



PRESIDENT TO PRESIDENT

Club Suggestions to Benefit Everyone

by Dave Mathewson, AMA President

I hope all of you newly elected club presidents are getting settled in to your first terms. For those of you starting another year as a club leader, I hope things are going well for you also.

I had an interesting E-mail exchange recently with a relatively new member who was just getting involved in model aviation. This was an older gentleman who, throughout his life, had been involved in several different associations as well as belonging to a number of different clubs. Almost all of these groups were outside of the aeromodeling discipline.

When he decided he wanted to give model aviation a try he, like many of us when we started, sought out a local club, one that would provide him with a place to fly, offer the

camaraderie of others who share similar interests, and probably most importantly, would be a resource for help and expertise that he could take advantage of to allow him to become a successful modeler.

The results of his search were so surprising that he decided to write. As he visited various clubs and met their members, he found the environment he was experiencing was different than what he was accustomed to.

He was used to club meetings that had large member turnouts, notable guest speakers, programs of interest to the members, and some even had monthly dinner meetings where club business was conducted. He was used to club events in which the vast majority of the membership participated. All of these activities

led to, in his eyes, a greater level of interest and member involvement in the club.

Giving this some thought, I think I can understand what this member was saying.

Quite often I've had club officers ask what they can do to increase attendance and involvement not only at their general meetings, but also with the various other activities and events the club holds throughout the year. I think it's safe to say that most club officers want their clubs to be active and successful and are always looking for new ways to accomplish this.

I also know there are a number of clubs out there that have been very successful in

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TIPS FOR CLUBS

Is Your Flying Site Ready for the Season?

by Ashley Rauen, AMA Insider Editor

Winter's finally moving on and spring is moving in. I'm sure many of you have spent your time indoors and out of the cold developing new creations to impress fellow modelers and yourself this upcoming season.

Your model is ready, but is your flying site?

For those with club's that are located in the colder parts of the nation, winter storms can do significant damage to a field. On the other hand, warmer states endure the rainy season and high waters—also damaging to flying sites. The field may look okay at first glance, but it's the small details that make a site nicer and safer.

Here are some things to look for when preparing your flying site for the 2008 season:

- Are there fences surrounding your flying site? When snow accumulates, it can be quite heavy. Abundant frozen snow sitting on a fence can quickly wear it down and cause separation or breakage. Walk the fenced areas around your flying site and check for holes or places where the fence may have fallen down. A quick mend can enhance the appearance of the site as well as keep wandering critters from getting too close to your models.
- Check the runway and surrounding areas for holes or loss of terrain. Bald spots in grass or dips in the ground are unappealing and leave uneven surfaces that can cause injury if an individual is not watching his or her step. Take the time to lay grass seed in worn areas or fill in holes with loose dirt. If your site uses a paved runway, look into recovering the damaged areas or speak with your site owner about the possibility of repaving. It may mean a fundraiser for your club, but a smooth surface to taxi your new models is worth it.
- Are there trees on or around your site? While they may not be near your flying area, trees can affect your flight. Broken limbs and twigs can become airborne in high winds. They can easily damage property or possibly cause injury. Inspect around the tree line for any loose branches that can be removed from the area.

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Safety Reminders for the New Season

by AMA Staff

AMA would like everyone to have a safe flying year with no accidents. Here are some items that might help in that regard.

The first is the use of Li-Poly batteries in our models. If you are flying electric airplanes with Li-Poly batteries, it is highly recommended that a fire extinguisher be kept in your car. Fire caused by Li-Poly batteries can happen through a shortage, improper charging, or crash damage. Standard household extinguishers (Class A, B, C or a combination of these) will not put out a lithium fire. Rather, it can increase the blaze. Class D extinguishers (metal/sand) are the only type capable of putting out flammable metal.

If a class D fire extinguisher cannot be obtained for your vehicle or flying site, at the least, keep buckets of sand ready and available should a fire start. (The sand *must* be dry because water reacts with lithium fires to make them worse.)

Second, remember to cycle the batteries in transmitters and airplanes to ensure they are up to par. Airplanes can go down because either the transmitter or the flight pack batteries have failed. If you should by chance get your airplane to respond long enough to land, do not taxi back toward the pits. Get it down and kill the engine. A running airplane with dying batteries is little more than a loaded gun waiting to go off and injure someone.

Most folks have a winter project that is now ready for a test flight. New airplanes mean new additions to the transmitter. Remember to

always check to ensure it is the correct one for the airplane. Always look to see that the control surfaces are moving in the correct direction when you are ready to taxi out. Also, as a new project, make sure it has been finished with your name and address or AMA number.

Lightning produced by electrical storms can travel amazing distances. If you are flying and should see lightning in the distance, just think of that radio antenna as a lightning rod. Lightning has been known to come 10-20 miles across the sky and strike a person just standing there—and that is without a 3-foot lightning rod in his or her hand.

Engine failure on takeoff is a common occurrence. Every time, when you taxi out, always think, “What am I going to do if the engine quits?” Remember that the best way to land is into the wind and with the wings level. If that means a walk out in the weeds a couple of hundred yards to get your airplane in one piece, that’s much better than taking a broom or shovel out to the middle of the runway to scoop up the pieces.

Lastly, it is strongly recommended that members do not fly alone. In a hobby where things can go out of control with the slightest of error, potential dangers are not far behind. It’s helpful to have an extra set of eyes to watch for any interferences or problems the pilot may not be able to see while following his or her model. Better to be overly prepared than under prepared. At the very least, you have a buddy to talk to and show off for! →

Want to Work for *Model Aviation*?

Now Hiring: Assistant Editor

The Academy of Model Aeronautics (AMA) and *Model Aviation* have an immediate opening for an Assistant Editor. This is an exciting opportunity for an aeromodeler with training and experience in reporting, writing, editing, and photography.

