



PRESIDENT TO PRESIDENT

A Club in Need ...

by Dave Mathewson, AMA President

“Help! We’re losing our flying site.”

AMA gets calls that start like this almost every week. Most of the AMA vice presidents will tell you that this is the type of call and request for help that they receive most. When I was a district VP, the very first thing I would ask of the person making the contact was, “Tell me what your club has done over the years to become an asset in your community.” If the answer was, “Well, we haven’t done much, but we’re thinking about doing XXX ...,” it’s almost always too late.

The very best way to protect your flying site is to be proactive in preparing for the day when losing your site might become a possibility. Site loss can be attributed to several factors; losing a site to things like soccer fields account for some. Other times it’s an unhappy neighbor who, for whatever reason, is opposed to your field being where it is.

In all of these cases having the support of the local community, especially when local town boards become involved, is invaluable. Most local boards will listen to its constituents, especially when they express their feelings strongly in one direction or another. A club standing before a town board pleading its case is one thing. That same club standing before that same board, but having members of the community standing right alongside, is something entirely different.

So, how do clubs become a welcome asset in its community? They become involved. There are a number of simple things that each of our clubs can do that have the potential to pay large dividends. Things like collecting canned goods at events or meetings and then donating the collection to the local food

please see **President to President ...** on page 2

TIPS FOR CLUBS

Club Corner

by Jim Wallen, *Insider Club Column Editor*

In many parts of the country about this time of year, the weather is a little dicey. If you are lucky enough to hang out in the southern climates you have a long flying season. If you reside farther up north, you can be seeing snow flurries and blustery winds that are not exactly conducive to flying. Along with your building project for the winter, take the opportunity to go out and get your club involved in some community activities that you can do indoors.

Mall shows are a lot of fun and the merchandise stores love to see you there. A few volunteers, a few airplanes, a kit building display, and a working model that kids can touch are all it takes. Institute a contest that the public can vote on for the best model on display. It also ends up being a great social event for club members.

Many schools welcome a visit to have

us display our “toys.” Preschool kids love to see the airplanes and get a real charge out of a “crash video.” Older kids like the more technical stuff and maybe you can arrange to fly a foamy on the school grounds or in the gym.

Arrange a visit to a local hospital to visit the kids. Watch their eyes light up as you fly a micro heli around in their room!

Don’t forget the old folks. Nursing homes and senior citizen centers are always receptive to visitors willing to entertain with a little “dog and pony show.”

In addition to promoting your club and our hobby, there is a great deal of personal satisfaction in sharing our experiences with others. Remember how intrigued YOU were when you got your first glimpse of RC? Give it a try!

Till next time ... Jim. →

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The Lighter Side of Safety

Don Nix, *Insider Safety Column Editor*

My last column about self-appointed, rude, and dangerous hotdogs in RC drew more mail than any previous one. With one exception, all the letters were not only in agreement, but most gave examples of similar incidents at their own fields and how they had dealt with it.

The lone dissenter was not only indignant (“*Nobody* is going to tell *me* what I can and can’t do”), but at the end of his e-mail stated he could tell I was probably pro gun control and a few other unspeakable sins, none of which were true or had anything to do with flying model airplanes. Oh, well.

As I was debating subject matter for this issue, it occurred to me that funny things related to safety do happen from time to time. They are only funny when no person is injured or no property is damaged. The following incidents took place years ago at a very popular RC flying field in Southern California.

Late one Saturday afternoon, one of our most regular and experienced pilots was flying an Ugly Stik and began yelling, “I don’t have it! I don’t have it! No control!” then watched open-mouthed as “his” model gracefully climbed into the pattern, turned downwind, turned again and passed in front of everyone, continuing on around again, seemingly on its own. This

field was a very busy one with 12 pilot stations, and most had models in the air at the moment.

Gradually he realized what had happened. This particular fellow liked to fly low and in the weeds (literally), but was always careful to do so well past the far side of the runway, at least a hundred feet from the flightline. As he made one of his low and slow passes into the afternoon sun, an almost identical Stik was taking off at the far end of the pit area and starting to climb into the pattern. At that time of day, at that particular point and general altitude, models tended to become silhouettes briefly.

