Wellosley Dr.

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Oxford Blvd

Oxford Blvd

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The Cloudbusters meet at 8pm. on the third
Tuesday of the month at
Drayton Ave. Presbyterian Church
2441 Pinecrest Avenue
Ferndale, MI 48220 The meeting room is #309
No meetings in June, July, or August.



Be sure to visit our web page to get the 2015 & 2016 handouts. If you do not have access to the web or a printer, contact a member who does and get your copies for handout today.

Cloudbusters Model Airplane Club 976 Pearson St Ferndale MI 48220



NOV-Dec 2014

NOV-Dec 2014

CHRIST NA S

Broome Park 2016 Schedule and Information

This information covers the events and procedures that will be flown at Stanley Broome Park during the summer of 2016. All dates will start official flying at 9:30AM and will run through 4:00 PM. Times may be altered at the discretion of the CD. The designated CD is required to be at the flying site a minimum of 30 minutes prior to the start of scheduled flying. Failure to arrive gives the designate alternate the right to choose the set up location. All official FAC events will be flown to the current FAC 2016/2017 Rule Book. Regarding Pinkham Field Stick, Pinkham Field Rules are published on the Cloudbuster Web Page.

Dates and CD's

Sun Apr 3 Winn Moore winn_moore@yahoo.com Sun Apr 17 George Bredehoft volare61@gmail.com Sun May 15 Winn Moore winn_moore@yahoo.com Sun Jun 5 George Bredehoft volare61@gmail.com Sun July 3 George Bredehoft volare61@gmail.com

A pre registration is required for **Chris Boehm merlin236**@comcast.net this event because of the free food and refreshments provided.

Mike Welshans mbwelshans@aol.com

Sun Aug 7 Club Picnic and Contest.

Sun Aug 28 Winn Moore winn_moore@yahoo.com
Sun Sept 11 George Bredehoft volare61@gmail.com
Sun Oct 9 Winn Moore winn_moore@yahoo.com
Sun Oct 23 George Bredehoft volare61@gmail.com
Sun Nov 6 Winn Moore winn moore@yahoo.com

Events – Flown on All Dates

Event # 1 FAC Peanut Scale

Event # 2 FAC Scale

Event # 12 Golden Age Biplane

Event # 13 Golden Age Monoplane

Event # 32 FAC Dime Scale

Event # 33 FAC No Cal Scale

Event # 34 FAC Phantom Flash - ROG - Best 3 of 6

Event # 35 FAC Embryo – ROG

Event # 36 FAC Jet Catapult

Event # 41/42 Combined Greve/ Thompson Race

Event # 43 Goodyear/ Formula Race

Event # 44 WW-I Combat

Event # 45 WW-II Combat

Event # 53 ½ Size Wakefield - Must ROG Unassisted

Event # X Pinkham Field Stick

Any other catagory in which we can muster three pilots may be flown.

All FAC Events are to be flown to the Current FAC Rules. The Rulebook is available at flyingacesclub.com.

Editor's Ranblings

Merry Christmas and Happy New Year! All of you are already getting your calender for 2016 ready, right,---- by marking your anniverseries, birthdates, special occasions, whatever... Don't forget to mark those calenders with the Broome Park contests dates, Cloudbuster meeting dates, and other major contests that you plan on attending. Remember the Cloudbusters meet at 8 p.m. on the third Tuesday of the month at Drayton Ave. Presbyterian Church

2441 Pinecrest Avenue, Ferndale, MI 48067

The meeting room is normally #309 with No meetings in June, July, or August.

The meeting is January is also the Auction. Bring your stuff to sell and bring some cash to buy. There are usually some great deals on lots of items.

This issue of the newsletter, please find some tips from Popular Mechanics Magazine from 1938. A neat little glue dropper that may look like something new, but not, is included, as well as a way to wind springs. While these were not published about airplanes. get creative, use them on airplanes. The third article, well, it is about airplanes, and while it may not be legal for the FAC, it would be fun just to try it. Who will be the first? There are also some nice tips from the old Smallflyingarts.com about multi bladed props and lightening kit wood.