This is a full-time position based at AMA Headquarters in Muncie, Indiana, and will require some travel including attendance at aeromodeling events and industry trade shows. Other responsibilities will include assisting in the planning and development of editorial content for *Model Aviation* and its online supplement *Sport Aviator*, with a special emphasis on AMA events, activities, and programs.

Education, skills, and experience required:

A bachelor’s degree in journalism, communications, English, or public relations is preferred, although equivalent experience will be considered. Knowledge of aeromodeling with an emphasis on Radio Control is necessary along with a willingness to learn all facets of the sport over time. Experience reporting, covering events, writing, editing, and a strong knowledge of photography and digital media is required. Knowledge of Web-publishing programs and methods are preferred. Compensation will be based on experience.

Deadline for submissions is April 15, 2008. Send cover letter, résumé, work samples, and three references to:

Academy of Model Aeronautics
Director of Human Resources
5161 E. Memorial Dr.
Muncie IN 47302

AMA is a non-profit, 501(c)3 corporation with headquarters in Muncie, Indiana. AMA is the largest sport aviation organization in the world.



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- Do spectators spend time at your field? If so, it is assumed that some form of seating is available to them. Take an inventory of all your seating surfaces. Do any of the chairs have broken legs? Are there any exposed nails sticking out of that picnic table? Sometimes a quick coat of paint can work wonders in turning that scratched and dented equipment into a welcoming visitor area.
- Take inventory of all signs posted at your site. Have some fallen down or been damaged by the harsh weather? Are the signs still legible or do they need to be remade? Signage at a flying site is very important; treat your signs as such. Additional or new signs and posters for Safety and RC Frequency can be purchased through AMA for a small fee. Contact the AMA club secretary (ext. 291 or loism@modelaircraft.org) to order.
- Lastly, what is your club’s first aid supply like? Have supplies been used that were never replaced? Check all dates on supplies that can expire. Throw away anything past its expiration date and restock. Never use medical supplies that are past the date of expiration. There is no guarantee that they are still of quality.

The list can go on and on. Each club has a different flying site and appearance it’s accustomed to. It’s important that clubs take the time to evaluate their site property and make sure everything is safe and in good form.

Remember: AMA and its members take pride in model aviation; the flying field is an extension of this pride. →

Be an Involved AMA Leader Member

by Jim Rice, District VIII Vice President

Dave Mathewson asked me to chair a new committee to study utilization of our Leader Members. Our Mission Statement: The AMA Leader Member Committee is tasked with developing new and creative ways to communicate with and utilize the diverse education, motivation, and talents of our Leader Members. This potential volunteer force represents nearly 3,000 members who could benefit the Academy and the general membership.

This four- to six-member committee will be forming by the time you read this. I will represent the Executive Council and be the communication conduit to the council. There will also be between two to four Leader Members from various districts and one AMA HQ staff member. This “think tank” of creative people will be interested in the future of AMA and devoid of personal agenda.

The first order of business in trying to improve communication was to get this *AMA Insider* in the hands of Leader Members. We will try to develop an easy way for you to communicate your input directly to the committee by the next issue of the *Insider*. Meanwhile, please provide your ideas and input to your district vice president (VP) or directly to me at District8VP@SATX.RR.com. Obviously, if I am inundated with input—and I hope that I am—I won’t be able to answer every single E-mail, but I can promise that I will read them all.

Here is a quick review of what a Leader Member is, how to become one, and what I see as the difference between a local club leader and an AMA Leader Member.

Leader Members are introduced in the AMA bylaws: “LEADER MEMBERS. Those Open members who have demonstrated an above-average interest and/or participation in AMA matters and who qualify in accordance with Executive Council-approved requirements.” An amendment thereto says “... The Leader Member is the most important of membership categories in terms of the operation of the Academy ... There is a provision in the bylaws which gives the Leader Member the right to vote in such cases as bylaws changes. Nominating procedures

for national officers also require that a nominee be a Leader Member.”

The bylaws also require that associate vice presidents (AVP), appointed by district VPs, be Leader Members.

Leader Member applications are available at AMA HQ, or on the AMA Web site (PDF 907). Applicants must have three current Leader Member references, or three Open member references and endorsement by a district VP or AVP.

An adoption to the bylaws states: “The Leader Member is the highest level of membership and as such will be noted on the membership card.”

Clearly, the intent here is to utilize our Leader Members much more than in the past.

I see a significant difference in the local club leader and a Leader Member:

1. You don’t have to be a Leader Member to be elected to a club office.
2. You don’t really need to have any interest in the growth of AMA or its smooth operation to be a club officer.
3. Some club officers only keep their club affiliated with AMA for insurance reasons and are not interested in the growth or programs of the AMA.

Leader Members provide administrative, scientific, or industrial contributions to the Academy and help in the passing of information from AMA to the local club level. Their interest, by the nature of the membership category, is to enhance and improve the AMA. They should champion the AMA and its efforts at the grass-roots level.

I hope this generates a lot of fresh, constructive thinking and provides the committee with valuable input upon which to build ideas and programs. I will update you on our progress in the next couple of issues of this column. →

President to President

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generating a level of enthusiasm in their members. It makes them want to be a big part of the club and not only take part in many of the club functions, but play a role in organizing those functions.

I see an opportunity here where maybe we can help each other by sharing some ideas. It’s probably safe to say that almost all of our clubs have found, over the years, one or two things they do that have made their club a better organization. Why not drop me an E-mail at dmathewson@mindspring.com and share those ideas?

I’ll use some of them in future columns in the *AMA Insider* so that what’s worked for you can be shared with all of our other chartered clubs. It’d be a great way to help give another club that could use it a needed shot in the arm. →

From the Woodland Aero Modelers, Downers Grove, Illinois

Cyanoacrylates

by Vince Ziegenbein [Internet Article]

Tech Editor’s Note:

It turns out that there is a downside to the use of cyanoacrylate glues. Inhaling the fumes given off when the material polymerizes can sensitize someone. This can lead to an allergic or allergic-like reaction, resembling severe asthma, in which the lungs may even shut down. The specific allergic reaction to cyanoacrylate fumes may be what’s called, anaphylactic shock, which is a dire situation. Cyanoacrylate should never again be used by someone who has already had an allergic reaction to it; the result can be fatal. A positive ventilation system, dispersing the vapors away from yourself or anyone else, is vital in preventing any harm.