Ah, you can see it coming. Just as our friend was approximately abreast of the model taking off, his eyes picked up the *other* Stik as his own. In the meantime (as we discovered an hour or so later), his model had continued unhampered and uncontrolled straight ahead, crashing into a golf course several hundred yards to the west. I might mention the golfers were not amused.

On another occasion, one of my friends who did a lot of training of newbies was helping a beginner with his brand new trainer, checking everything, starting the engine, tuning it, and explaining what he was doing at every step. After getting the

engine tuned and idling properly, he told the proud owner that he wanted to check the engine at full power with the nose up to be sure it wasn’t too lean. The owner, eager to please, held the airplane vertical while the engine test was made, and was still holding it in that position when the instructor reduced the power to idle.

Yes, the fellow was a beginner, but he had been at the park for a couple of hours, and certainly must have seen what others were doing all around him. No doubt nerves pickled his brain at that moment, because when the instructor nodded at him, assuming the fellow would put it down at the edge of the runway, the poor guy simply tossed it straight up into the air, nose pointed skyward, engine at idle.

Incredibly, the stunned instructor, having more skill and presence of mind than most of us, punched the throttle full forward, managed to get the thing wallowing into the air and flew it out into the pattern. Another fine example of what happens when we assume something.

After getting into this subject, I realized I have some more funny ones that ended up safely, but they’ll have to wait until next issue. In the meantime, if you care to add to the list, or suggest another safety subject, I’m always available: flyerdon@aol.com. →

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pantry. Hosting an event and donating a portion of the proceeds to a local charity. With the holiday season fast approaching, maybe this would be a good time to collect toys for the Toys for Tots program that almost all communities have.

Parents appreciate groups, like model aircraft clubs, that run outreach programs that their children can participate in. Getting involved with local Scout groups, community recreational programs, or running an after-class program at the local school for kids interested in modeling can be extremely effective.

On the other end of the spectrum, consider contacting your local senior center and ask if they would be interested in someone coming to the center to speak about model aviation. Those of us who have done this will tell you that this can be an extremely rewarding experience.

And, finally, a very simple program your club can become involved in that takes very little effort is the Adopt-A-Road program that most communities have. Participating in a program like this most often results in a roadside sign, indicating that your club is participating in the program and is responsible for this section of road. This is like having a billboard along the road, promoting your club to motorists who travel this stretch of highway.

Nearly all of these ideas, if approached by the club as a group, can be fun activities. At the same time, you’ll be building strong relationships with those in your community whose help you may someday need. Being proactive has the potential to pay off down the road when you just may need it most.

See you next time. →

Safety Beyond Members

Jim Rice, Chairman Leader Member Development Committee

As we start the New Year, it is imperative that we not only keep our excellent safety record intact, we must also make strides toward the goal of ensuring all modelers, AMA or not, fly in a manner to be considered safe by the FAA and other governmental agencies including city, county, and state officials.

We have a difficult enough time enforcing our AMA Safety Code with our own membership, but we need to attempt to educate and encourage safe operation by nonmembers when we see them flying in and around our areas. If we do this properly, we might get the safety issues corrected and develop a friendship that could encourage the newcomer to join our ranks and fly at a chartered club field where more friends and aircraft can be encountered. A reckless act by a nonmember could endanger our future operations, and that should not be taken lightly.

Please familiarize yourself with the new Safety Code and the “See and Avoid” document so you can train the rest of the modelers in your area. You should also try to remain in tune with the ongoing activities of Rich Hanson’s work group and any communications between the FAA and the AMA. You are

another voice to our membership and communications are crucial to us over the next year or two.

I also encourage you to sign up for the AMA Forum on the AMA Web site at www.modelaircraft.org/forums/default.aspx. As I write this, we have 267 members on the forum and it has been running for about three months. Many issues discussed are just bantering, and others are quite meaningful.

I do not want to get into censure, but I believe a shot of level headedness from our ranks can help keep the threads from getting too far out of control or off topic. I post periodically when I think I can help get to the bottom of an issue, but I believe all of you can help provide new issues for thread discussion and can offer years of experience and leadership to all of us.

