



PRESIDENT TO PRESIDENT

Response to Last Issue

by Dave Mathewson, AMA President

Hello, again. The outdoor flying season should be in full swing for most of us by the time this issue of the *Insider* hits the streets. I hope those of you who live in some of the colder climates are getting a chance to get out and do a little flying also.

In my last column I wrote about a concern a member expressed regarding what he felt was a lack of enthusiasm among some of the members in his club. He asked about ways to improve participation at various club activities. I passed that question along to you and received some interesting suggestions in return.

Most of the comments involved improving attendance at club meetings. The overwhelming thought among all of your responses was that there needs to be an element of fun included along with the necessary club business. This isn't to say that the business of running a club isn't important, however, most felt that in addition to that aspect of the meeting, members would be more likely to attend if there were some additional modeling related events also on the agenda.

Some suggestions included having a "show and tell" after regular business is concluded to allow members to bring their new models to the meeting to talk about them and show them to others. As an additional incentive, some clubs put the names of those members who bring a model to

a meeting into a raffle drawing.

One of the more popular suggestions was to include a program on some modeling-related issues. Topics suggested include building techniques, covering methods, radio setups, and flight trimming. Most clubs have experts within their own ranks who could be asked to present these programs.

Along the lines of the raffle/drawing concept, many clubs hold general drawings at their meetings where all members attending have their name thrown into the hat. Drawings can be something as simple as a five-dollar bill. Some clubs have found that local hobby shops are more than willing to support a club by providing a small gift certificate for this. Another popular idea along the lines of a drawing is a 50/50 raffle where members who attend the meeting each throw a dollar into the draw.

I thought one of the more intriguing ideas was to hold meetings, maybe not every month, but on a regular basis at a local restaurant to turn the meeting into a little bit more of a social gathering. Many small, local restaurants have rooms available for these types of events.

It seems like the common denominator in all these ideas is the wish to "keep the hobby a hobby." Why not try a couple of these ideas with your club and see if it improves member involvement within your club. →

TIPS FOR CLUBS

Select Your Officers with Caution

by Bruce Ream, 2007 President Jefco Aeromod'lers of Denver, Colorado

From the day most of us enter into the fun of building and flying model airplanes we begin to fly with people who share a passion for our hobby. All of us will find people within the hobby whom we come to know as good friends and people we can trust; but *beware*, this trust can sometimes be betrayed.

I would like to share with all in the hobby what Jefco Aeromod'lers of Denver, Colorado, recently went through when we found out that all of the funds in our treasury were gone. As we look back on this event, we keep coming back to the questions of how this could happen and what we should have been doing to prevent the catastrophic event.

We are a large club with more than 280 members, therefore our treasury has always had a fair balance. As with all clubs, it is sometimes hard to get people to volunteer for positions on the board. When a member steps forth to volunteer to be the treasurer, a sigh of relief goes off that somebody will do this

difficult and time-consuming job; but again, beware. This is our story:

Clue #1: The club bent the rule that required a two-year membership to be an officer so this person could become treasurer. He had only been a member for one year.

As it started out, and as far as the board was concerned, everything appeared to be in order with bills being paid and reports from the treasurer that we had money in the bank. We had other board members' names on the account, so it could be checked on by other board members.

Clue #2: It wasn't long before the treasurer asked the board if he could open another account because a different bank was going to offer us a better deal on our credit card machine and we could have a debit card for miscellaneous, small charges. He asked the other board members to sign signature cards for this new account. We later learned those

please see **Tips for Clubs...** on page 4

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Propeller Sense

Never use or try to repair a damaged propeller. You may get by with it a time or two, but is the cost of a propeller worth risking injury to yourself or a friend?

If the propeller is visibly damaged, then whatever force did that could also have caused other damage that remains invisible to the naked eye. So, please when you have a damaged propeller, either use it strictly for static display purposes only, or better yet, break it clean in half before discarding to keep anyone else from using it. Don't even think about using it as a back-up spare.

There are some solid black propellers on the market, which become invisible to the naked eye once they're spinning. This is a dangerous hazard which can be remedied by simply painting the propeller tips with a bright color. You can even use the paint to help balance the propeller. You do balance your propellers don't you?

Why bother balancing a propeller? It won't hurt the engine any.