Cyanoacrylate glues are reactive monomers that chemically link (polymerize) when pressed into a thin film. The very thin layer of water moisture present on most surfaces acts as an alkali, or weak base, which is the catalyst that results in bonding. However, the presence of detectable amounts of water usually degrades the performance of cyanoacrylate glues.

The thinner variety of cyanoacrylate glues have a water-thin viscosity that wicks deep into joints by capillary action and cures in a matter of seconds. Surfaces to be bonded must be tight fitting and should be held together while you apply the cyanoacrylate glue around the edges of the seam. At the moment cyanoacrylates cure, they give off a vapor that can irritate the nose and eyes, so be prepared. Thin cyanoacrylate’s work well on balsa because they penetrate into the wood and form more than just a surface bond.

Tech Editor’s Note:

If cyanoacrylate fumes are allowed to mix with the atmosphere and be diluted, all negative effects cease. The point at which you become allergic to the fumes is highly individual and can happen without any warning. Best is to always ventilate!

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Searching for Scale on the Internet

From Bill's Corner in *Postive Incidents* newsletter

You want some documentation for a Scale model? In the past, that meant digging into your collection of pictures and drawings from magazines. If that didn't provide you with enough information, then you had to look for a book on the airplane. Hopefully, you could find one in print and for a reasonable cost.

If you're looking to build a model for Scale competition, you'll still need to get some form of official printed documentation. For the 99% of us who are really just building for our own satisfaction, there's a lot of material available on the Internet—both for free and for pay. The problem is in finding that material. Then, once you've found it, what do you do with it?

I'm not going to try to list commercial sites that sell documentation, nor sites that provide free files. If I did make a list, I guarantee many of the sites will have closed down or changed their addresses by the time you get to reading it. That's the way of the Internet.

Let's start by setting a few ground rules:

1. I'm not going to tell you how to do anything illegal. There's enough free stuff out there, so there should be no reason to steal anything.
2. I use Microsoft's Internet Explorer (IE). Yes, there are other good Web browsers out there, but Internet Explorer is the one I use in my day job as a computer technician. That's what I'm the most familiar with. Likewise, I use only Microsoft Windows at work, so that's what we use at home. I have no experience with Firefox, Apple, and so forth, so I'm not going to claim I'm competent to discuss them.
3. When you surf the Internet, you are roaming through a wild and uncontrolled place. Make sure you run a virus scan on anything you download.

Searching

I like to use Google as my first search engine (a search engine is a Web site that you use for searches). After I've exhausted it, I'll go to Dogpile, Jeeves, Yahoo, or another such engine. Why use multiple engines? Because not all search engines give the same priorities to each Web site. A site that's at the end of one search engine's list may be at the top of another one's.

There are some differences in how you phrase searches for each engine, but usually "punctuation" is consistent. Here are what I consider the most important bits of punctuation in an Internet search:

1. The + (plus) sign shows phrases or terms that *must* be found.
2. The - (minus) sign shows phrases or terms that indicate a site you don't want to see, even if the term you want to see is on it.
3. Quotation marks show phrases you want searched for or to contain words with spaces, minus signs, dashes, or plus signs.

Let's assume I want information on a Piper Cub. If I put the

following into Google: +cub, I should get back every site with information about the J-3, provided that site includes the word Cub on it. Of course, I'll also get every site that mentions baby animals, the Chicago Cubs, Cub Scouts, and so forth. In fact, when I ran a Google search with that command, I got 1,380,000 sites—bit much to look at.

How do I get rid of the ones I don't want?

That's where the next piece of punctuation comes in, the - (minus sign). I have to put that sign before some keyword that explains what I don't want. So, my search would now be: +cub -Chicago -baby -scouts.

This command tells the search engine to find every Web site with the word Cub, and also ignore any site that contains the words Chicago, Baby, or Scouts. Also note that there is no space between the + or - signs and the words that follow. This is important. Spaces tell the search engine where one term ends and another begins.

Will this get rid of every unwanted site?

Nope. My test search still turned up 16,300 sites. Why? Because there are a lot of other uses for the word Cub. You can either keep adding "-whatevers," or else you can just skim through what you get.

You can try another technique to restrict the search: quotation marks. Most search engines will only look for the complete phrase contained within the quotes, and they will only look for those words in that specific order. Also, you must use quotation marks if there's a blank space anywhere in a term you're looking for.

Let's look at some examples:

My first search is for: +Piper +Cub. This searches for every site containing the word Piper and every site containing the word Cub. On Google, that gave me 647,000 possible sites. Everything from bagpipes to tiger cubs; too much!

So, let me rephrase my search to use quotes: "Piper Cub" (Note that we don't really need the + symbol if there is only one term in our search. Makes sense, right?)

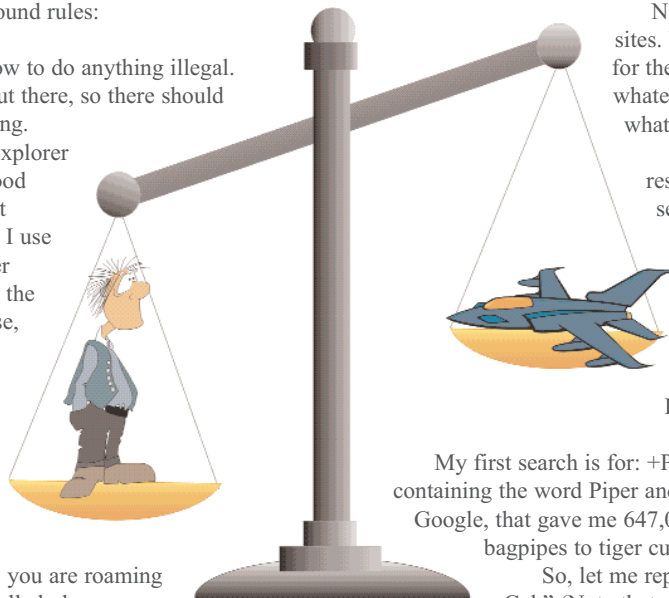
That gives me only 303,000 sites to look at. Why so many? Because the term Piper Cub is commonly used to designate any small airplane. We need to thin it back down.