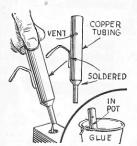
Oh yes, there are also some plans. Another jet catapult, The Phantom, is included. It is small, yet looks like it should be a good flyer. The one design event for the 2016 Outdoor Champs features the Ford Stout AT, well here is someones Bostonian adaptation of the same. Remember that any Bostonian qualifies under the FAC embryo rules, however, to get the 9 points in embryo, the wheel pants and exhaust have to be included. The Small Flying Arts World Tour Flyer is included with a short article. This plane is definity a flyer. I watched one of mine OOS about 5 years ago. The original has quite a history; Please see Model Airplane Flies Around the World!

The next plane should look familiar to a lot of the Cloudbusters, the Jetco ROG. The Cloudbusters use to fly this one as a special event at the indoor flings. Why don't we all build one and get it back on the list of events that we fly?

Chris A. Boehm

Glue Dropper for Cabinet Work

Here's a dropper that will be found handy for applying glue in small dowel holes, blind mortises, etc. A short length

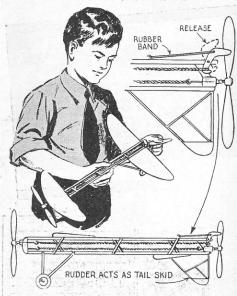


of copper tubing with one end closed has a spout soldered to the other end. A piece of wire soldered to the tube permits hanging it on the gluepot when not in use. A vent in the tube near the closed end permits

air to escape while filling, which happens each time the dropper is hung inside the

gluepot. When the dropper is removed finger is placed over the vent to keep glue from running out where not wan Raising the finger from the vent momentarily allows a few drops of glue to escape

Twin Propellers Double Flight Time of This Model Plane



Here is something new in model airplanes; twin propellers arranged in tandem so that one runs and then the other, almost doubling the time that the plane will stay in the air. The plane is made in the regular way except that the rudder is on the underside so that it serves as a tailskid. The rubber band operating the front propeller is fastened to a pivoted L-shaped arm, which engages the rear propeller and prevents it from turning until the arm is pulled back. As the band untwists in driving the front propeller, the pull on the arm is gradually reduced and a short rubber band fastened to the upper end of the arm pulls the arm back, allowing the rear propeller to rotate.

-Kenneth Howard, French Lick, Ind.

Presidents Notes

My final thoughts as President as the Cloudbusters approach 2016. I have enjoyed being an officer for the past 14 years however I do need a break for a year or two. I am going to address a couple of serious issues and I hope at least a few of you will take this to heart.

Cloudbusters did get some news, a mixture of good and bad, over the last 30 days. The good news is we received a check for \$1,000.00 from the Pensacola Florida Free Flight Team. That money has been deposited and now rests in our club bank account. The extra dollars will really help with the Indoor Fling and Outdoor Champs next year. The sad part is we received the check because the PFFT, due to lack of member participation, is folding up and have now disbanded. They are a club of older members, just like many of us, and can no longer function with 3 or 4 people doing everything. The few members they have left will attend some contests held by other clubs but will no longer have a flying site of their own.

That brings me to our next issue. I have been an officer for 14 years, Davis Gloff has steadily held a position, either President or Secretary for 8 or 9, Bruce Thoms has been Safety Officer for 5 or 6 now and Dan Olah, before he passed away, had been Treasurer for 8 or 9 years. Only the VP, Winn Moore and the current Treasurer, John Jackson (who was railroaded into his position a year and a half ago) have served less than than 3 years. That is not taking into consideration the Newsletter Editor, Chris Boehm, who has done that job for several years.

This year we could barely get anyone to accept being an officer. Club members either skip the October meeting or say they can't do it, too hard, etc. I even had a couple of long time Cloudbuster members tell me they didn't care if the club folded, they could still go flying. That is a true statement but only to a point. Without the safety net of the insurance policies provided by Cloudbusters through the AMA the following happens. Cloudbusters can no longer fly as a club at Heritage School or Broome Park. Ultimate could also be suspect if the MIAA declines to insure modelers as we go forward. The club would also have to give up both the Indoor Fling and the FAC Outdoor Championships as you can't get a

sanction and the AMA Insurance to hold a contest unless you are a chartered club. No Cloudbusters, no charter, no contest sanctions. Yep, everyone could still fly at the FAC Nat's in Geneseo, the AMA Nat's in Muncie and for sport in your local field or Broome Park. That would be about it.