Keep your eyes open for potential new Leader Members because we are always in need of new blood in our volunteer ranks and there are many new modelers whose expertise could be invaluable to our organization.

See you on the flightline. →

2010 AMA Safety Code

Jim Rice, Chairman AMA Safety Committee

There will be an article in the next issue of *Model Aviation* concerning the new Safety Code. Please encourage all of your club members and friends to read it.

The changes to the code are significant in my mind in that they put the most important two paragraphs up front instead of buried in the rest of the code, and they begin a streamlining process that I hope will continue over time. Aside from cosmetic/grammatical changes, the more significant changes are outlined for you here:

- Introduction of “See and Avoid” with the inclusion of a PDF to explain the procedures.
- Strengthening of airworthiness requirements for events, which now includes pilot skills and execution of all maneuvers intended during the event. The addition of the word “anticipated” would mean dead stick/emergency landing procedures or anything else one might try to anticipate.
- Deletion of the dangerous fuel additives from the code as they are antiquated technology.
- Deletion of the paragraph about children under six on the flightline. In fact the point made by one of the Safety Committee members was that anyone not flying, undergoing instruction, or spotting should not be allowed on the flightline regardless of his/her age. This should be taken care of by parents, club officers, and safety coordinators not mandated by the organization. I used my 5-year-old grandson as a spotter when flying on a private airport. Of course I briefed him on the duties before taking off.
- Deletion of the speed reference for night flying. The rule was written as a knee jerk reaction to a one time situation and is nearly impossible for a club to enforce because of difficulty in measuring the speed of the aircraft in the first place. However, there is no proof that flying more than 100 mph is any more dangerous than flying a high wing loading airplane or flying by a pilot with limited skills at night. Requiring the aircraft to be lit in such a manner as to provide the pilot with a clear view of attitude and orientation at all times should self regulate speed by requiring better lighting for faster aircraft or slower speed to stay within sight.

The audience for this newsletter is the top level of volunteer leadership in our organization. We should all understand that model flying has to be not only safe but also perceived to be safe by all who encounter it. This is important to new modelers, spectators and others who share the National Airspace with us.

Please review the Safety Code at your next model meeting and take the time to become familiar with and review the “See and Avoid” PDF with your club and friends as well. Both documents are available on the AMA Web site. →

Learning to 3-D and 3-D Well;

Part 3 of 5: High Alpha Knife-Edge Flight

by Jeremy Chinn

In the previous articles, you got the right equipment (both virtual and real) and you learned how to fly a Harrier. Then you expanded your 3-D horizons by learning to fly an Inverted Harrier. You are well on your way to building a solid base of fundamental 3-D skill.

Next in line is another fundamental skill that can be built upon later. It is time to learn to do a High Alpha Knife Edge.

If you followed earlier suggestions to build your basic aerobatic skill set, you learned to fly a Knife Edge during that effort. If not, then go back and learn to fly it. Make sure you can fly both left tip down and right tip down, and both orientations with the top and the belly of the airplane toward yourself. This basic aerobatic skill can also be developed quickly using the simulator.

If and when you are comfortable flying regular Knife Edge flight, you are ready for the next step in your 3-D education: High Alpha Knife Edge. This name is really just the common name for flying

Knife Edge at a high angle of attack.

To learn this skill, start by flying a regular Knife Edge down the field repeatedly. As you fly, gradually increase the rudder deflection, while balancing that against changes in throttle. Some airplanes require more throttle, some less. All have a point of equilibrium that you must find on your own.

This skill can be learned at any lower altitude, but I've found that having the lower wingtip at around eye level is the most effective. This altitude gives enough time to roll the airplane back to level in the event of a problem, but is not too high to allow good vision of the airplane.