"So," you say, "I see. All I need to do is make 'Piper Cub J-3' my search and I'll get just what I want." Well, that particular line gives us 10,800 possible sites. Why so many? Because it includes full-scale and model J-3s, plus books, movies, and so forth.

You may also notice your search engine ask if you really mean "J-3" and not "J3". So, let's try the same search, but without the dash between the J and the 3.

Hey, it only returned 8,870 sites this time. Why? Every airplane person knows J3 and J-3 are the same airplane. Yes, but computers are very literal. The better search engines will try to figure out what you are asking for, but they can't always do so. Not only that, but let's try asking for the following: "Piper J-3 Cub."

We should get the same number of returns as "Piper Cub J-3", right? Nope. We get 69,900—almost seven times as many as the first time. Again, it's that literal-mindedness of the search engine. It is looking for the exact set of letters and numbers, in the exact order as you put in your request. Think about it. We know that John Smith is the



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Has This Ever Happened to You?

by Bob Kugler

You're flying your favorite airplane. You're doing the maneuvers that you've done a hundred times before. The weather is perfect. The wind is steady, light, and blowing in your favorite direction. You are having a great time. You couldn't feel more comfortable.

Then, without warning, your old friend develops a mind of its own. While doing a simple, straight, and level flyby, your airplane throttles up. It rolls over and spins into the ground. Something has gone seriously wrong.

Your first thought is, "I've been shot down!" This may or may not be true. After you have had time to regroup and analyze the situation, you may be able to determine the actual cause of the crash. A postmortem is always worth doing so you can prevent the problem from recurring.

What are the possibilities?

1. Someone turned on a transmitter on your frequency.
2. Outside radio interference.
3. Receiver battery failure.
4. Transmitter battery failure.
5. Radio failure.
6. Receiver switch failure.
7. Mechanical failure.
8. Pilot error.

My limited experience has shown that most airplanes are lost as a result of mechanical or electrical failure (items 3, 4, 5, 6, and 7). Next comes pilot error. This includes letting the airplane get too far away, losing it in the sun, getting confused while inverted, stalling the airplane too far away, throwing the wrong switch on your transmitter, or simply trying one too many turns while dead stick.

The least frequently seen cause of RC airplane crashes is radio interference (items 1 and 2). Yet this is the one we think of first. This is probably because it is one of the few causes that we can blame on someone or something else.

Here are some things you can do that may prevent these problems:

1. When installing the switch harness in your model, you may want to locate it inside the airplane. Cut a piece of thin music wire so, when bent to shape, it will extend from the switch to the outside of the airplane. This will help the switch stay clean and oil free.
2. When installing the radio in your airplane, shield the receiver and battery from vibration by wrapping them in closed-cell, high-density foam. In time, vibration will loosen the internal electronics of an unprotected radio. Prolonged vibration can also cause a short in an onboard battery. While you're at it, make sure your servos

are shock mounted by using the little rubber grommets and sleeves that come with the radio.

3. Before you assemble your airplane, make sure the servos, battery, and receiver are secure. Ensure all radio connectors are in place. Check the control surfaces for excessive play, cracks, or binding.
4. The connection between the antenna of your transmitter and the transmitting module in your transmitter must be solid, so check to see that the link is proper.
5. Walk the flightline and pits. Check to see who is sharing your frequency. Let them know you are there and ask them if anyone else is using the channel. Don't assume that everyone uses the board when flying. You may run into a new person who is not familiar with our system, or you may find someone whose tag fell off the board.
6. Use the frequency control board.
7. Always do a preflight inspection of your airplane.

If you use an ESV to check your receiver packs remember to leave the ESV connected for at least 30 seconds to get an accurate reading. I have tried this and have seen the needle drop. If the battery is weak, it will show up here.

Check to see that all controls are working and in the right direction. When I first started, I could not remember which way the ailerons were supposed to work until I started using a catch phrase. When I test my aileron, I push the stick to the right and watch the right aileron. I say "right up" to myself. If the right aileron moves up, it's working correctly.

Check the meter on your transmitter. These batteries are reliable, but they do sometimes fail.

People who faithfully check their receiver batteries sometimes forget to glance at the transmitter meter. Range check your radio system. This is rarely done, but it can uncover an otherwise undetected problem. It should be done with the engine running so, if any of the radio components are loose, the vibration may cause it to act up.

Test to see if another transmitter is turned on. This can be done by turning on your transmitter and receiver. Move the sticks to the corners, much like you would when performing a snap roll. While holding the sticks in that position, turn off your receiver switch. Next, turn off your transmitter. This will leave the ailerons, rudder, elevator, and throttle off center. Turn on the receiver switch. If the control surfaces should center themselves or begin to twitch, your receiver is getting hit by another radio or some sort of outside interference. Do not fly!

If you are already flying and your airplane starts going crazy, hold your transmitter as high as possible. Notify everyone on the flightline that you are going on the field. Run toward your airplane. If you can get your transmitter closer to the receiver in your model, it may provide a strong enough signal to override any interference. I have seen this technique used several times by our chief instructor, Joe Felonk. It works. →

Strokes: What to Look For

Although unable to find and credit the original source, the following knowledge of first aid is always helpful. The simple steps outlined might save a life or lessen later complications. None of us is getting any younger. Spread this around as you see fit.

