

TOSS -- UP



SPECIAL NOTICE

NEW MEETING DAY
WEDNESDAY
NEW TIME 8:00pm
CAMERON HOUSE

NEWSLETTER

JANUARY 1993

14705 LOYOLA STREET

MOORPARK, CA 93021

A.M.A. CHARTERED CLUB # 1943

EDITOR: LARRY JIMENEZ 1943 CHANNEL DRIVE VENTURA, CA 93001

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NEXT CLUB CONTEST:

Date Saturday, February 13, 1993
Place Paramount Ranch, Agoura
Time 9:00 a.m.
C/D To be determined.

NEXT CLUB MEETING:

Date January 27, 1993
Day ** WEDNESDAY **
Place Cameron Center
Time 7:30 p.m.

NOTES FROM DECEMBER MEETING

None available.

Please take note that TOSS meetings will be held on Wednesdays for at least the next three months.

JANUARY CONTEST

The January 10th. contest was rained-out and will be rescheduled for some other day. Hopefully a nice dry day.

PROPOSED 1993 MONTHLY CONTEST SCHEDULE

Sunday January 10 Redwood School, T.O.
Saturday February 13 Paramount Ranch
Sunday March 14 Redwood School, T.O.
Saturday April 10 Paramount Ranch
Sunday May 9 Redwood School, T.O.
Saturday June 12 Paramount Ranch
Sunday July 11 Redwood School, T.O.
Saturday August 14 Paramount Ranch
Sunday September 12 Redwood School, T.O.
Saturday October 9 Paramount Ranch
Sunday November 14 Redwood School, T.O.
Saturday December 11 Paramount Ranch

CONTESTS DIRECTORS

We need contest directors for 1993 contests. Please sign up for your favorite month at the January meeting.



TREASURER'S REPORT

This shall be my final report for the year of 1992. First of all, I would like to thank Mike Leal for taking over as the new TOSS treasurer. And, to thank Larry Jimenez, your new newsletter editor/composer/author/printer/mailer, who now is wearing my other hat and has the thankless, timely, and most important post. In brief, we have \$345.35 to our name with about half of the 1992 club members having paid their dues. Besides the dues, the only other income we have is club contests. So please come out and participate. Last year at the same period, we had \$899. With simple mathematics, it is easy to see we did not have a good financial year. Regrettably this means that we can not purchase much new equipment. I am currently working on our complete financial statement for 1992 and it will be available around mid-february by contacting Mike Leal.

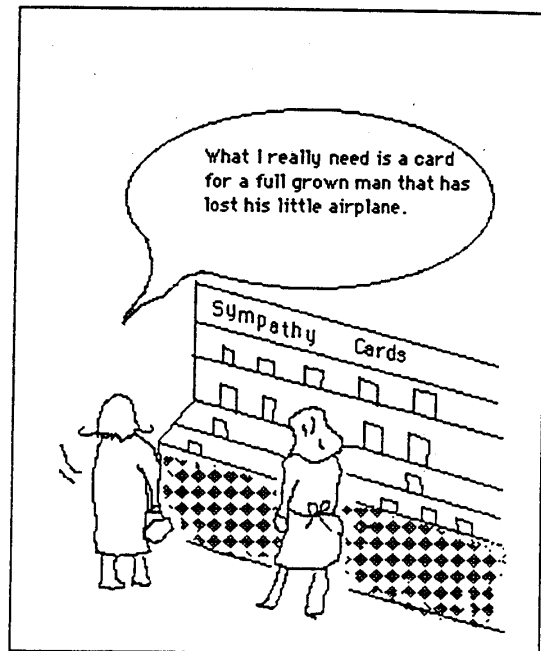
BE SMART and BE ACTIVE.

Bob Swet

A NOTE FROM THE EDITOR

I would like to take this opportunity to thank Bob Swet for doing a tremendous job as our newsletter editor this past year. If I can do half as good a job as he did I'll be very satisfied. THANKS Bob, for a job well done. If anyone would like to contribute to our newsletter by writing an article, a tip on building or any helpful tidbit feel free to give me a call (805) 652-1937.

