



SAIL & SCALE

NEWSLETTER OF THE EDINA MODEL YACHT CLUB

January 1996

Volume 5, Number 1

Commodore's Corner: Greetings, members! I hope that the New Year finds you in good health and good cheer. With the holidays now passed and hopefully with some new boats, I am looking forward to an active and fun season in 1996.

This year, our meeting format will be as follows: 7:00PM: Start with club business (we are trying to keep this to a maximum of 15 minutes); 7:15PM: Monthly topic or seminar; 7:45PM: Show 'n tell.

Each month, topics will be discussed from responses to the club survey or on issues club members bring forward. These discussions will be lead by club members or local experts.

The first item of discussion in January will be glues, epoxys and all kinds of sticky stuff. Bring your questions and someone will have an answer. The other item of discussion will be suppliers. We have lots of members who use mail order with good luck, and they will share some of their experiences, good and bad.

The Board has put together a schedule of events for this year and we will be looking for helpers. We have scheduled more events, per your request. It should be a great time!

In closing, this year I would like to welcome and encourage everyone to become more active. We have a great club and I would like the rest of you to know and enjoy our club the way that I do. *Jeff McCabe*

New Year's Resolution: A decision was made at the membership meeting in November to change the club year to coincide with the calendar year. A ten dollar (\$10) membership fee for the seven additional months, June through December will be assessed to extend membership until year's end. Although the fee is not due until May, several members have already paid up. A supplemental membership application is enclosed for your convenience. Why not do it now and get your boat type(s) and frequencies up to date while you're thinking about it? A new membership list is imminent.

What and When?: The Commodore and Board met in December in order to formulate a schedule of events for the New Year. Take a peek at page two and let the leadership know what you think.

Where's The Meeting?: The presence of ice on the surface of the pond and rubber on the floor of the Centrum building signals our eviction from that edifice until Spring. We will meet in the Centennial

Lakes Garage (Band Room) until ice out. Walk to the North (left) of the Centrum building about three hundred feet or 125 paces to the garage entrance. Once inside, just follow your ears.

What's The Meeting?: Glues and adhesives will be the primary items of discussion...as is the main focus of this issue of the newsletter. Come prepared to ask questions and to get some gripping answers.

Bring 'n Brag: Haul along your winter building project to the January meeting. Other members would like to see what you're up to and could possibly do with a bit of encouragement on their new boat. Who knows! You might even pick up a building tip or two.

Builder's Corner: According to *Epoxyworks*, the semi annual newsletter published by Gougeon Brothers (West System®): "The ratio of resin to hardener is crucial to epoxy performance"... "If the mix contains excess hardener, hardener molecules will remain unreacted in the cured epoxy, weakening it"... "Never add extra hardener in an attempt to alter cure speed"... "You are better off with a little extra resin than a little extra hardener." A word to the wise!!

Epoxy Journal: For a free two year subscription (4 issues) to *Epoxyworks*, mentioned above, write to Gougeon Brothers, Inc., P.O. Box 908, Bay City, MI 48707-0908, Attention: Kris

Boating History: A record was set just one hundred years ago, when Joshua Slocum set sail from Boston on the first solo circumnavigation of the globe. He acquired his boat, reported to be 100 years old, rotting away in a field in 1892. Two years of work resulted in the (re)birth of his new vessel, *Spray*. That full sized restoration should serve as an inspiration to us model builders who sometimes take that long, or longer, to complete a miniature project.

Model Longevity: The *Nautical Research Journal* reports that a fifteen year old ship model undergoing restoration was found to display deterioration at every point at which cyanoacrylate glue and brass were in contact. It may be prudent to use epoxy when gluing brass until further evidence is forthcoming.

February Newsletter Deadline: Feb. 6th

Board & Membership Meeting, 11/21/95: Commodore McCabe called the meeting to order at 6:40 PM., D.Bros, D.Campbell, D.Proulx, M.Kirihara were present. Old Business: Commodore asked for financial report for past year. G.Phillips presented report (to be enclosed in all members' January newsletters). New Business: G.Phillips was asked and agreed to remain on as club Treasurer for the 1996 calendar year. He was advised that a maximum of only a \$50 expenditure is authorized without prior Board approval. McCabe asked for input from membership to the 1996 club schedule which

will be formulated by the Board very soon. Motion was made and passed to change club year to coincide with the calendar year to avoid prior years' confusion. A partial dues payment of \$10 was agreed upon to be paid by current members between now and March 31st to extend memberships until Dec. 31, 1996. D.Campbell agreed to serve as recording secretary for 1996. Club will look into the possibility of a static display at the Mall of America sometime before Spring ice-out. A total of 32 members and guests were in attendance for the swap meet. Adjourn, 7:25 PM