Stroke Identification:

A neurologist says that if he can get to a stroke victim within three hours he can *totally* reverse the effects of a stroke. He said the trick was getting a stroke recognized, diagnosed, and then getting the patient medically cared for within three hours, which is tough.

Recognizing a Stroke:

Remember the "three" steps, S.T.R. Read and learn!

Sometimes symptoms of a stroke are difficult to identify. Unfortunately, the lack of awareness spells disaster. The stroke victim may suffer severe brain damage when people nearby fail to recognize the symptoms of a stroke.

Now, doctors say a bystander can recognize a stroke by asking three simple questions:

S: Ask the individual to smile.

T: Ask the person to talk and speak a simple sentence coherently. (i.e. It is sunny out today.)

R: Ask him or her to raise both arms.

If he or she has trouble with any one of these tasks, call 999/911 immediately and describe the symptoms to the dispatcher.

New Sign of a Stroke

Another sign of a stroke is this: Ask the person to stick out his tongue. If the tongue is crooked—goes to one side or the other—that is also an indication of a stroke. →

A special thanks to David Mills of the Thermal Thumbers of Metro Atlanta for providing this information.

same guy as Smith, John, but a computer can't make that connection.

So, plan to make multiple searches, with little variations each time.

Before you think I'm crazy telling you to do all of these searches, let me tell you some tricks to save not only the Web sites you find, but the searches themselves. Now, I will remind you that I only work with IE, so my instructions will relate to it. The other Web browsers all should have similar functions; I just can't tell you how to use them.

1. Create a file folder somewhere. I like to put it on my desktop, for example. Label it so you know it has to do with what you're looking for. When I start a project, I label the project with the name of the airplane I'm looking for, i.e., Cub.
2. Open your Web browser and do a search.
3. If the search results look good, click on "File," then "Send," then "Send shortcut to desktop." The link it sends to your desktop will contain the results of your search.
4. Minimize your browser window.
5. Rename the shortcut to something helpful (i.e., the search phrase you used "Piper Cub").
6. Drag the shortcut you've just created and drop it into the Cub folder. Now, you can open that folder and rerun that search at another time.
7. As you go through sites you find interesting, use the same method to create links to those sites and save them.
8. Create more folders, or subfolders, for pictures, paintings, and 3-views you may want to use.

I recommend doing it this way, instead of making sites "Favorites," because this way you don't clog up your Favorites folder.

Okay, let's tighten up our searches and start looking for something more specific. Let's say, you have pictures, but you want a good 3-view. So, let's try to look for 3-views: +"Piper J-3 Cub" +"3-views."

That gives us 56 sites to look at. Just to be safe, let's also look at leaving out the minus sign in "3-views" and see what we get: +"Piper J-3 Cub" +"3views."

How about nothing? No sites found. Again, it's that literalness.

So, let's try putting a space between the "3" and the word "views" +"Piper J-3 Cub" +"3 views."

Hmmm, 13 returns; better. But, we've missed something.

Remember, I said the search engine was literal? Let's try another shot at +"Piper J-3 Cub" +"3-views," but leave out the "s" in views. +"Piper J-3 Cub" +"3 view."

Wow, 257 returns instead of 56! Think about it. Both the word "view" and "views" contain the word "view", but only "views" contains the word "views." Leave off the plurals.

Hang on, I've got one more 'gotcha' for you ...

Most of the sites on the Internet were set up by amateurs.

Sometimes, their enthusiasm far outweighs their typing skills. Just for fun, let's try changing our earlier search to one for "Pipper Cub." Would you believe 453 sites have the misspelling on them? That's 453 potential sites for useful information about an airplane you may want to build.

Where misspelling really becomes important is when you're doing a harder-to-find model, especially one made in a foreign country. Worst of all, one made in a country that doesn't use the western alphabet. Are you sure you spelled Messerschmitt right? How about Polikarpov? Worse yet, did the person with the Web site spell it the same way you did? If you aren't sure you're doing it right, do multiple searches, using slight variations each time.

One final tip about searching: If you know the "N" number of a particular airframe, you can search for that. You may be lucky and get some good information from it. →

Molding with Carbon Veil

by Jim Varno

It seems as though technology is advancing so quickly that no one can keep up. Sometimes one gets discouraged because just when you get good at one aspect of modeling, the products are no longer available or new techniques are being used. Each change requires new skills that must be learned.

I have found that the old ways of building still work and it is easier to pick and choose which new building skills and materials you can incorporate into your way of building. The key is to keep an open mind and be willing to change to what will make your building easier or better without compromising quality.

One such technique I have learned is using carbon veil and molding to replace carving and hollowing out balsa blocks. Carving out the top block on my Cardinal took several days and a very light, 4-pound balsa block—which is almost impossible to get these days. The new method is as follows:

1. Cut and sand a piece of pink foam to the shape of whatever you want to make (like the top of your new airplane or a wing tip, etc.).
2. After the part is finished to size, reduce it in size by $1/16$ inch on the top and sides (or $1/8$ inch if using $1/8$ -inch balsa).
3. Soak your balsa sheet in ammonia for a few hours until fully soaked in ammonia. Use light, A-grain balsa.
4. Place the wet balsa over the foam form and wrap from one end to the other with an Ace bandage. Set aside to dry overnight at least.
5. Unwrap the Ace bandage and you will have a molded balsa shell. Now place the shell back on the mold and repair any imperfections in the balsa.
6. To give the strength to the shell, lay a piece of wax paper on your bench a little larger than the inside of your molded balsa, and place the carbon veil on the wax paper.
7. Cover the veil with a thin film of slow-curing finishing resin and squeegee the excess resin off with a flat piece of plastic or old credit card.
8. Place a piece of wax paper over the veil, and from the center out, use the plastic card to remove almost all the resin working it out to the sides. You can't take off too much, because you only need enough to stick the veil to the balsa.
9. Next, remove the top piece of wax paper from the carbon veil. Place the veil on the foam with the bottom piece of wax paper down on the foam, and place the balsa shell over the veil. Again wrap the shell, veil, and foam together with the Ace bandage. (I also place wax paper between the balsa and the Ace bandage to keep any resin off the bandage.)
10. When the resin has hardened, remove the wrap and balsa shell from the foam. The veil now will be attached to the inside of the balsa and the unit will be extremely strong and light, ready to glue in place.