You may find that the airplane you are flying will require a higher angle of attack in high-angle-of-attack Knife Edge than it did for Harrier flight. This is because the fuselage typically has less area than the wings do, and thus requires a higher angle of attack, more power, or both, to maintain a flat heading. You may also find that you need some aileron correction

or elevator correction to keep the airplane on the same heading while in High Alpha Knife Edge. Fly the airplane in this case rather than relying on a mix. I've found that rarely are mixes effective in maintaining High Alpha Knife Edge when compared to regular Knife Edge.

Perform the same exercise in both directions down the field, and both directions with both orientations to yourself. When you feel comfortable in all orientations, begin to make circles with the airplane. Use your elevator to 'steer' the airplane in your intended direction. Practice this skill repeatedly until you feel comfortable in all attitudes and orientations, and turning in all directions.

When you have mastered High Alpha Knife Edge and flying upright and inverted Harriers, you are ready to move on to two more advanced 3-D skills: The Hover/Torque Roll and the Rolling Harrier. Each will be covered in upcoming articles. →

From the Rogue Eagles R/C Club, Medford, Oregon

RC Helicopter Safety Tips

1. Whenever you start your helicopter, whether it's a nitro, gasser, or electric, always hold the blade grips tightly. If your throttle is not all the way down, or there's a glitch, your helicopter can spin out of control and cause damage.
2. Always stand a minimum of five to ten feet away from your helicopter and never fly toward yourself. Similarly, don't fly around other people or pets.
3. Blade tips can be spinning in excess of 250 mph and a carbon fiber rotor at those speeds can do some serious damage and even cause death.
4. Always disconnect your battery/motor before trying to adjust anything on your helicopter.
5. If a blade separates during in flight, it can fly in excess of 100 feet, so make sure your nuts/bolts are tight.
6. Perform a quick preflight check to make sure everything is as it's supposed to be. Make sure nuts, bolts, and screws are tight, linkages aren't loose, and your batteries are charged.
7. Don't fly alone if it can be avoided and always have a cell phone or other means of communication available.
8. Don't fly near trees, power lines, or other obstacles.
9. Avoid flying your RC helicopter in close proximity to another helicopter to avoid contact and a potentially fatal crash.
10. Don't fly a nonelectric RC helicopter indoors. The fumes are toxic and not good for your health.
11. Practice new moves on a simulator first for safety and your wallet's sake.
12. When flying on windy days, always fly upwind from your RC helicopter so a gust doesn't blow it toward you. Better yet, don't fly when it's windy out.
13. Don't adjust the radio when your helicopter is powered. If you accidentally reverse throttle, bad things can happen.
14. Avoid flying your RC helicopter at head height. If something comes loose or there's a glitch (electrical or human) you're less likely to lose an eye.
15. If you want to manually slow down the blades, do so by adding friction to the button and keep loose clothing and other bodily parts away from them.
16. When walking toward your helicopter, make sure that your transmitter's throttle hold switch is turned on.
17. Only use hardened bolts for any bolt that has a load being placed on it. If possible, stick to stock parts.
18. Program fail-safe settings into your receiver if possible.
19. If you're new to RC helicopters, make sure that an experienced helicopter pilot checks out your aircraft and radio setup prior to your first flight.
20. Don't fly powerful RC helicopters indoors that were meant for the wide open spaces of outdoors. →

Pilot Spotter's Responsibility

by Bob Ackerman

While at the field recently I was asked, "What does a pilot spotter do?" I quickly told him, "spot for the pilot." I thought about my response for a few minutes and I realized that was not a good answer.

Do you know what the responsibility of the pilot spotter is? I asked a few pilots and I got the same answer from most, "spot for the pilot." So, what does that mean?

The pilot spotter, or just spotter, is a safety person for the pilot. The pilot and spotter should be a team working together for the safety of the pilot, the spotter, the aircraft, and all parties at or near the field.