Larry



Cloud Jockeys, Randy Leazemby: Editor
PO Box 424, Lafayette, IN 47904

REPRINTED FROM AMA NATIONAL NEWSLETTER JULY '92

THOUSAND OAKS SOARING SOCIETY

1993 MEMBERSHIP ENROLLMENT FORM

Name: _____ Date _____

Address: _____

City: _____ State _____ ZIP _____

Home phone (____) _____ - _____

LSF # _____ Level: _____

AMA # _____

MANDATORY FOR MEMBERSHIP

SIGNATURE _____

Family Membership ----- \$25.00
 Adult Membership ----- \$20.00
 Half year adult (July 1 thru Dec 31) ----- \$10.00
 Junior Membership (15 or less) ----- \$ 5.00

FREQUENCY: Please circle all of your channel numbers

72 MHz:
 11 12 13 14 15 16 17 18 19 20 21 22 23 24
 25 26 27 28 29 30 31 32 33 34 35 36 37 38
 39 40 41 42 43 44 45 46 47 48 49 50 51 52
 53 54 55 56 57 58 59 60

6 Meter:
 RC - 00 01 02 03 04 05 06 07 08 09
 53.1 53.2 53.3 53.4 53.5 53.6 53.7 53.8

All transmitters and receivers must meet 1991 requirements

If you are not already an AMA member: Fill out the AMA application below and send to AMA with payment. Then give or mail the TOSS form and a check for the correct amount to the Treasurer; Mike Leal, 844 Charles Street, Moorpark, CA 90321 (Please make checks payable to the Thousand Oaks Soaring Society) cut off

Application for 1993 Membership — One applicant per application AMA, 1810 Samuel Morse Drive, Reston, Virginia 22090, (703) 435-0750

Date of Birth: _____	Main Interests: (Check one only)	<input type="checkbox"/> Indoor <input type="checkbox"/> Scale <input type="checkbox"/> RC <input type="checkbox"/> CL <input type="checkbox"/> FF <input type="checkbox"/> All	
All membership categories receive full membership and competition privileges, liability and accident/medical insurance.			
For those 19 or over by July 1, 1993 (check one only!) <input type="checkbox"/> Open Membership — \$40.00 Model Aviation magazine included. <input type="checkbox"/> Extra Family Membership — \$22.00 This category applies to anyone who currently resides in the same household as a current open member. Magazine not included. Current Open member's name and AMA number _____ For those 65 or over by July 1, 1993 <input type="checkbox"/> Special Senior Citizen Rate — \$30.00 (must submit proof of age at time of original application.) Model Aviation magazine included.		For those not 19 by July 1, 1993 <input type="checkbox"/> Youth Membership — \$14.00. Model Aviation magazine included. <input type="checkbox"/> Youth: no magazine — \$7.00 (in order to qualify applicant must have same last name and address as current open member) Magazine not included. Current Open member's name and AMA number _____ Note: For competition purposes, Youth will be categorized as Junior (under 15 by July 1) or Senior (Those 15 by July 1, but not 19).	
Options: <input type="checkbox"/> Non-affiliate Members Add \$20.00 for postage at non-US address. <input type="checkbox"/> Add \$6.00 for mailing magazine in envelope. <input type="checkbox"/> Check here for information on non-US membership.			

Print clearly in CAPITAL LETTERS.

First Name _____ Initial _____ Last Name _____

Mailing Address (number and street) _____

City _____ State _____ Zip Code _____

Check enclosed \$ _____ Charge my VISA MasterCard \$ _____ Card No. _____ Exp. date _____

New member Renewal: give old number if known.

EVERYONE MUST READ AND SIGN BELOW

Please read and sign this declaration. Applications without signatures will be returned.

Note: This waiver means that if I am involved in any claim or suit I will not sue the AMA, Inc. I understand that this waiver does not affect my liability insurance coverage.

Safety code compliance and waiver and release of liability statement.

I hereby agree to comply with the current AMA National Safety code(s) for all MODEL Aircraft, Boat, Car and Rocket operations. I also understand and agree that I will abide by and comply with all changes and modifications that may be made to the safety codes (see reverse side) during my entire membership period with the AMA. I understand that my failure to comply with the applicable Code(s) will result in failure of liability coverage for any damages or claim so caused. I further understand that written notice must be provided within sixty (60) days of the occurrence of any incident of bodily injury and/or property damage.

I am aware that modeling may present hazards to participants and spectators. I exempt, waive and relieve The Academy of Model Aeronautics, Incorporated ("AMA"), AMA Chartered Clubs, AMAs Sanctioned Event sponsors, AMA Contest Directors and AMA Chartered Club Site owners, and any of the representatives of the aforementioned entities and groups, from all current or future liability for personal injury, property damage, or wrongful death caused by negligence or otherwise.