This may be true, but the vibration and shaking caused by an out-of-balance propeller tends to loosen nuts, bolts, and screws, both on your engine and throughout the model. Here again, it's a simple matter of spending five to ten minutes to balance a propeller, or risk spending ten hours or more repairing or rebuilding your model. Just consider the few minutes that it takes as a sort of insurance.

When installing a propeller, always use a hard metal washer that's flat on the surface facing the propeller, in between the propeller and the propeller nut. This washer should be larger than the propeller nut too. The washer is there to give additional surface area to be tightened against. The smaller the washer area, the greater the chance of the propeller being crushed under the pressure of the tightened propeller nut.

When the propeller is crushed at the hub, it can be damaged to the point of being dangerous to use or it can become loose to such an extent that it becomes dangerous. This "crushing" action is also why it is important to recheck the tightness of the propeller nut every so often, especially with new wood propellers. In most cases, the propeller washer supplied with the engine is adequate, so don't use anything smaller. But again, never tighten the propeller nut directly against the propeller itself. You need more surface area to secure the propeller safely, plus there's a good chance that the action of twisting the nut tightly into place will tear into the propeller hub.

Propeller Markings

Nearly all propellers have some sort of identification marked on them, be it brand name, propeller size, something else, or all of the above. In addition to noting the size of the propeller, the marking also denotes the front of the propeller, and the front of the propeller always faces toward the front of the airplane. Don't make the mistake of installing a propeller backwards. You'll probably get lots of RPM from the engine, but very little thrust from the propeller.

Propeller sizes are almost always marked with at least two numbers such as 10x6. Sometimes there will be three numbers, such as 10x6-12. The first number represents the length of the propeller, or the diameter of the "disk" formed by the spinning propeller. Propellers are usually pretty accurately marked when it comes to their length/diameter.

The second number represents the pitch of the propeller, which is theoretically the distance the propeller moves forward in one complete revolution, disregarding slippage. One might think at first that the angle of the blade would be constant from hub to tip for a constant pitch propeller (one having the same pitch all along its length), but it isn't so. Remember, the farther out from the hub a given point on the propeller is, the farther it travels to complete one revolution. So, the farther out from the hub a given point is on a constant pitch propeller, the smaller its angle will be.

When a propeller has a third number, such as the example of 14x6-

12, it means that the pitch progresses from 6 inches near the hub, to 12 inches near the tip. This is called a progressive pitch propeller, and in this case, the angle of the blade might actually be constant from hub to tip, since the progressive pitch has more pitch near the tip than at the hub. Progressive pitch propellers, however, are commonly seen only in sizes appropriated for 1.20 size engines and larger. And, as far as I know, the verdict isn't in yet on whether they have any advantages over constant pitch propellers.

Some manufacturers of propellers are very precise. There are propellers marked with their pitch out to the second decimal point, as in 8x3.8. Don't mistake this "second number" as described above. In this example, the second number is a fraction of the first, and has in fact a pitch of 3.8.

Regretfully, the number shown on the propeller representing the pitch is not universally accurate. Some manufacturers are very good in this aspect, while others are downright terrible. In a series of tests conducted by *R/C Report*, it was found that in most cases, propellers have less true pitch than indicated by their markings.

Not all propellers are created equal. Much of the variations in the way they perform have to do with their shape, airfoils, and the material it's made from. If you're tweaking every last bit of power out of your engine, it's worth experimenting and finding the propeller that works best for your engine/airplane application.

Play it safe, and keep your propellers clean, tight, and balanced. →

NEWS! on the
AMA
Web Site

The Academy has made some additions and updates to its Web site.

Information Systems (IS) at AMA Headquarters added a new page on the Members Only section: Club Roster. The page provides rosters for all AMA Chartered clubs including member name, AMA number, membership expiration date, and any position held in the club.

The page allows club presidents or club contacts to view and print all members at once with their current status; much easier than the old way of looking up each individual one at a time.

IS is also working to update the Charter Club Locator section of the Web site. Several clubs now have updated club information as well as flying site specific information including topographical maps of the fields.

The Charter Club updates are a continuous process. Visit www.modelaircraft.org/clubseach.aspx to see if your club's information is available. If you don't see your flying site complete, talk to your club president about providing that information to AMA Club Secretary, Lois Mock, at loism@modelaircraft.org, to get it posted online. →

Membership Dynamic Volunteers

by Jim Rice, District VIII Vice President

Response to the previous Leader to Leader article and the Membership Dynamic program—seeking volunteers to help the Academy in many areas—has been both refreshing and disappointing.