Remember that this hobby is about having fun but you can't have fun flying model airplanes if you have nowhere to go and fly them. Having a place to fly takes an active club. Fair Skies and Tailwinds

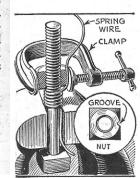
Mike

nut should be shallow enough to allow screw of the C-clamp to press againstightly, causing a slight tension wire while winding it.

—Roy Mahal, Charles

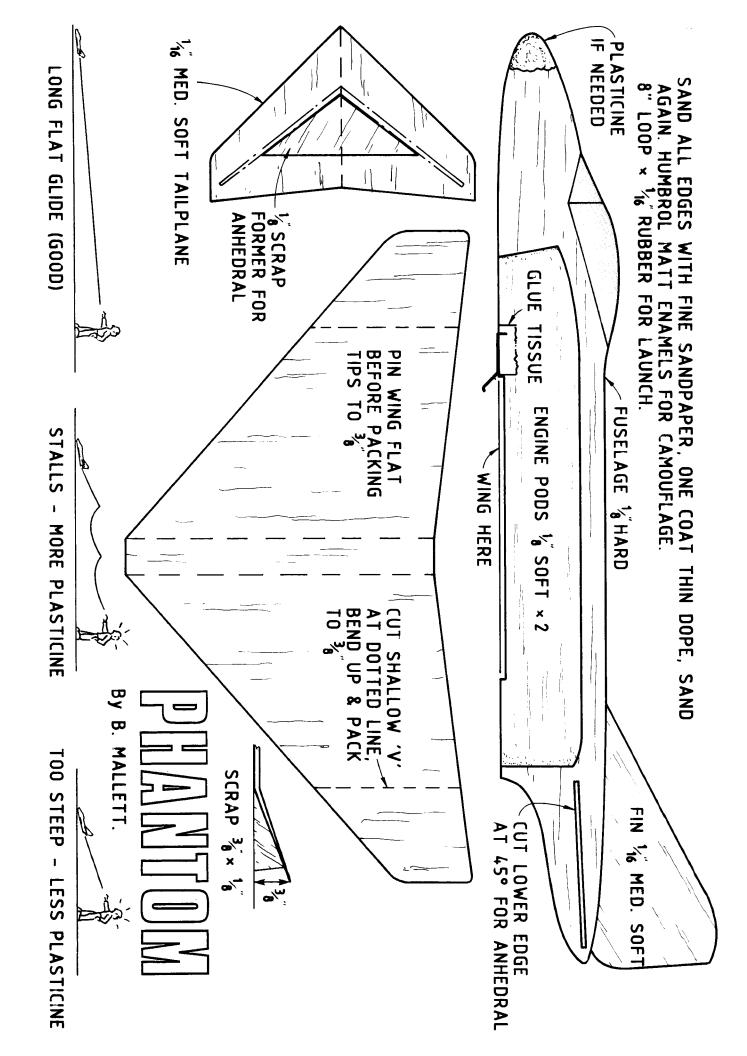
Winding Small Coil Springs

The next time you have to wind a small coil spring, get a bolt of the proper diameter and file a small V-groove in one side of the nut. Then clamp the bolt in a vise,



placing the end of the wire from which the spring is to be wound between one side of the bolt and one of the vise jaws so that the assembly will be clamped tightly. Run the wire in the groove of the nut and put a C-clamp over it

as indicated. Then using the C-clamp as a handle, turn the nut. This will cause the wire to be wound tightly on the threads. The groove in the



Hello Mike

Please be kind enough to accept my request to pass on to Cloudbuster members information for the upcoming third annual Trains, Planes, Automobiles, Boats & more Show and Swap which will be held February 20 & 21, 2016. Attached is a flyer.

Two years ago I had the privilege to stop by and address some of your members in person at a time when the planning for the inagural event was underway. SInce then the event has been held twice and is growing. in popularity. Last year over 1,500 attended the two day event.

The goal of the event still is to bring together and showcase different hobbies to existing hobbyists as well as the general public in a swap & shop venue. I believe this event is a great opportunity to promote your hobby and organization.

Your members who have items they wish to sell should find many interested prospective customers. A table registration form and dealer detail information is available online at www.hobby-rama.com Tables are available for one or both days at the same low fixed price and include parking passes. Questions and inquiries can be directed to Shawn or myself.