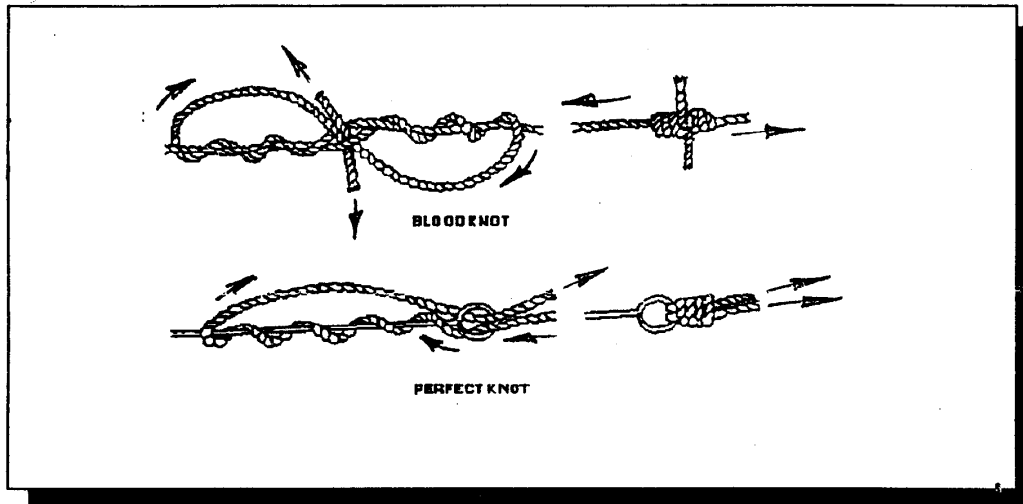
This waiver shall be in force at all times I am a member of the AMA, and the waiver does not require my resignation when I renew my membership.

Signature of applicant _____

Parent or Guardian of applicant under age 18 must also sign form _____

HOW TO TIE A BROKEN WINCH LINE WHILST EATING A PEANUT BUTTER SANDWICH

by Al Doig



I've run across a few fellers on the field that have been rather embarrassed when asked to fix a broken winch line, or tie on a parachute.

The above picture is, I believe, self explanatory. This is the proper way to tie a blood knot though, truthfully, I always poke both ends through the hole in the same direction. So far I've not been caught. HOWZAT!

Membership Information

Insurance coverage is effective on the date of receipt at AMA Headquarters of a properly completed application and correct dues payment. Membership ends each year on December 31, regardless of the date a membership application is received. If a magazine is included with the membership, it begins with the first issue available for the year after a correct current application and payment are received; it expires with the issue printed in December (which is dated February of the following year). Membership rates and insurance limits are those in effect at time of printing. Actual cost of dues and amount of insurance coverage is subject to change. Any such changes will be noted at the time of membership processing so that they may be accepted or not.

1993 OFFICIAL AMA NATIONAL MODEL AIRCRAFT SAFETY CODE — Effective January 1, 1992 Model flying MUST be in accordance with this Code in order for AMA Liability Protection to apply.

GENERAL

- 1) I will not fly my model aircraft in competition or in the presence of spectators until it has been proven to be airworthy by having been previously, successfully flight tested.
- 2) I will not fly my model higher than approximately 400 feet within 3 miles of an airport without notifying the airport operator. I will give right-of-way and avoid flying in the proximity of full-scale aircraft. Where necessary, an observer shall be utilized to supervise flying to avoid having models fly in the proximity of full-scale aircraft.
- 3) Where established, I will abide by the safety rules for the flying site I use, and I will not willfully and deliberately fly my models in a careless, reckless and/or dangerous manner.
- 4) If my model weighs over 20 pounds, I will only fly it in accordance with paragraph 5 of this section of the AMA Safety Code.
- 5) At air shows or model flying demonstrations a single straight line must be established, one side of which is for flying, with the other side for spectators. Only those persons essential to the flight operations are to be permitted on the flying side of the line; all others must be on the spectator side. Flying over the spectator side of the line is prohibited, unless beyond the control of the pilot(s). The only exceptions which may be permitted to the single straight line requirement, under special circumstances involving consideration of site conditions and model size, weight, speed and power, must be jointly approved by the AMA President and the Executive Director. In any case, the maximum permissible takeoff weight of models is 55 pounds.
- 6) I will not fly my model unless it is identified with my name and address or AMA number, on or in the model. Note: This does not apply to models flown indoors.
- 7) I will not operate models with metal-bladed propellers or with gaseous boosts, in which gases other than air enter their internal combustion engine(s); nor will I operate models with extremely hazardous fuels such as those containing tetranitromethane or hydrazine.
- 8) I will not operate models with pyrotechnics (any device that explodes, burns, or propels a projectile of any kind) including, but not limited to, rockets, explosive bombs dropped from models, smoke bombs, all explosive gases (such as hydrogen-filled balloons), ground mounted devices launching a projectile. The only exceptions permitted are rockets flown in accordance with the National Model Rocketry Safety Code or those permanently attached (as per JATO use); also those items authorized for Air Show Team use as defined by AST Advisory Committee (document available from AMA HQ). In any case, models using rocket motors as a primary means of propulsion are limited to a maximum weight of 3.3 pounds and a G series motor. Note: A model aircraft is defined as an aircraft with or without engine, not able to carry a human being.
- 9) I will not fly any model using turbojet power (axial or centrifugal flow) unless I have obtained a special waiver for such specific flights from the AMA President and Executive Director and I will abide by any restrictions imposed on such flights by them. (Note: this does not apply to ducted fan models using piston engines or electric motors.)