I have only been contacted by five Leader Members (LM) interested in the program and the number of mail and electronic replies to the Membership Dynamic is equally disappointing. On the other hand, the 160 folks who have responded are energized and willing to help. While I think Dave Mathewson and I both hoped for 300-400 Leader Members and into the thousands of general membership, we are grateful for the ones who have shown interest.

Each committee chair has been provided a list of volunteers for his committee and we should see committee membership firming up soon. I have selected Greg Minch, the information services director at AMA Headquarters, for my committee and have a

list of 10 LMs who listed the Leader Member Development Committee as their first choice. I am only looking for 3 members beyond Greg and do not want to duplicate district membership in the members, so I am reviewing the volunteers even as I write this, attempting to fill the committee.

If you are a volunteer for the committee and not selected to serve, or for that matter a caring Leader Member, we would welcome your input to the committee. I am just trying to keep committee membership down to make meetings easier to set up and conduct.

Greg is developing a forum for LMs to communicate with each other and the committee. It would be monitored to ensure it stays with its intended purpose of being



constructive and productive. I am also looking into the possibility of having AMA Custom Products develop logo apparel that identifies the wearer as a Leader Member.

As LMs, I ask each of you to be proactive in membership growth activities in your area, continue to search for areas where your Academy can serve the membership better

and help us ensure that the spread of information about Academy activities is accurate, not rumors. We sometimes make mistakes but never is that intentional and seldom is it discussed accurately and truthfully at all levels in all forums.

Thanks to those of you who have provided input and thanks in advance to those of you who will assist us in the future. →

A Note for Leader Members

Leader Members:

One of your most important roles for the Academy is ratification of proposed changes to the constitution and bylaws of the AMA. The Executive Council (EC) voted April 19, 2008, to send proposed changes to you for review and vote.

The committee spent months constructing the changes which have been discussed at several EC meetings. These are the first of several changes needed to our bylaws. Since you have not been asked to vote in recent years (I believe 1997 was the last time), I felt it was important to let you know that these proposals are headed your way and remind you that you are the voice of the entire membership in approving these changes.

Please take the time to review the proposals and then vote in a timely manner. Your packet will include some rationale for the changes and show the old and the new verbiage. Should you have questions, I recommend you contact your District Vice President. Votes received more than 45 days after issuance of the mail ballot cannot be counted.

Thanks,

Jim Rice
 District VIII Vice President
 Chairman Leader Member
 Development Committee



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Tips for Clubs continued from page 1

signature cards were never turned in to the bank.

Clue #3: The treasurer volunteered to run our biggest fund-raising event. This event generates large amounts of cash, and of course this was turned over to the treasurer for deposit in the club account. Nobody asked for a receipt for this cash, which later turned out to be a major problem when we had to prove how much money had been stolen.

Clue #4: As time went on and people would ask for the treasurer's report, he would report so much money in the account and everybody took him at his word. Then, some bills were not getting paid on time. When he was questioned about it, he would say that he sent the check but that he would check on it, and soon after the person or company would get paid.

Clue #5: The treasurer reported the club was running low on funds and that we should consider raising the dues. When he was questioned about this, he would say we have enough to pay the bills but if we kept spending the way we were, we could run out. Many of the older members started to question how this could happen given our past record of having substantial amounts of money in the bank and our spending habits hadn't changed.

Final Clue: In order to cover up the fact that he had stolen all the money and the accounts were overdrawn, he reported to the club that the State of Colorado had fined the club for our monthly drawing and they had seized all of our monies—more than \$15,000. It only took overnight for most of the club members to realize what had happened to the club money.

The next day we contacted the Denver Police Department who referred us to the District Attorney's office. I believe one of the smartest things we did as a club was to engage a criminal attorney who agreed to take our case, talk to the DA on our behalf, and file civil charges at the same time. Throughout the whole process he guided us as to what our next steps were and provided counseling as to what we could expect as the case proceeded through the justice system.

After a long investigation, the DA's office determined that a theft had occurred and that charges against the treasurer would be filed. Theft of more than \$15,000 in Colorado is a Class 4 felony. He was arrested and posted bond.