Doug Kass Hobby-Rama 586-306-5306 Shawn Barrick Society Of N-Scalers Detroit 810-444-5238

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day paid admission good for Sunday too!



Pensacola Free Flight Team resource list Sat Nov 28, 2015 3:44 pm (PST). Posted by: "Bob Clemens" pentaxbob

The Pensacola Free Flight Team (PFFT) has closed shop but its collection of over 850 free flight-related hints, tips, tecnique explanations, etc. that were published in its nowdefunct newsletter have been archived and are available on George Bredehoft's web site. No greater compendium of FF information has ever before been assembled. It's a true treasure trove! Check it out at:

http://volareproducts.com/?page id=1686

Bob

Editorial October 8, 2006 Model Airplane Flies Around the World!

Many recent events here at SFA deserve some commentary, but none quite so much as the new SFA World Tour. This project was born in the mind of an SFA Forum member as he sat daydreaming in his calculus class. At that time membership in the SFA Forum had just surpassed the 1000 milestone, and there were already members in nations all over the world. A great reason to celebrate, he thought! So he dreamed a wondrous plan to share the "spirit of SFA" literally around the world. The concept was to ship a little rubber-powered flying model on an international route, with stops at various members' homes along the way. Each pilot would fly the model in his unique location before shipping it on to the next person in line. Pilots could also post photos & flight reports in the forum to document the travels of the little ship as it made its way completely around the globe!

Well, once that little bombshell of an idea was planted in the forum it exploded, and many other members chimed in with further ideas and encouragement. Frankly, I was very skeptical at first. The planning & organizing seemed formidable, not to mention the website development needed. After all, too much of my time is already spent in front of the computer. But I couldn't ignore the responsive chord struck within the SFA community. Members saw this as a wonderful expression of SFA "spirit," and an opportunity to demonstrate unity and good will on a global scale. Given the current state of affairs around the world, how could I refuse?

With help & encouragement from the SFA community the SFA World Tour project finally got underway, and the 1st official flight took place on August 5th, 2006. The World Tour Flyer (affectionately nicknamed "SoFiA") will visit 72 pilots in 19 different countries by the time it completes the journey. The Tour Route heads generally Eastward, while zigzagging North and South to the various destinations along the way. We're very excited and proud that we can work together as a group to accomplish such a thing. The consensus at this point is that nothing like this has been done before in this hobby. If you have information to the contrary, please let us know.

To track SoFiA's progress, and for more complete information about this event, please see the official World Tour website. In addition, photos and discussion can be enjoyed in the World Tour forum thread.

Bhagat Dhillon

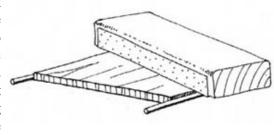
Lighten That Kit Wood!

A lot of kits on the shelves of your local hobby shop would be great buys if it weren't for the incredibly heavy wood they come with! For instance, I love all those old Guillows designs and the nice scale canopies in their kits. But I'd never waste my time building with the wood as provided... I want my models to fly.

Well here's an easy way to lighten the wood in those kits and make them into better flyers!

By sanding the sheetwood down to a smaller thickness you can shed up to 50% of the weight. The illustration shows how

a sanding block is used to thin the wood, with two pieces of music wire used as "stops." You just keep sanding until no more



wood is coming off. The only challenge to this is judging how thin to make the wood, and then locating the correct diameter of music wire.

As an example, let's say we want to reduce some 1/16" sheet to 75% of its original thickness. With a calculator we find the following:

1/16" = 0.063" 75% of 0.063" = 0.047"

It just so happens that music wire is available in 0.047" diameter, but it's not necessary to be that precise. Just find the wire that comes closest to the desired thickness.

Multi-Blade Prop Conversions

Every once in a while I find myself needing to make a three or four bladed prop. Usually it's to add scale realism to a WWII warbird, but there are other uses for this too. With additional blades you can reduce prop diameter without great power loss, and that can solve certain clearance problems associated with scale landing gear, pusher-props, and so on.

We usually have a good idea what size two-blader to use with a model. It's standard equipment in most kits, and the plan usually specifies prop size. But how much do we reduce that diameter when we add additional blades?

The answer to that question is this week's tip, contributed by Martin Hepperle.

For you theorists out there, here's Martin's technical explanation

"The power absorption of a propeller is linked to its diameter to the power of 5.