RADIO CONTROL

- 1) I will have completed a successful radio equipment ground range check before the first flight of a new or repaired model.
- 2) I will not fly my model aircraft in the presence of spectators until I become a qualified flier, unless assisted by an experienced helper.
- 3) I will perform my initial turn after takeoff away from the pit or spectator areas, and I will not thereafter fly over pit or spectator areas, unless beyond my control.
- 4) I will operate my model using only radio control frequencies currently allowed by the Federal Communications Commission. (Only properly licensed Amateurs are authorized to operate equipment on Amateur Band frequencies.) Further, any transmitters that I use at a sanctioned event must have a certified R/CMA-AMA gold sticker affixed indicating that it was manufactured or modified for operation at 20 kHz frequency separation (except 27 MHz and 53 MHz).

FREE FLIGHT

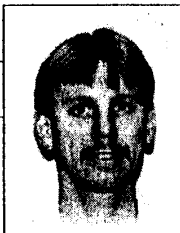
- 1) I will not launch my model aircraft unless at least 100 feet downwind of spectators and automobile parking.
- 2) I will not fly my model unless the launch area is clear of all persons except my mechanic and officials.
- 3) I will employ the use of an adequate device in flight to extinguish any fuses on the model after it has completed its function.

CONTROL LINE

- 1) I will subject my complete control system (including safety thong, where applicable) to an inspection and pull test prior to flying.
- 2) I will assure that my flying area is safely clear of all utility wires or poles.
- 3) I will assure that my flying area is safely clear of all non-essential participants and spectators before permitting my engine to be started.

Separate Code(s) available from AMA Headquarters for boats, cars, and rockets.

CENTER ON LIFT



M I C H A E L L A C H O W S K I

WET-WEATHER SOARING

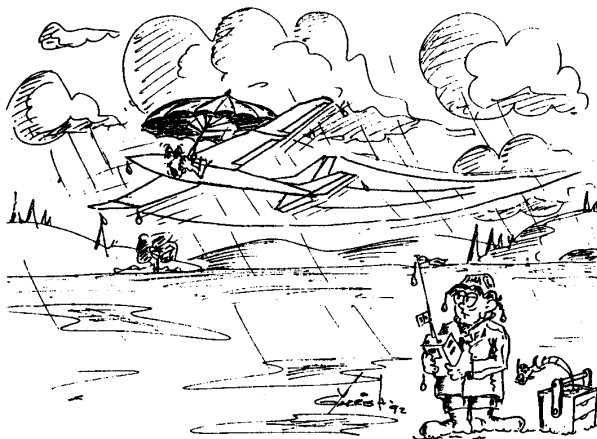
THIS MONTH'S topics are all related to flight performance. Flying on cloudy, overcast days presents some interesting soaring conditions, and I'll discuss some techniques for maximizing flight time. Of course, rain usually comes with the clouds, so you have to understand how the rain will change your sailplane. Finally, I'll show you how to make some cheap seals for control-surface gaps to reduce drag and improve flight performance.