As president, and along with our new treasurer, we spent many hours going through bank statements and old records in order to prove what had been stolen. Just getting access to these records with the banks proved to be a big task because his was the only name on the account.

He pleaded not guilty and tried to say that

most of the charges on the debit card were for club activities. We again had to go through records to prove they were not club expenses.

In the end and after many months he did plead guilty and was sentenced to six years in state prison plus providing restitution in the amount of \$41,365.52. We found out during the trial that this was his fourth felony conviction.

The court also said that if he or his family could reimburse our club for \$20,000 they would consider reducing his sentence. He is still in prison and the club has received \$20,000. If and when he gets out he will be required to provide restitution of an additional \$21,365.52.

So what have we done? We now require two signatures on our checks: the treasurer and one other board member. At each board meeting the treasurer must bring the original monthly bank statement to the meeting and show it to another board member. We require that once a year our books are audited by someone outside the club.

This has been a learning experience for all of us who have been through it. If you are a board member of your club, you may come to the conclusion that we did. Just because you can fly an airplane doesn't mean you should be trusted.

Our club is fully recovered because of the generosity of all who have contributed money and time to make this the great club it is. We have the best field in Colorado and invite all of you to visit and fly with us any time you're in the state. →

Need Articles for your Club's Newsletter?

In the Archives section of the *AMA Insider Web* site you will find every issue of the *National Newsletter/Insider* published since 2003! It's a great resource for construction, safety, and how-to articles as well as hints, jokes, and cartoons all for you to use in your club newsletter!

Visit the newsletter archives
online at
www.modelaircraft.org/insider

From the Radio Control Club of Detroit,
Clinton Township, Michigan

One Way to Draw Plans Using CAD

by Ken Myers

I am finishing up my plans for a design I call Son of Swallow. It is based on a 1986 Fred Reese design, but it is not his Swallow. I have made many, many changes, but one of the major changes was the size, as well as structure, airfoil, incidence angles, and more. It was suggested that I might share how I got the original plans into my computer for use with a CAD program, so this is a short step-by-step of how I did it.

This process is best used with reduced-size plans, if you have a normal size scanner and don't like "stitching" things together in your imaging program.

To avoid any copyright problems, I am going to use a scale outline three-view, instead of a copyrighted plan, but the process is the same.

Get the plan or outline into your computer. You could scan it or find it on the Internet.

I cannot tell you how to use your imaging program or CAD program. If you have a basic knowledge of those two programs, you will be able to follow my directions.

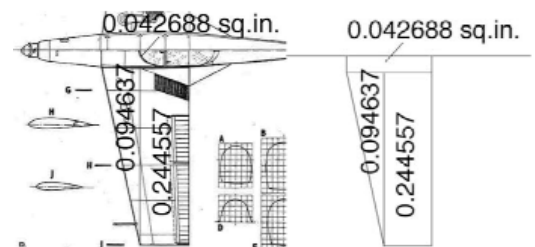
For reference, my imaging program is Photoshop Elements and my CAD program is CADintosh.

Step 1: Either scan the three-view/plan into the computer and save it to a format that your CAD program can import, or get a three-view/plan from the Internet. An Internet three-view/plan will most likely be in .jpg or .gif format and have to be changed by the imaging program into a format your CAD program can use.

Step 2: Open your CAD program and import the three-view/plan.

When I originally opened my three-view in the CAD program, I found that the fuselage top view datum line was off by about 2°. I opened the three-view in the imaging program and rotated it to the proper angle. This took several tries to get it just right.

Use the tools in the CAD program to compute the wing area of the original drawing.



Original shown on left and hidden on right.

please see **One Way to Draw...** on page 5

Covering Idea

by Vic Welland

Have you ever wanted a graphic or picture for your model but didn't want to spend a ton of money to have a custom sticker made? This technique, developed by Brian Ireland from the Frontier Fun Flyers of Alaska, allows you to have a detailed image made of several pieces, keeping them in their proper location to each other, while cutting them out and transferring them to your model.

Using your covering of choice, a piece of glass, Windex, razor or X-Acto blades, Glad Press'n Seal Wrap, and your normal covering tools, you can have the image you want with a steady hand and some time.

Let's begin by printing your image in the size you want on a regular piece of printer/copier paper. This is assuming your image will fit on a standard sheet of paper, of course. I recommend you start simple the first time out.