Assuming you have props of the same blade shape you can write:

For a 2 bladed prop having diameter D2: $P2 = 2*Cp*D2^5$ For a 3 bladed prop having diameter D3: $P3 = 3*Cp*D3^5$ (Cp is a constant depending on the blade shape)

What you want is props of equal power consumption; thus P2 = P3.

Solving for the diameter D3 gives:

 $D3 = D2*(2/3)^1/5 = D2*0.922$

Thus a diameter of 90% should be quite close (for a 3blader - Ed.). For a four-bladed prop, you would end up at 87% of the two-bladed prop's diameter. By the way, power is also related to the rpm to the power of 3 and thrust scales with diameter 4 and rpm 2. "

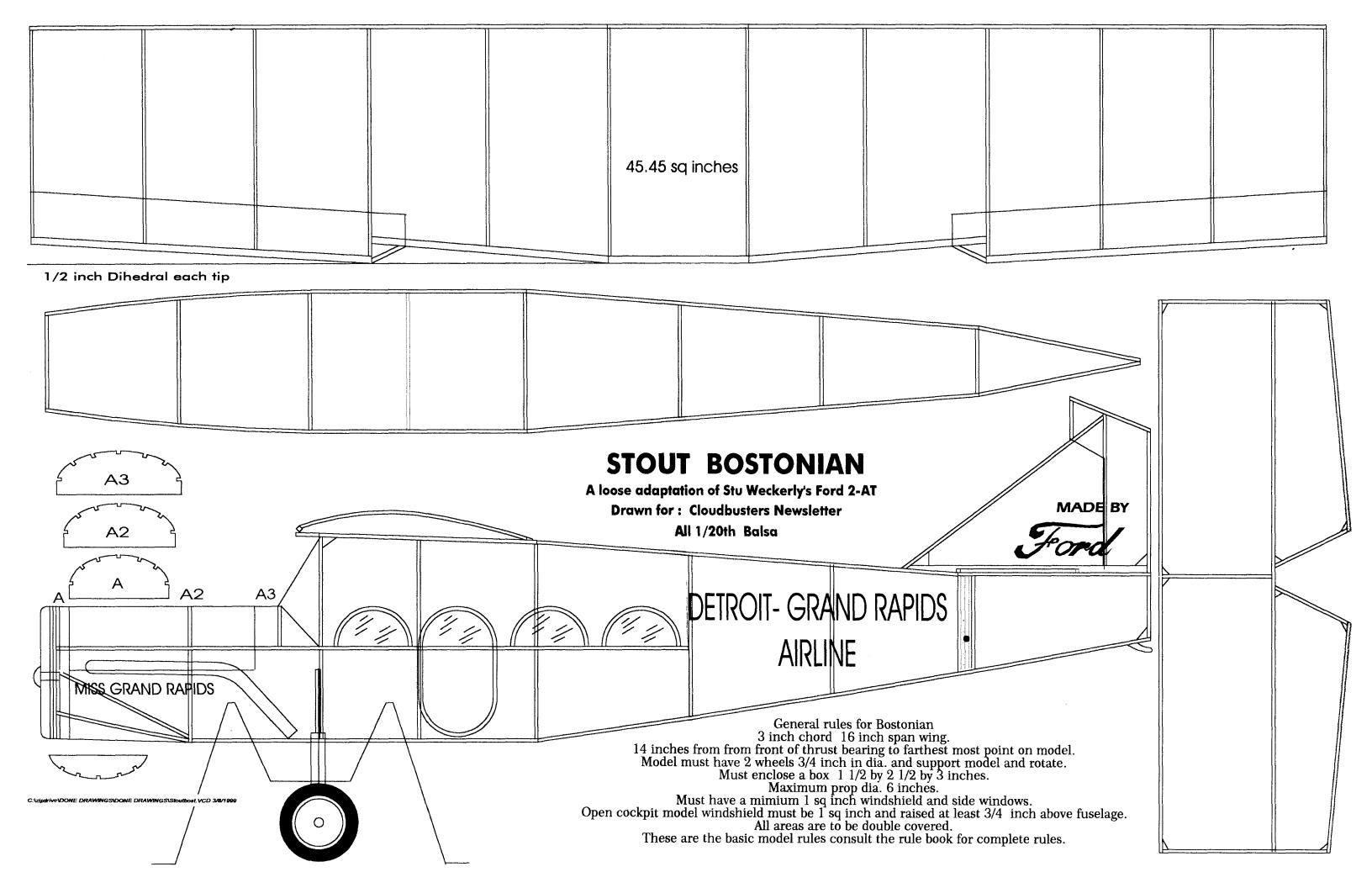
To bypass all that theory, just remember this:

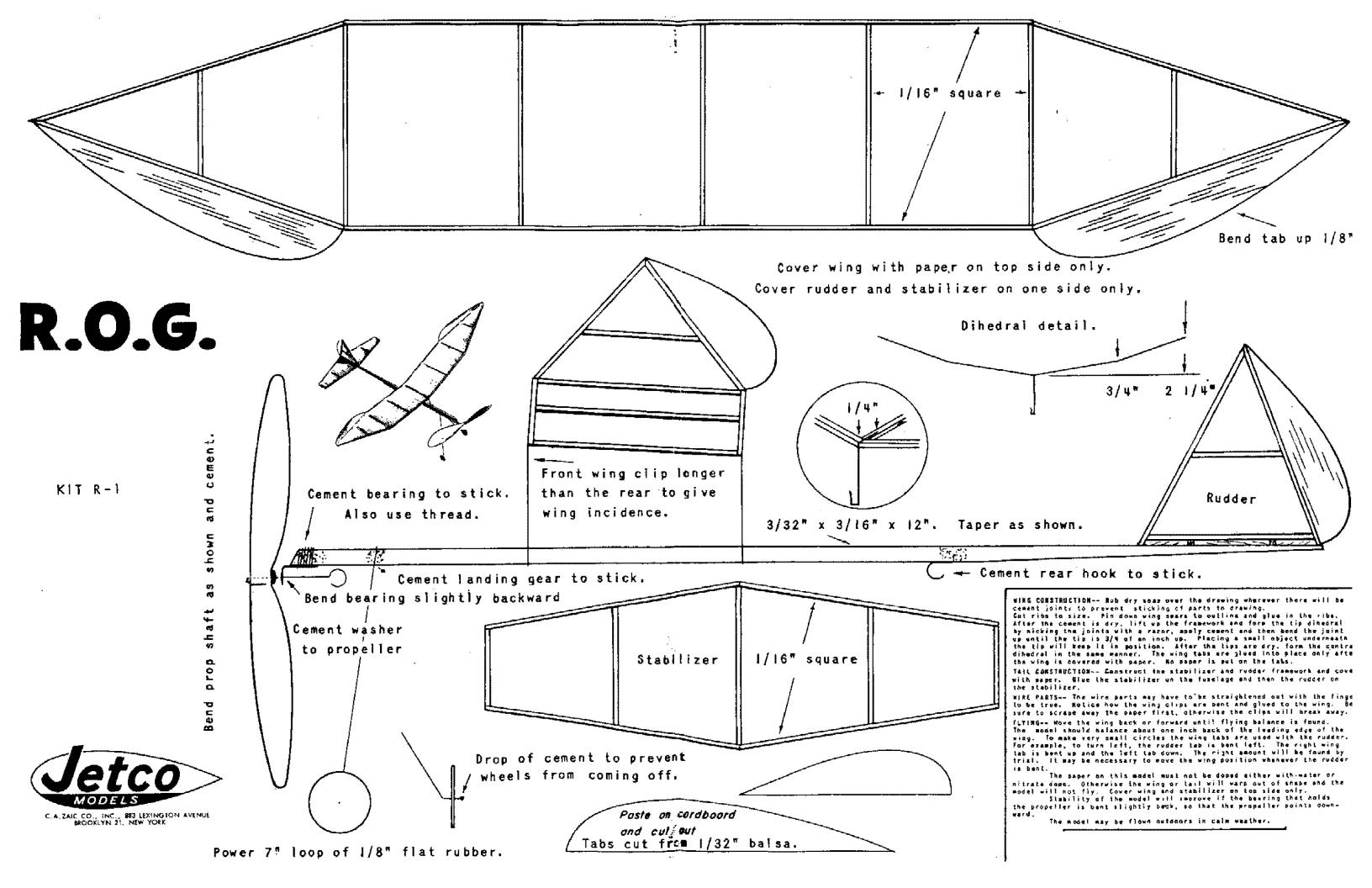
- 3-blade diameter = 90% 2-blade diameter
- 4-blade diameter = 87% 2-blade diameter