FLYING WITH A LOW CEILING

One great part about flying sailplanes is you can enjoy flying on many days when power fliers stay home or pack up. Strong winds? Add ballast. Cloudy, gloomy weather? That's good for soaring, too. Good flight times are possible even on some of the worst-looking days. I'll talk about how to identify the best air for flying, how to deal with extremes like very low ceilings and, finally, how mist and rain affect flight performance and how you can deal with these changes.

When the ceiling is very low, the clouds provide a good indication of lift and where to fly. The key indicators are darker clouds and low-level scuds (loose, vaporous clouds). The darker areas are usually the lower clouds where you can take advantage of the air rising upward. You have to be careful, since you may see your sailplane disappear into these clouds. Don't panic; just keep flying the model. One way to work around this visibility limitation is to circle at the edge of these clouds with the model disappearing and reappearing on one side of the circle. Low-level scuds are good indicators of possible lift and are most useful on days when the primary cloud base is higher.

If you lose sight of the model, don't panic. Now is the time to try some flaps or spoilers. They will reduce lift and bring down the model to where you can see it again. Always visualize where the model



is flying, and this will make it easier to track when it reappears. Don't over-control the model, or you may end up with some violent maneuvers! Spending more time in the clouds means you're higher than your competitors and will have a longer flight because of it.

Launching into a low ceiling is another problem. The model might disappear near the top of the launch. If you are conservative, release below the clouds, and try to launch into the brighter cloud areas, i.e., where there is better visibility. A more aggressive approach is to maintain constant altitude and gain speed on the winch without pulling up to zoom on release. Use this speed to cruise off the launch.

Look for a launch corridor of bright sky in which you know you will not reach the clouds. Launch toward that area to get the maximum altitude possible while maintaining visibility. Watch for bands of light and dark clouds. Maybe a little "sand-bagging" is in order to wait for the best launch conditions. For some excitement with a stronger model, zoom off the winch into a loop into the clouds, and hold the elevator so that the plane continues to loop until the model is again visible. You can accumulate as many as 30 seconds of your flight time with this energy—with "occasional visibility"—before leveling out to continue your flight.

Interpreting the air in which you fly takes a good eye when you are in heavily overcast conditions. You have to know the normal attitude of your sailplane and be able to detect the slight differences you will see in very light lift. The lift conditions are similar to those you encounter on very humid days. When the air looks good, you must have patience with it. There are no strong thermals here. Don't forget the lift indicators you use on more pleasant days. There may be thermals, and you might see small birds feeding and hawks circling, and feel wind shifts

toward the thermals.

Of course, there is rain on these days, too. Rain may start during your flight. This can really impact the performance of a glider, so you should look to see from which side of the field the rain is coming and avoid the heaviest rain. It's a good idea for your spotter/timer to watch for rain and low clouds. You can ride good air downwind, but you can end up downwind with low clouds or rain coming, and that can drastically reduce visibility and your ability to bring back your model.

WATER DROPLETS AND TRIM

Flight trim will change during a flight in mist or rain. Water does build up on the model, and the most obvious impact is a change in CG. When the model starts to stall and the flight is not smooth, don't hesitate to throw in a click of down-trim. You may need to do this more than once during a longer flight. Remember to return the trim to its original position after the flight.

If you are expecting rain during the flight, you might want to put in just a little extra nose weight ahead of time. You may find that some models' performances deteriorate badly with moisture on the wing. This depends on the airfoil, since the water drops change the airfoil surface and cause turbulence. The airfoil performance will often suffer, and some become really bad.

CON'T ON NEXT PAGE

WET WEATHER SOARING CONT'

I hope these tips help next time you decide to fly on a less-than ideal day. If you're used to flying in beautiful weather all the time, too bad. You've been missing out on all this fun.

WET-WEATHER WEIGHT GAIN

I've been to a few contests this year in which the weather was overcast with occasional showers or continuous mist. For all sport fliers who would stay home on such days, these conditions are excellent for soaring. It is possible to get flights of 7 minutes with less than full launch height, and winning contests in these conditions usually depends on landing scores.