Spray some Windex onto the surface of the glass, be sure the glass is free of dust and debris to keep things clean and bump free. Remove the backing from your covering and lay it down on top of the Windex and glass. Squeegee the excess Windex out so you have a good bump/bubble free piece of covering to work on. Let things dry for several hours.

Tape the piece of paper with your image directly over the covering and glass while being careful to not move things around and wrinkle the covering.

Here is where a steady hand and time come in. Carefully cut out the image with your razor or X-Acto blade. It's a bit easier if you start at the top and work down while working on the small fiddly bits that need to be removed first.

Once you are satisfied that you have the image cut out you should be able to see what your piece(s) will look like as they are located on the glass plate.

Here is the cool part. Using a piece of Press'n Seal, cover your image completely and press it down with some form of straight edge (credit cards work great). Gently peel the whole thing off the glass. The Press'n Seal will hold your covering in location and allow you to move it to your model.

Again apply Windex to your clean, dust-free model followed by placing your Press'n Seal/image assembly in the desired location. Squeegee the excess Windex and bubbles out as you did when you put the covering on the glass sheet. Allow to dry for several hours.

After a reasonable period of time (overnight is recommended) using your heat gun on low heat, gently play the heat onto the Press'n Seal to get it to release from your model's covering and the covering your image is made of. You should now have your image securely located on your model and looking great! It's recommended that you go back over the edges with some trim solvent or acetone to ensure a good bond.

This idea has been condensed from several posts in RC Universe by Vic W. The thread can be found at http://www.rcuniverse.com/forum/m_686800/anchors_6867168/mpage_2/anchor/tm.htm#6867168.

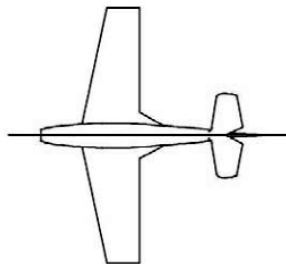
Watch the YouTube tutorial by Brian Ireland at <http://youtube.com/watch?v=8NhLZ-4V1pM>. →



One Way to Draw continued from page 4

You should note that I did not use the "triangle" at the rear of the wing going to the fuselage in computing the wing area for this example.

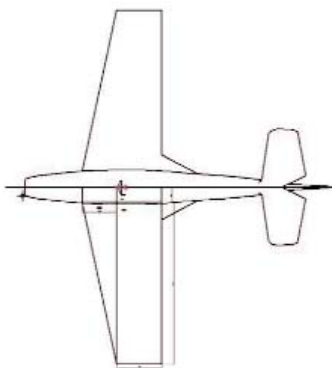
Step 3: Draw in all of the outlines only of the three-view/plan. Do not draw any structure at this time. Save the file with a name like outline-zlin526.



For this example, I only quickly did the top view, but all outlines should be in the outline file.

Step 4: After the original outline has been saved, do a Save As and rename the file something like zlin526-650 (where the 650 represents the desired wing area in square inches) so it can be used again to create different-size models.

To find the multiplier for the drawing, find the square root of the desired area 650, which is about 25.5. Next find the square root of the original area (0.763764), which is 0.8739359. Divide 25.5 by 0.8739359, which yields 29.172731 or 29.2 as the multiplier. Enlarge the enter outline drawing by a factor of 29.2.

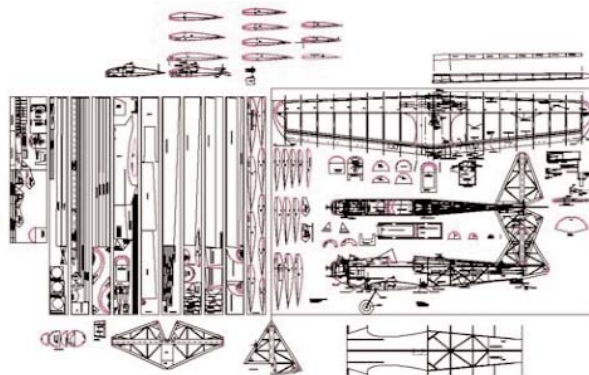


This screen capture shows the original drawing near the center and the outline enlarged by 29.2. It also shows that I checked and found the area to be about 652 sq.in., which is what I wanted.