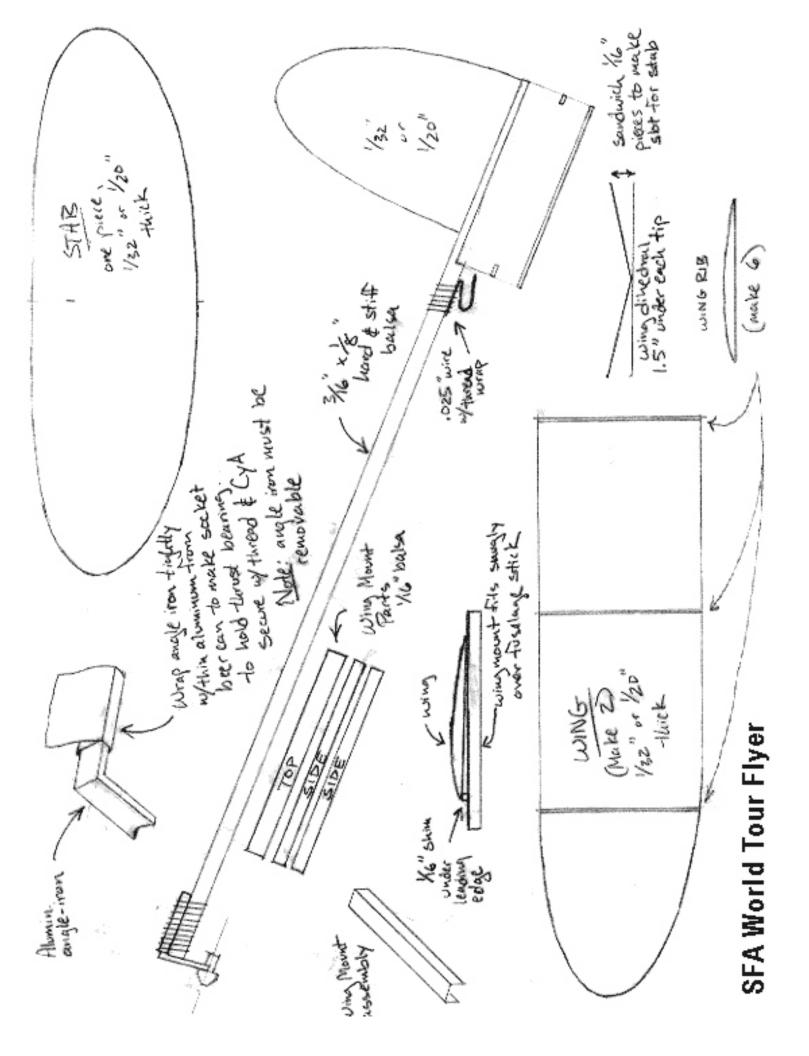
This assumes that other factors do not change, including prop pitch, blade width, and blade shape.











Building & Flying the World Tour Flyer

Major assemblies:

First, download the plan. The model has a 12 inch (30.5cm) wingspan, so when you print the plan be sure the wing half is exactly 6 inches (15.25cm) long.