Whereas the pilot has the responsibility of flying his/her aircraft in a safe manner, the spotter has many other responsibilities, which include:

- Relay messages from the flightline and safety personnel to the pilot about landing aircraft, aircraft emergencies, or dead-stick landings by other aircraft on the field, and other information important to the pilot flying the aircraft. The pilot may be concentrating on the aircraft in flight and may not hear or pay attention to background messages on the field.
- Relay messages from the pilot to the flightline and/or safety personnel about the pilot's landing, emergency, or dead-stick landings, and other information that needs to be passed from the pilot to others.
- Be the eyes of the pilot away from the aircraft. Watch the flightline and inform your pilot of aircraft taxiing in front of the pilot, people on the runway line, obstacles on the ground if the pilot walks around while flying, or other safety issues that your pilot should be aware of.
- Watch the other aircraft in flight and inform your pilot of

aircraft that may cross the flight path of his or her aircraft. Changes in pattern direction or aircraft in different flight types (aerobatic vs. pattern flight) crossing your pilot's flight path should be reported.

- Keep the pilot advised of the type of aircraft that are being started for flight. Some pilots may be flying the pattern and if a 3-D aerobatic aircraft is getting ready to fly, the pilot may decide to fly at a different altitude or land the aircraft.
- Minimize the distractions to the pilot in flight. The spotter is the eyes and ears for the pilot. Anything that could distract the attention of the pilot should be explained so that the pilot can keep his/her eyes on the aircraft and not look at the distraction.
- A pilot spotter may also assist the pilot at contests, such as a pattern contest, by providing information to the pilot about the next maneuver at key points of the flight.

This is not a complete list of responsibilities that the spotter has. Some pilots will have specific instructions for their spotters as to what to do, what to watch for, and what to explain. Each pilot and spotter should discuss these responsibilities before each flight.

Every field has different rules for the use of a pilot spotter during flight operations. Most fields do not require a spotter when no organized event is scheduled, or the number of pilots flying is low. Other fields require a spotter on all flight activities. Most fields require the use of a pilot spotter during all scheduled events. Do check with your club or field rules about the use of a spotter.

The ultimate purpose of a pilot spotter is to increase safety for all. So be a good spotter and help keep our field, and our pilots, safe. →

Dyeing Condenser Paper

by Bill Henn

Condenser paper (c-paper) is a nonporous, delicate, and extremely light weight material whose primary use is as a dielectric in electronic capacitors. It also has gained a fair amount of popularity as a covering material for certain types of indoor models.

In its natural state this paper has an unrealistic off-white appearance that creates a problem with using the substance on scale models. In order to make condenser paper resemble the color of an actual aircraft, it is usually necessary to dye the material. After several unsuccessful attempts to color condenser paper, I finally developed the following method which is simple and works most of the time. The c-paper I

used was obtained from Oldtimer Model supplies. It was its lightest grade.

Before coloring the paper, it will be necessary to construct a number of frames from scrap lumber. The larger the frames, the more difficult the coloring operation will be. The frames I use measure 12 by 14 inches and are made from one-inch-square hardwood. Make sure the wood you use is rigid enough to resist flexing because the c-paper later shrinks.

Using a 50% mixture of white glue and water, affix the c-paper to the frames. Be careful not to pull the paper too tight. About one-half inch of slack in the center of the frame is about right. If the material is too tight, it will tear when it shrinks. Wrinkles will develop in the c-paper if it

is applied unevenly or too loosely on the frame. Minor wrinkles can be removed from the finished product by pressing with an ordinary household iron set on low heat. Some experimentation may be necessary before you find the right amount of slack.

After the glue dries, the dye can be applied. I have tried a number of different dyes and colors with varying degrees of success. The results obtained using a 50% mixture of Yellow Higgins Drawing Ink and water were the most consistent.

Using a soft, one-inch brush, paint the c-paper with the dye. Stand the frame

please see Dyeing Condenser Paper ... on page 7

Float Flying: a guide to setting up and flying techniques

by Chuck Hocking

From AMA Insider's Technical Editor Ed McCollough:

Chuck Hocking, of the Lakeland R/C Club Inc., Oconomowoc, Wisconsin, wrote a primer on float flying that we are putting in the Insider. Of his many points, the one that needs a "second opinion" at the beginning is what he wrote about foam floats, "... foam (not recommended)."