Step 5: Add the structure. This is a long and tedious process! Be sure that you have read Keith Shaw of Southern Ontario's, *Talk to the Electric Model Flyers* to learn how to do model structure correctly. You'll find that four part document here:

<http://members.aol.com/kmyersefo/page3.htm#TOP>

Step 6: After hours and hours of drawing and thinking and thinking and drawing, print your plans and build the airplane. →



After weeks and weeks of work, you may have a finished plan and templates similar to this one for Son of Swallow.

Transporting Our Models

by Lou Tisch

Transportation of our models from the shop to and from the flying field is fraught with hazards. The model must be secured from moving, yet you need space for several models and equipment. As our models have increased in size, so has the challenge for safe transportation. Crates, shelves, tie-downs, and racks help solve this problem as does a purpose-built system for your vehicle.



I built a shelving system maximizing the space in my van to fit fuselages, wings, fully assembled models, as well as support equipment. I have a 12-foot bed in my van that lends to hauling model airplanes or anything necessary for my primary businesses. I designed this system so I can install it or remove it within roughly 30 minutes. This allows for maximum flexibility.

There are three rectangular modules for the shelving unit allowing for a platform from aft of the side doors to the back doors. Longitudinal 2x4s lock these units together and give them some rigidity. All units and tie-pieces are labeled for easy assembly when it's time to rig for flying.

The three preassembled rectangular units are first set into the van between the metal structural uprights. The longitudinal tie-pieces are then screwed into place. One large sheet of $\frac{3}{4}$ -inch plywood (approximately 78-inches long) and a couple smaller pieces are fit alongside the large piece, on top of the structural units and screwed into place. I add a couple of side pieces on top to keep airplanes away from the sides of the van. There is a front piece to prevent the airplanes from moving too far forward. Small 2x4s and 2x2s are screwed behind the forward piece to trap the wheels and several shot bags hold them in place.

I also installed a shallow shelf along the left side, directly inside through the side/cargo door and can anchor a model to that piece (the piece of pink-foam pad is anchored there right now). Just inside the cargo doors is plenty of room for my support equipment: field boxes, radios, anything else I think I will need at the field, as well as a few things I'll probably never need, but ... you never know. Fuselages are typically stored on the upper deck while wings are stored below wrapped in blankets; I still need to develop that rack system yet.

I now have the flexibility to haul anything from .40 size to 30% with ease and have the versatility to adapt this to any size model I choose in the future because I know large, scale, and biplanes are on the docket for 2008.

This entire system allows me to haul a bunch of stuff to a swap meet (for sale of course) or haul a bunch of airplanes and equipment back home (whether I've taken any with me or not), though I try not to come home from a swap meet with more airplanes than I took. →



Letter to the Editor

I was reading the March 2008 *AMA Insider* and would like to add my idea for correct aileron deflection when setting up the servos. This is too easy not to forget.

Stand behind your airplane with your transmitter on and receiver on. Hold a hand in front of you and make a fist with the thumb pointing up.

Rotate your fist in the direction you want the model to roll, say to the right. Your thumb will point at the aileron that should deflect up. Thus, thumb to the right, right aileron up. Thumb to the left, left aileron up.

This is infallible. This is the way pilots check aileron deflection with full-scale airplanes, especially if the aircraft has had recent work performed. I hope this helps.

Mike DaBiere
AMA 643070
Front Line Flyers, York, Maine

From the Windom Eagles Model Airplane Club, Windom, Minnesota

The Know-It-All Modeler

A very knowledgeable modeler with a know-it-all arrogant attitude challenged club members that he could answer any model related questions. For a small \$5 bet, he would go around and ask each member to ask one question. If he answered wrong, he would lose the bet. True to his words, he could answer all questions until finally no modelers would take up the challenge.

Always on the lookout for a new victim, one day the arrogant modeler came across a new novice member. "I challenge you that we will take a turn to ask model-related questions," said the modeler. "But because you are a novice, if I can't answer your question, I'll pay you \$100 dollars. But if you can't answer my question, you'll pay me \$5."

The novice just wanted to get on with his flying and refused the bet. However, after repetitive, annoying words from the arrogant modeler, the novice just wanted him off his back so he accepted the bet.

The novice asked his question first: "What airplane has five wings, three tails, and one aileron, fitted with only an O.S. 28 and can go up to 250 km/h?"

After a long thought, the arrogant modeler concluded for the first time, he did not know the answer and paid the novice \$100.

"So what's the airplane called?" asked the arrogant modeler.