This method may seem complicated but it is actually faster, stronger, and easier than carving out a block. →

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* published since 1998! 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
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How to Make an Aircraft Stand for Less Than \$8

I'm sure everyone has seen the blue foam aircraft stands at flying fields on occasion. To me, they looked pretty good and obviously did the job. I figured they were pretty inexpensive as they are just three pieces of molded foam. Off to the hobby shop to get one, there on the shelf was my prize of molded blue foam. I check the price and whammo—\$30 for some foam!

I figured \$10, maybe \$15. But clearly I was a victim of sticker shock. There I was deciding if the convenience was worth the money or if I should come up with something myself. Maybe it was the cheapskate in me or the thought that I could do it better, but I put the foam one back. Here is my design: total cost less than \$8.



Tools Needed:

- Hacksaw or plastic-pipe cutter
- Drill (preferably a drill press)
- A 1-inch drill bit

Parts:

- One 5-foot and 3/4-inch Schedule 40 plastic pipe
- Two 3/4-inch plastic crosses
- Four 45° plastic elbows
- One package 3/4- or 1-inch foam pipe insulation
- One bottle plastic-pipe glue
- Four 2-inch wood or sheet metal screws

Start by cutting the pipe to dimensions out-lined below:

- Eight 5.5-inch sections
- One 4.5-inch section
- One 21.25-inch section
- Cut the 4.5-inch piece in half length wise.

Drill a 1-inch hole in the center of each plastic cross. Do not drill all the way through; just through one side. Enlarge the hole a little by wallowing the drill bit. Test fit a section of the pipe to ensure a snug fit. If the fit is too tight it will crack the cross.



You should now have a kit that looks like this:

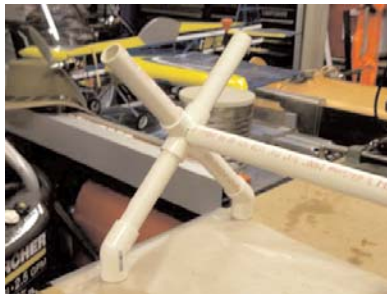


Time to start building.

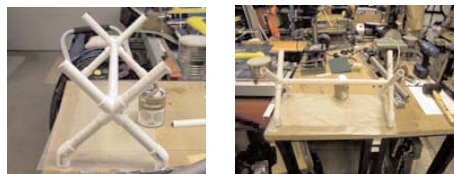
Glue the 5.5-inch pipe sections into the bottom two points of the plastic crosses. Then glue the 45° elbows to the bottom of the pipe sections to make the feet. Make sure the elbows are straight and flat to each other. Then glue the remaining 5.5-inch sections to the remaining two holes in the plastic crosses. Do not use the hole that you drilled in the previous steps. Make two of these.



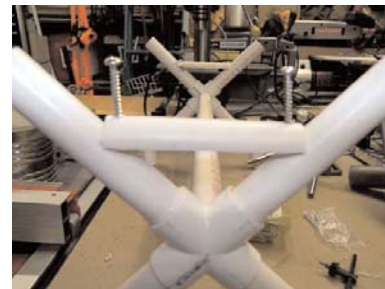
Take the 21.25-inch pipe and insert it into the hole that you drilled in one of the crosses. Gluing this piece is optional dependent on how snug the fit is.



Do the same at the other end of the 21.25-inch pipe section. It should look like the pictures.



Now take the 4.5-inch sections of pipe and center them into the top of the crosses. Drill a hole on each side to fit your screws and screw them into place. Do not tighten too much; snug is just right.



Once you have these placed, it's time to put the pipe-insulation foam in to hold the airplane in place. Cut the foam to fit your cradle, and place it on top of the cradle as shown in the picture. You can either glue it in place or put tie wraps at the ends. Now it's all done!



Options:

- You can add two small bungee cords to hold your airplane in place.
- Ace Hardware has rubber-cane feet that can be put over the elbow feet of your stand. 1 1/8-inch size fits snugly. →



Tips & Tricks

Any Old Bikes Lying Around?

A good thing to use for pushrods are bicycle spokes. You can find old used wheels for next to nothing and take out the spokes. They are threaded and come in different sizes.

Instant Gap Filler

To fill small gaps, instead of filling with the usual putties and waiting for them to dry, place some medium CA in the gap. Then place a small amount of baking soda on and watch it set before your eyes. It is the strongest fill I have come across and is instant.

—both from the *Beachmasters RC Club, Ocean Park, Washington*

Sandbag Weights

Fill plastic Ziploc bags of various sizes approximately $\frac{3}{4}$ full of fine sand and seal each well. Use these to hold down large parts of your airplane, such as wings, while

building. The sand conforms to the shape of the parts. The bags also work well when gluing sheeting.

—from the *Orbiting Eagles, Omaha, Nebraska*

Cutting Corners

For a better fitting joint when using triangle stock, sand a little off the 90° corner to provide clearance for any glue fillet that may exist.

Weight Lifter

An excellent way to add ballast to the front of your model is to straighten the tab of your old tire weights, then bolt them to the underside of your engine mount. This puts the weight well forward where it's needed and where it can be clipped away with shears to adjust the balance point of the model. Do not bolt ballast to the cowls. More often than not, the little cowl mounting screws will be torn out by the vibration. Your friendly tire man will probably give you some old weights.