(tentative) **1996 SCHEDULE OF PLANNED EVENTS** (tentative)

	Every Sunday	Open Boating	4:30 PM - 9:00 PM
	Every Tuesday	Open Boating	5:30 PM - 9:00 PM
	Every Thursday	Open Boating	5:30 PM - 9:00 PM
Jan.	16th	Membership Meeting- Glues, Suppliers	7:00 PM - 9:00 PM
Feb.	20th	Membership Meeting- Hulls, Fiberglass	7:00 PM - 9:00 PM
Mar.	19th	Membership Meeting- Electrical, Lighting, Sound	7:00 PM - 9:00 PM
Apr.	16th	Membership Meeting- Painting	7:00 PM - 9:00 PM
	27th (Sa)	Ice Breaker & Buoy Setter	1:00 PM - 3:00 PM
May	5th (Su)	All Boats Relay	2:00 PM - 4:30 PM
	18th (Sa)	Big "E" Spring	1:00 PM - 3:00 PM
	21st	Membership Meeting- Sailing Basics	7:00 PM - 8:00 PM
June	9th (Su)	Parade of Model Boats	1:00 PM - 6:00 PM
	18th	Membership Meeting- Boat Repair	7:00 PM - 8:00 PM
	23rd (Su)	Fast Electric	2:00 PM - 4:30 PM
July	11th	Handicap Boating	6:00 PM - 7:00 PM
	16th	Membership Meeting- Sailing Rules, Tactics	7:00 PM - 8:00 PM
	21st (Su)	Sailboat Regatta	2:00 PM - 4:30 PM
	27th/28th	Minnesota Splash	10:00 AM - 6:00 PM
Aug.	10th (Sa)	Club Picnic	4:00 PM - 8:00 PM
	20th	Membership Meeting- Fast Electrics	7:00 PM - 8:00 PM
	24th (Sa)	Big "E" Autumn	1:00 PM - 3:00 PM
Sep.	8th (Su)	Fast Electric	2:00 PM - 4:30 PM
	17th	Membership Meeting- Nominations	7:00 PM - 9:00 PM
	19th	Light Up The Lake	7:00 PM - 10:00 PM
Oct.	13th (Su)	Columbus Day Regatta	2:00 PM - 4:30 PM
	15th	Membership Meeting- Advanced Modeling	7:00 PM - 9:00 PM
Nov.	9th (Sa)	Dry Dock Party	6:00 PM - 11:00 PM
	19th	Membership Meeting- Swap Meet	7:00 PM - 10:00 PM

Note: Centennial Lakes Park is available to all members for boating at any time. "Open Boating" is scheduled so that members know when it is most likely to find others at the pond. All events published above are timed so as not to interfere with open boating and most event times flow conveniently up to the scheduled open boating period. It is therefore quite easy for a member to participate in either one or both of the activities.

After reviewing some of the comments regarding the Newsletter in the recent survey, I thought that it was especially fitting to run across the following item in the January issue of *Model Aviation* magazine called: "The Joy Of Editing" Jim

If we print jokes, people say we are too silly. If we don't, we are too serious.

If we clip things from other sources, we are too lazy to write them ourselves. If we don't we are too fond of our own selves.

If we don't print contributions, we don't appreciate true genius. If we do print them, the paper is full of junk.

If we make a change in the contributor's writing, we are too critical. If we don't, we are asleep.

Now, most likely, someone will say we swiped this from some other publication.

We did!

Edina Model Yacht Club

Income and Expenses

Submitted By: G. Phillips, Nov.21,1995

Balance from: 11/16/94 \$1,073.31

Income, 1995

Dues	\$1,590.00
Advertising	\$ 75.00
Miscellaneous	\$ <u>22.50</u>
Total	\$1,687.50

Total Income: 11/16/94 - 11/21/95 \$1,687.50

Expenses, 1995

Newsletter	\$315.11
Parade of Model Boats	\$134.07
Picnic	\$171.70
Dry Dock Party	\$252.64
CR-914 Regatta	\$441.50
Printing and Materials	\$ 74.98
Carried Over From 1994 (Postage & Printing)	\$ 55.88
Misc. (Refreshments, buoys, magazine sub., bank chgs)	<u>\$133.16</u>
Total	\$1,579.04

Total Expenses: 11/16/94 - 11/21/95 \$1,579.04

Balance as of: 11/21/95 \$1,181.77

cut and mail

Extend Your Membership In The Edina Model Yacht Club

Additional Membership Dues For Period From May 31st through Dec.31, 1996 Adult- \$10