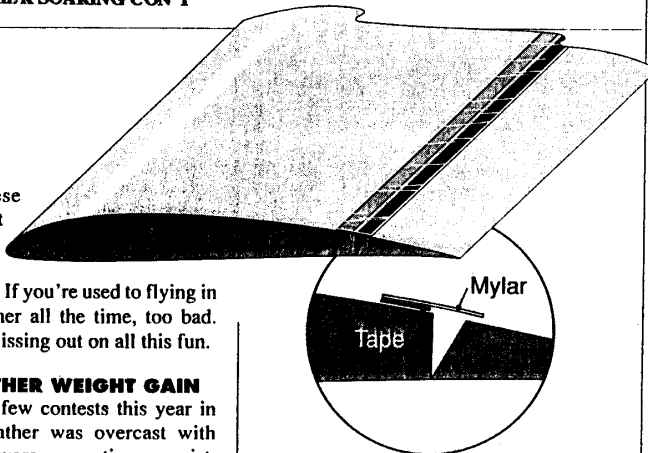
One problem: your model gets wet. This can have a significant effect on a its performance. If you think a composite construction is any better than wood in this weather, you might be surprised at how much weight a composite model will gain in the rain.

The biggest impact is on the model's CG. This is usually manifested as tail-heaviness and increased pitch sensitivity—not what you need when the conditions require smooth flying. Plan to add a little nose weight to keep at normal trim positions.

Unpainted, vacu-bagged models have pinholes in their surfaces. These pinholes can accumulate water—under the worst conditions, as much as 1/4 to 1/2 ounce for each square foot of surface area. For a typical unlimited ship, you will need to add 1/2 to 1 ounce to the nose to maintain the balance position. For all HLG fliers, a composite HLG can pick up 1 to 2 ounces of water in wet weather. This is significant, considering that a competitive weight for an HLG is 13 to 14 ounces. This is a good reason to catch your model in early morning rounds when there is dew on the grass.

IMPROVE PERFORMANCE WITH GAP SEALS

One of the simplest control-surface hinges is a simple piece of tape. With this type of hinge, the control surface pivots about the surface where it is taped. The other side of



A Mylar strip seals the gap along the upper surface of a flap hinge.

the control surface then has a gap to allow for control movement. This gap disturbs the airflow and generates drag. You can reduce control-surface drag by covering this gap with a Mylar seal when the control surface is near its neutral position.

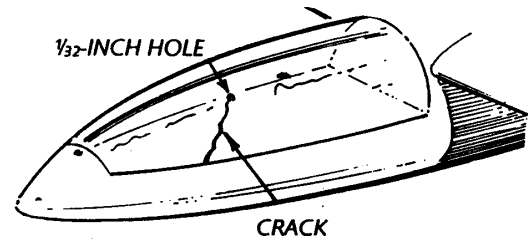
Seals made out of drafting Mylar are easy to add to a wing or tail. You need to buy some thin (3mil) Mylar from a drafting supply or arts supply store. You'll also need some Scotch double-stick tape (no. 136) to attach the Mylar. The Mylar gap seal is stuck to the wing with the double-sided tape. It overlaps the control surface 3/32 to 1/8 inch, and that keeps the gap covered for most small deflections. Don't overlap the control surfaces excessively, since the Mylar will then stick out too much when the control surface is deflected away from the Mylar.

Cut the Mylar into 3/4-inch widths for use as the seal. Put the tape on the wing or stab in front of the control surface, with its edges 1/32 and 7/16 inch away from the edge of the control-surface gap. When you are satisfied with the positioning, stick the Mylar onto the tape and rub it down. You can lift up the Mylar if you need to position it properly. If you don't like cutting your own Mylar and using the double-sided tape, Airtronics* offers Mylar gap-sealing tape.

See you next month.

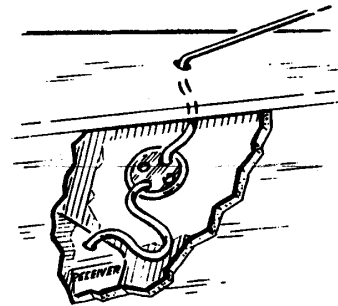
*Here's the address of the company mentioned in this article:
Airtronics Inc., 11 Aury, Irvine, CA 92718. ■

HOW TO



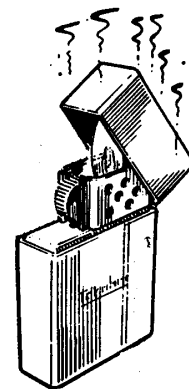
CANOPY REPAIR

Stop canopy cracks from spreading. Drill 1/32-inch hole at end of crack—a hot needle will do it.



ANTENNA SAFETY DEVICE

An old idea but essential. Thread antenna through button inside fuselage. Wire is not ripped out of receiver if pulled. Allow enough slack between button and receiver.



PORTABLE MONOKOTE IRON

Heated cigarette lighter cap is a portable Monokote iron for field repairs.