—both from the *Schoolcraft SkyHawks R/C Airplane Club, Schoolcraft, Michigan*

From the *Lafayette Cloud Jockeys, Lafayette, Indiana*

Advice Can be a Vice: Know Your Audience

I broke a propeller the other day. Surprised? I didn't think so. Actually the real shock was that this propeller lasted seven years before breaking it became noteworthy.

Now had I been doggedly flying all those years, this Master Airscrew might have been enshrined on my wall. Such as it is, I will not be keeping it. You see as my propeller broke, so did my airplane. And, just like my first flight lifting off the runway in June 2000, I won't forget my beloved first airplane cartwheeling in the grass.

I will admit to pilot error, but not to dumb thumbs—at least not on this crash. My transmitter chirped a low-voltage warning shortly after rotation and just as I was turning downwind. I killed the engine, called the emergency and attempted to land, but I had lost power and control.

Thursday night and Friday morning I began to cycle my flight batteries. I planned to bring only three airplanes and transmitters. Had I stuck to the plan, charging at $\frac{1}{2}C$ and discharging at $1C$, I would not be ready to fly. In an 11th hour fit, I thought of buying an additional cyclor.

I didn't have much cash so while I looked for a deal I got free advice. Honestly, it was sound, good advice. "There's no need to cycle your NiHM batteries. Just charge them before use." Originally I protested, but choose to follow since I had lots of batteries and could swap if needed. And, as it turned out, a swap was made.

My first flight with the Eagle 2 ended abruptly as my transmitter voltage dropped slowly away. So I made my second flight after replacing my transmitter batteries, but with an equally bad pack. No—let me say it was a worse pack. Worse because the power curve on this pack wasn't going to tail off slowly. This pack's discharge dove over a cliff.

While I was collecting advice there was one detail that was left unspoken—a detail that might have saved my airplane and propeller.

I don't fly as much as I'd like to and, as a result, my packs were an unknown quantity. Would these batteries hold, or deliver, a charge? No one could know, but cycling would have clued me.

Years ago I remember working in my camera store and a very nice, older lady needed advice. I questioned her at length about her needs. Finally, now frustrated, she asked me why I kept questioning her. Answers! She wanted answers! Not more questions. My response: I want to be sure I'm giving good advice.

Advisees are often told to "consider the source." Shall we too add: Advisers consider the audience. →

Cyanoacrylates continued from page 3

The thicker form of cyanoacrylate glue has a higher viscosity for loose fitting joints in which the adhesives must bridge gaps. Normally the thicker cyanoacrylate is applied to one surface and then the parts are held tightly together for approximately 5 to 15 seconds. For large surface areas, including those with close-fitting joints such as lamination, this grade of cyanoacrylate glue should be used. To prevent premature curing, don't spread the glue into a thin film layer. Lay down a serpentine bead about 1-inch separations on one surface, then assemble the parts letting the pressure spread the cyanoacrylate out.

The Cure Accelerator is a catalyst that works by allowing cyanoacrylates to quickly cure in thick layers. When a light mist of the accelerator is sprayed on the surface to be bonded, it dries almost instantly, but remains active for several minutes. Apply accelerator to the opposite surface, and the glue will set within a few seconds after the parts are held together.

To allow for more time for the parts to be positioned correctly, wait to spray the accelerator around the glue joints after joining. This will instantly hold the part in place while the rest of the cyanoacrylate cures normally. A bead of medium cyanoacrylate can be placed over a joint for reinforcement when sprayed with accelerator. When parts meet at right angles, lay a bead along both sides of the joint to form fillets that will buttress the joint when cured with the accelerator.

The thick variety of cyanoacrylate glue is the best for most plastics, including GE's Lexan. It is also the best choice for plastic model assembly. When used with the accelerator, it works better than nearly any

putty for modifying or filling voids. It can be carved with a knife or razor blade and sanded and feathered to form a finish indistinguishable from plastic.

The thick cyanoacrylate bonds fiberglass, hardwood, metal, and rubber better than any other hobby adhesive. For gluing to the inside of the cloth-textured surfaces of fiberglass, scrape the area to be bonded with a razor blade or coarse sandpaper before using the cyanoacrylate.

With all cyanoacrylate glues, the closer the parts fit together, the stronger the bond. Always hold the bonding surfaces together as tightly as possible. Any rough spots on the mating surfaces should be smoothed out. Although cyanoacrylates will hold objects together with considerable strength in seconds, the full strength of the bond is not reached for several hours. Allow for this before subjecting parts to maximum stress. Also, cyanoacrylates are generally a little less brittle and have higher strength when they are allowed to cure on their own.

Heat and moisture will decrease the shelf life of cyanoacrylate glues. Unopened bottles can be stored in a freezer or refrigerator, but allow them to reach room temperature before using. Keep your bottle in a cool place that won't be exposed to direct sunlight and store away from bottles of accelerators. →

Save that stamp!

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E-mail your newsletter to ashleyr@modelaircraft.org

WD-40

History

The product began from a search for a rust-prevention solvent and degreaser to protect missile parts. WD-40 was created in 1953 by three technicians at the San Diego Rocket Chemical Company. Its name comes from the project that was to find a “water displacement” compound. They were successful with the 40th formulation, the WD-40.

The Convair Company bought it in bulk to protect its Atlas missile parts. The workers were so pleased with the product, they began smuggling—also known as shrinkage or stealing—it out to use at home.

The executives decided there might be a consumer market for it and put it in aerosol cans. The rest, as they say, is history.

It is a carefully guarded recipe known only to four people. Only one of them is the “brew master.”

There are about 2.5 million gallons of the stuff manufactured each year. It gets its distinctive smell from a fragrance that is added to the brew. Ken East, one of the original founders, says there is nothing in WD-40 that would hurt you.