As it happens, one of my clubs out here (SkyKnights) has run an annual float-fly that started back in the 1970s or before, depending on which "old timer" is talking. Sometime along about the 1980s, the big guns from RCModeler showed up to do a spread about our float-fly. At that event, they were introduced to a foam-based float that made all kinds of airplanes practical and even competitive during the events. They published the article about us and they also did a separate piece about what they called "Hansen's Floats."

Just cutting some foam floats out and attaching them to an airplane won't do you a lot of good, but a little work and they can be the best ones for multi-event meets.

The first thing you do, after you've cut the blanks out of foam, is to split the float lengthwise down the middle. Next, use one float half to mark two outlines (one for each float) on some lightweight plywood or thin laminate. Cut holes in the plywood but leave the area around the step solid.

At this point you can simply epoxy the lightweight plywood to one float half and then epoxy the other float half to make one float. But, to have a much better float it needs a tad more work.

Before you epoxy the float halves and plywood together, decide what kind of attachment (and where you want the attachment) you want to use to fasten the floats to your aircraft. Small lengths of hardwood blocks, like maple engine bearers at the appropriate fastening point, can be epoxied to the plywood and foam removed from the float-half so all will fit together. A dowel can be split, for the same purpose. The bottom of the float needs to be covered and MonoKote is not recommended!

Aircraft grade ply, say 1/64th-inch thick, can be epoxied to the bottom of the float. Or, heavier ply can be used on the front of the float bottom; how heavy depends on the type of beach you fly from. Then the bottom could be covered with 3/4 oz. fiberglass cloth and epoxied on. The entire float can be finished with any or all of the above. Epoxy paint is obviously the best, if you want to paint the floats.

Why all the epoxy? It's basically waterproof and "hot stuff" isn't.

It has been said that one has not really fully enjoyed RC flying until you have experienced the thrills and spills of float flying. Hopefully the following information will be of assistance to you. Remember these are only presented as guidelines.

Motor and Propeller: Select a motor that has sufficient power to get the airplane up on step and to gain necessary speed for proper liftoff. Remember it takes more power to lift off of water. Never use a wooden propeller on a float plane; there is a possibility that it will shatter when coming in contact with water.

Types of Floats: There are four basic types of floats, float kits (which you must build and do not include mounting hardware), fiberglass, combination glass and wood, and foam (not recommended).

Float Length: Guideline—length should be approximately 75% of body measured from back of engine thrust plate to end of vertical stabilizer, plus or minus one to three inches is okay. Too long can add too much weight; too short will not support the airplane and not enough float in front of propeller. Two inches is good.

Tread Width: Guideline—tread width should be about 25% of wingspan. The wider the width, the more stable on water. Closer together gives a more scale look, but will tip over easy in a crosswind. When it does that, you are done for the day.

Step vs. CG: Guideline—generally speaking, the step or the center of a V-shaped step should be in line with the CG of the airplane. I have found that 1/2 inch either way causes no problem.

Incidence: Critical—incidence must be about 1.5 positive degrees when the top of the floats are level. More than that will cause a premature takeoff before necessary speed is reached. Less than that and the airplane will probably not lift off. You will now have a high-speed boat with wings on it. You will need a Robart Incidence meter to do the job correctly. This is the most important step in setting up your floats.

Alignment: Critical—in the final assembly be sure both floats are parallel with each other and parallel with the center line or thrust line of the airplane.

Rudder: Guideline—I feel, if possible, a servo-type rudder is the best choice. It gives a more positive type action and is trouble free, especially if you will be going back and forth between floats and wheels. If, however, you will be setting up your airplane for float flying only, then an extra rudder horn and cable will work just fine.

I hope this information will be of assistance to you in setting up and enjoying your airplane. →

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for your
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Dyeing Condenser Paper

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vertically on its edge and pull the brush carefully across the surface of the paper without pressing. If the brush is well loaded with the dye it will not drag and tear the paper.

When the c-paper is thoroughly wet, take a ball of cotton, approximately one and a half inches in diameter, and use this swab to distribute the dye evenly over the c-paper and to soak up the excess liquid. Because c-paper has very little wet strength, extreme care is necessary during this stage of the operation. When the dye dries, hopefully you will have a wrinkle-free, uniformly colored piece of condenser paper on the frame, which at a glance resembles yellow Japanese tissue. The material can now be cut from the frame and applied to a model with your favorite adhesive.