- Cut the motor stick (fuselage) from stiff 1/8" x 3/16" (3mm x 4.5mm) stiff balsa stock. These dimensions can vary slightly, but be sure the stick is stiff (and preferably light).
- 2 wing halves, the stabilizer, and the rudder are cut from very light sheet balsa, 1/32" to 1/20" thick (0.8 to 1.25mm).
- Wing ribs are cut from 1/16" (1.5mm) sheet balsa.
- Lightly mark rib locations on both wing halves, and glue the center portion of each rib (peak of airfoil) to it's proper location on each wing (approx. midway between leading and trailing edges). After glue is dry, apply glue to remaining lengths of ribs and flip wing assemblies over. Place wings on a flat surface and use weights along leading and trailing edges to make the balsa sheet conform to the rib profiles while the glue dries.
- (Optional step) The wing can be made damage-resistant by gluing thread along the leading edge, from wing roots to wing tips.
- Both wing halves must fit together with 1.5" (3.8cm) dihedral under each wing tip. Sand the top section of each wing half where they meet (root ribs) until a good fit is achieved, and glue halves together with proper dihedral.
- Cut a square notch out of the rear of the motor stick to accommodate the stabilizer, as shown on plan. Make the cut straight & square, and approx. half the height of motor stick. Length of cut should be longer than width of stab by about 1/4" (6.5mm). Next, cut a piece from 1/16" (1.5mm) sheet the length of the motor stick notch, and the width of the motor stick. Assemble this piece and some small pieces of 1/16" scrap onto the motor stick to create a slot for the stab to slide through. Position the stab in the notch during assembly to ensure it sits squarely in the slot while glue dries.
- The wing mount pieces are cut from 1/16" (1.5mm) balsa sheet and assembled as shown on plan. The mount should fit snugly over the motor stick, and must be able to slide freely along the length of the motor stick.
- At this point, 2 to 3 coats of Nitrate dope should be applied to all balsa parts. Hold stab and rudder flat while dope dries. Dope only one half of the wing at a time, and weight it down on a flat surface as it dries, with a shim under the trailing dge to create washout. The shim should be approx. 1/16" (1.5mm) thick, placed under the trailing edge approx 1/4" (6.5mm) outboard of the outer rib.
- Sand very lightly between coats of dope, and be sure to brace parts as described above while drying each time.
- Slide stab into stab slot, and glue rudder to motor stick as shown on plan. Ensure that the rudder is square with stab while drying.
- Assemble wing mount to motor stick (do not glue). Glue wing to wing mount with a 1/16" (1.5mm) shim underneath the leading edge. Ensure wing is square with rudder and stab, and also square in the top-view, before glue dries. When dry, remove wing/mount assembly from motor stick.
- The thrust bearing mount is made from aluminum-angle, approximately 1/16" x 1/2" x 3/4" (1.5mm x 1.3cm x 2cm). Cut off a section of aluminum-angle about the width of the motor stick. Next, cut a section of thin aluminum from a beer or soda can, and wrap it tightly around the long section of the aluminum angle piece. It should wrap only one time around, and overlap itself about 1/8" (3mm), creating a "socket" that the angle can slide in and out of. Bind the thin aluminum wrap with several truns of thread, and lock the thread with a thin coat of superglue (CyA). Be careful that you do not glue the aluminum angle to the thin aluminum.
- The socket (with aluminum angle still inserted) should be glued to the motor stick as shown on the plan. When glue is dry, lash the socket to the motor stick with thread and glue (Cya) to create a solid attachment. Once glue is dry, slide the angle out of its socket and back in a few times to check the fit.
 - The short leg of the aluminum angle should be filed so the that the end

mates to the round profile of a Peck plastic thrust bearing (as shown in sketch on plan). Lash the plastic bearing to the angle with 10 or 15 turns of thread, and harden the joint with superglue (Cya).

- Bend the rear motor hook out of .025" (0.6mm) music wire as shown on plan, and lash to motor stick with thread and Cya glue. Final assembly:
- Small areas of bright paint or tissue are recommended to make your model easier to find.
- A 4.5" grey plastic Peck prop works well for the World Tour Flyer. Scrape plastic from the front and/or back of the prop to make it balance. For best performance, a great deal more plastic can be scraped away to lighten the weight.
- Use pre-formed motor hooks, or bend your own to attach the prop to the thrust bearing. Ensure that the free-wheel mechanism functions properly.
- Attach the wing to the motor stick using a single small rubber band.
- Slide the thrust bearing assembly into its socket.
- Slide the stabilizer into its slot.
- Tie a loop of 3/32" (2.5mm) or 1/8" (3.2mm) rubber, about 8" (20cm) long. Stretch & lube the motor, and attach to front and rear motor hooks. Flight Trimming:
- Slide the wing to a position on the motor stick where the CG (center of gravity) is about where the airfoil peaks (1/3 to 1/2 of the way back from the leading edge). Mark the motor stick and the wing mount so you can easily find this position again.
- Hand-wind 25 to 50 turns into the rubber to begin flight tests.
- Adjust wing position to cure problems in the glide.
- Thrust adjustments are made by bending the aluminum angle portion of the thrust bearing assembly. Use two pairs of pliers for this operation.

If flight surfaces need to be warped (or if warps must be removed), hold the warp in position while brushing dope thinner over the balsa. Continue holding until dry. Steam also works well for this.

Dave Andreski