Uses of WD-40

- Protects silver from tarnishing.
- Cleans and lubricates guitar strings.
- Gives the floor that “just waxed” sheen without making it slippery.
- Keeps flies off cows.
- Restores and cleans chalkboards.
- Removes lipstick stains.
- Loosens stubborn zippers.
- Untangles jewelry chains.
- Removes stains from stainless steel sinks.
- Removes dirt/grime from the barbecue grill.
- Keeps ceramic/terracotta pots from oxidizing.
- Removes tomato stains from clothing.
- Keeps shower doors free of water spots.
- Camouflages scratches in ceramic and marble floors.
- Keeps scissors working smoothly.
- Lubricates noisy door hinges on vehicles and doors in homes.
- Gives a children’s play gym slide a shine for a super fast slide.
- Lubricates gear shift and mower-deck lever for ease of handling on riding mowers.
- Rids kids’ rocking chairs and swings of squeaky noises.
- Lubricates tracks in sticking home windows and make them easier to open.
- Spraying an umbrella stem makes it easier to open and close.
- Restores and cleans padded leather dashboards in vehicles, as well as vinyl bumpers.
- Restores and cleans roof racks on vehicles.
- Lubricates and stops squeaks in electric fans. →

Tarmac

I have always heard the word “Tarmac” and it was always in reference to a runway. Most of the folks that used the term tarmac generally had 10-15 years of more life experiences. I also noticed these folks, at some point in time, enlisted in one of our armed forces and therefore thought it was a term that came out of the armed forces. Boy was I wrong on that assumption. Let us look into this a little deeper and find out how this name actually came about and what it really means.

First, tarmac is short for tarmacadam, a type of highway surface. In 1901, E. Purnell Hooley patented this type of material. John McAdam invented macadam, which is a form of pavement. It consisted of crushed granite or greenstone compacted as subgrade to support the load. This was covered with a light stone to take the abuse and repel water off the road.

In more recent time’s macadam construction, crushed rock was then placed on the compacted course and hot tar used to bind together the materials. A final layer was then added and rolled to fill in the spaces.

Originally, macadamized roads were sufficient for horse-and-buggy day. However, these roads were quite dusty and eroded with intense rain. Henry Cassell patented “Pitch Macadam” back in 1834 that helped to stabilize macadam roads with tar.

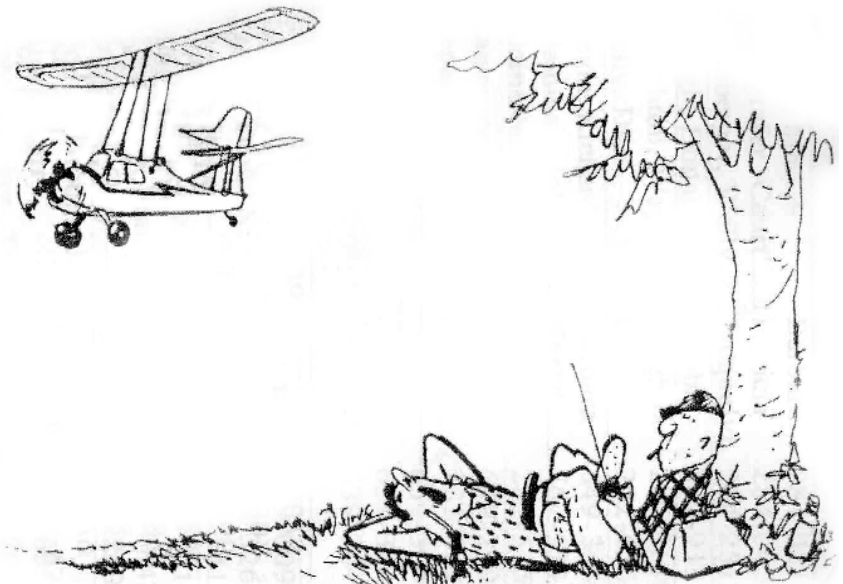
This process involved spreading tar on the subgrade then placing a typical macadam layer and then sealing the macadam with a mixture of tar and sand. Tar-grouted macadam was also in use well before 1900, and involved scarifying the surface of an existing macadam pavement, spreading tar and re-compacting. Hooley’s patent for tarmac involved mechanically mixing tar and aggregate prior to lay-down then compacting the mixture with a steamroller.

As petroleum production increased, the byproduct asphalt became available in huge quantities and largely supplanted tar because of its reduced temperature sensitivity. The macadam construction process also became quickly obsolete because its high manual labor requirement. However, the somewhat similar tar-and-chip method, also known as bituminous surface treatment, remains popular.

While the specific tarmac pavement is not common in some countries today, many people use the word to refer to generic paved areas at airports, especially the airport apron, near the terminals despite the fact that many of these areas are in fact made of concrete.

The Wick Airport at Wick in Caithness, Scotland is one of the few airports that still have a real tarmac runway. →

—From Wikipedia, the free encyclopedia



“Gotta replace those gum-bands one of these days...”

More Tips

tips provided by the members of the Suburban RC Barnstormers, Bloomingdale, Illinois

Ron Hilger had a tip for simple aircraft brakes. Just put a fuel tube between the wheel and wheel collar to add some friction. These can be adjusted by compressing the tube more or less when adjusting the wheel. These work well for paved runways.

Mert Mischnick had a tip to help save your propeller spinner. Many use self-tapping screws that go into plastic. Over time, these can become stripped from rethreading the

plastic hole. To prevent this when replacing the screw, put the screw in the hole, but slowly back it out until you feel it drop into the previously tapped thread. This will greatly extend the life of your spinner.

Mert had another tip to help make your Dean connectors easier to pull apart. Lubricate them with plain old Vaseline. Works great!

Jim Scahill shared his secret for great fillets on models. Fill the fillet with baking

soda and let some thin cyanoacrylate soak in. This can also work for V-joints.

Tom Lyons suggested using some silicone sealer on the end of the wheel wire to hold lightweight wheels on. It is cheap, simple, and easy to remove when desired.

Dave West said he likes to put a rubber band around a used battery pack to prevent mistaking them for a fresh pack. A simple solution and we all have rubber bands! →

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.

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