I use a 50% or weaker mixture of white glue and water for this purpose also. If you want to shrink the c-paper after it is applied to the model this can be accomplished to a limited degree by light steaming. Some shrinking ability will still remain in the c-paper even after being colored.

It is advisable to color a surplus of c-paper and store what is not used. If it is ever necessary to patch the model, you will be assured of a close color match. Although I carefully measure the proportions of dye and water, each batch of paper that is colored seems to have a slightly different hue.

After reading the foregoing, you may decide to stick with Japanese tissue. Admittedly Japanese tissue is more rugged and easier to work with, but if you are intending to build a highly competitive scale model, the reduction in weight resulting from the use of condenser paper may make the difference between winning and losing contests. My son, Billy, and I each built identical 20-inch wingspan models of the Lacey M-10. The only difference was that he used tissue to cover his model and I used condenser paper. Billy's Lacey weighs 30 grams and mine weighs 26.5 grams. The lighter model consistently out flies the other by 15 to 20 seconds. →

From the Eugene Prop Spinners, Eugene, Oregon

Using Kitchen Appliances

I used to soak pieces of balsa in a pungent mix of ammonia and water in order to bend them around wing tip forms, or other compound curves, like a cowling form. Now I use the microwave.

Soak the balsa (or even plywood) in water for a few minutes, then zap it in the microwave. It comes out limp as a noodle, and ready to form into complex shapes.

Also, Kraft used to sell little plastic clamps with parallel faces. The tension was by a rubber band. These can be adjusted for any amount of pressure depending on your rubber band.

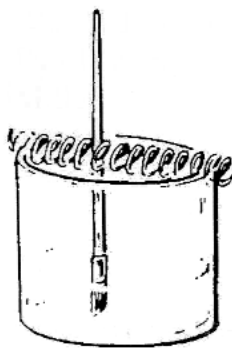
Don't overlook small spring-loaded electrical battery clamps available from Radio Shack. These make nice clamps to hold things in place while the glue dries.

Got a wing warp? A finished model is usually too big and cumbersome to hold over a steaming kettle on your stove. Soak a bath towel in water and put it in the microwave until it is steaming hot. Wrap this around the warped wing. Have some books handy to use as weights to stress the structure in the proper direction a bit more than you would think; this is because the structure will spring back somewhat when it is all over. I hope you realize that even the finest and straightest building board is not much use if a warp creeps in after covering and painting. Butyrate dopes especially keep on shrinking and pulling at the structure.

If you don't have a MonoKote hot air gun, you can use an ordinary hair dryer. It might take a bit longer, but it is safer and you are not likely to melt the plastic film.

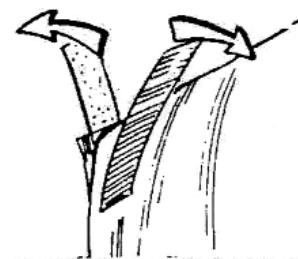
An easy way to cut large pieces of MonoKote is with a pizza cutter. You know, this is a wheel with a handle. This works well for irregular shapes of MonoKote. →

Tips & Tricks



BRUSH PARKING

A spring stretched across a jar of thinner provides a convenient spot to park the dope brush clear of the bottom.



SEPARATE THOSE SHEETS

The protective backing on some covering films can be difficult to separate, initially. A strip of masking tape applied to each side creates a "handle" on which to pull—sheets then easily peel apart.

—from the newsletter for the First Weed Wacker Aerosquadron, Lakeside, California

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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*:

The Academy of Model Aeronautics' *AMA INSIDER* is published electronically on a bimonthly basis for members of the Academy of Model Aeronautics. Its purpose is to create a network of information exchange between the Academy of Model Aeronautics-chartered clubs as well as the Academy of Model Aeronautics officials and chartered clubs.

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SUBMISSIONS

If you are a member of an AMA charter club and would like to submit your newsletter or an article for consideration. Please send it to us via E-mail or postal mail.

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