"I don't know," said the novice. He handed over the \$5 and pocketed the remaining \$95 for himself. Then he got on with his flying! →

Tips & Tricks

Keep Your Parts in Place

Ever had the prop nut, washer, and propeller fly off while airborne? Ever heard that sickening "crack!" when you touch the starter to the engine and then spend the next hour looking for the prop nut in the tall weeds? Well, try this solution:

Put an o-ring on the end of the engine crank shaft after you get everything secured. It may keep the prop nut from spinning all the way off next time your engine decides to be cantankerous.

By the way, I hope you have been around long enough to know that propellers, especially the wooden kind, compress after being subjected to tightening down of the prop nut. That's why you see so many coming loose early Saturday morning at the field. What was tight for the last flight on Sunday ain't tight a week later. Check 'em!

—From the Beachmasters R/C Club, Ocean Park, West Virginia

Electric Screwdriver Drill Bits

I'm sure by now everyone has an electric screwdriver in his or her tool box, but did you know that you could also use these handy little devils as a drill? Sears, and I am sure other hardware stores, handle this item. What they are are different size drill bits welded to hex shank ends. You simply slip the hex shaft into any electric screwdriver and drill away. These are great for drilling in tight places or through delicate material. They are slow enough so you won't drill too far and powerful enough to drill through most materials.

Small Spring Clamps

Another item I found at Sears was small spring-loaded clamps. Besides clamping stuff, I use these and a couple strips of wood to center rudders and elevators. Simply place two strips of wood across the elevator and stabilizer: one on top and the other on the bottom. Clamp

them in place. Center your servo arm and connect the control rod from the elevator to the servo arm. Tada! The elevator is now centered with the servo. Repeat on the elevator.

—Both from the Prop Masters R/C Club, Downers Grove, Illinois

Engine Oil Removal

Another way to clean baked-on oil from an engine is to boil the stripped parts in a pan of water with a handful of clothes washing powder. It does a great job, but smells horrible!

—From the Endless Mountains R/C Flying Club, South Montrose, Pennsylvania

When a Little Makeup Will Help

A lot of us weigh and grade our balsa when we bring it home. Like a lot of modelers, I'll use a pen or magic marker and write the weight of the sheet in grams, and the density in pounds per cubic foot on one end of a 3 x 36 sheet of balsa. Every now and then I won't notice the black mark on the back side of the strip of balsa or on a former or rib until it's glued into place. My experience is that those marks are tough to sand out.

Reader Mike Moskow in Maryland builds beautiful rubber scale models. He has a solution for those black marks in the wrong places. He suggests that you go to an art supply store and get a tube of titanium oxide white artist's paint. It will cover all other colors and when dry, is a near match for balsa.

He says that you can use it to cover laser burns as well. Using it for that purpose may save you a lot of time expended in either bleaching or sanding the laser burn off kit parts. But you'll still need to sand the laser burn off the joint areas because glue doesn't stick as well to the laser-burned material as it does to bare wood. Using the titanium oxide should speed construction on laser-cut kits.

—From the Southern California Ignition Flyers, Glendale, California

You are Invited to Attend the 2008 AMA Nats!

The 82nd annual National Aeromodeling Championships (Nats) begins with Indoor FF in Johnson City, Tennessee, May 28, 2008. The Outdoor Nats quickly follow beginning July 7, 2008, at our International Aeromodeling Center in Muncie, Indiana.

To register for the events, go to www.modelaircraft.org/events/nats/entryforms.aspx to download an entry form or call (800) 435-9262 ext. 224 or ext. 293 and we will mail you a copy.

We hope to see you there!

Sincerely,
Nats Management



AMA Vision

We, the members of the Academy of Model Aeronautics, are the pathway to the future of aeromodeling and are committed to making modeling the foremost sport/hobby in the world.

This vision is accomplished through:

- Affiliation with its valued associates, the modeling industry and governments.
- A process of continuous improvement.
- A commitment to leadership, quality, education and scientific/technical development.
- A safe, secure, enjoyable modeling environment.

AMA Mission

The Academy of Model Aeronautics is a world-class association of modelers organized for the purpose of promotion, development, education, advancement, and safeguarding of modeling activities. The Academy provides leadership, organization, competition, communication, protection, representation, recognition, education and scientific/technical development to modelers.

ABOUT THE *AMA INSIDER*:

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