Membership Supplement - - 1996 Renewal

Edina Model Yacht Club, 7499 France Avenue South, Edina MN 55435
(Please make checks payable to: Edina Model Yacht Club)

(Print) NAME: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone:(_____) _____

Type(s) of Sailboat Operated: _____

Type(s) of Electric Boat: _____

Channel Number of Radio(s) - and - Number Of Boats Operated Per Channel (in parenthesis):

CH: _____(), CH: _____(), CH: _____(), CH: _____()

ADHESIVE SELECTION CHART

Jim Smith EMYC 1996

Attach To ➡	Wood	White Metal	A.B.S. Plastic	Styrene Plastic	Brass	Acetate	Polyester Molding	Epoxy Fiberglas
Wood	E C Y	E C	E U C	E T C	E	U G	P F	E F C
White Metal	E C	E C	E U C	E T C	E F	U G	P F E	E C
A.B.S. Plastic	E U C	E U C	U C E	U C S	E	G E	G F	E G
Styrene Plastic	E T	E T	T S	S T	E T	G	P	E T
Brass	E	E C	E	E	E	G	P	E
Acetate	G U	E G	E G	U G	G	U G	G	E
Polyester Molding	P F	P F E	P G	P	P	G	P	P F
Epoxy Fiberglas	E F C	E F	F E	T E	E	G U	P F E	E F

Listed in order of preference for model boat building. I lean toward epoxy if time permits. It pays to rough smooth surfaces such as brass and plastic with coarse sandpaper prior to applying the glue in order to provide a tooth to which the adhesive can better adhere.

C - Cyanoacrylate (e.g. Zap, Zap-A-Gap, Slo-Zap, Zap Gel) **E** - Epoxy **F** - Flex-Zap (cyano for fiberglass)
G - Gen. Purpose Clear adhesive (e.g. Pacer Formula 560) **P** - Polyester Resin **S** - Styrene Cement (liquid or tube)
T - Plasti-Zap (cyano for polystyrene) **U** - Poly-Zap (cyano for lexan and hard speciality plastics)
Y - Yellow Wood Glue (e.g. Titebond II, Titebond)

Although my experience is mostly with Pacer's extensive line of Zap products...I am sure that other brands have similar adhesives.

What's Happened to Glue?:

If you are new to modeling or if you are returning to building after a layoff of more than a few years, the selection of glues and other adhesives on the hobby shop shelf can be bewildering.

Certainly, model airplane, solvent type tube glues such as the old standby, *Ambroid* are still available. Although they are said to be water resistant, their use as a primary adhesive in model boat building is not recommended.

Commonly available, PVA white glues such as *Elmer's Glue-All* are also not water proof and should probably be avoided.

Aliphatic Resin yellow glues such as *Titebond* are advertised to "resist water" while *Titebond II* "passes type II waterproof testing", whatever that implies. Their primary use is for wood to wood joints and they can be sanded much more easily than white glue. They are not toxic and have virtually no odor. Use of this type of glue requires extreme care sealing of all surfaces to preclude gradual deterioration of the bond as a result of moisture.

The biggest surprise on the hobby shop shelf is the availability of the cyanoacrylate (CA) super glues such as *Zap*, *Jet* and *Hot Stuff*. They are commonly offered in three thicknesses. Thin CA penetrates deeply, bonds in seconds and should only be used on very tight fitting joints. The gap filling type can be used on less than perfect joints and allows a few seconds for positioning. Slow CA has about a 90 second cure time and is excellent for laminating and planking. Pacer has recently introduced *Zap Gel* which is a very thick adhesive that won't run or drip even on vertical surfaces.

All the cyanoacrylates can be caused to set up instantly by the application of spray accelerator. Common baking soda does the same job, however the resultant joint is very hard and almost impervious to sandpaper.

Regular CA adhesives give off fumes which cause allergic reactions in many users, especially when used in volume. Most manufacturers sell "odorless" CAs

which are priced at almost twice the regular product, but they allow allergic builders the opportunity to experience the advantages of CA without the unpleasant reaction.

Caution...regular CAs dissolve foam parts. Many of the odorless brands claim that they do not. It is certainly prudent to test your particular brand on a piece of scrap before you assume that to be fact. Sometimes, the dissolution can occur over a period of several minutes, or even longer.

CAs are available in formulations for use on Nylon, Lexan, ABS, butyrate, vinyl and fiberglass and for use as thread lock.

When you purchase that first bottle of CA, it is recommended that a bottle of debonder is also on your shopping list. After all, cyano glues were originally developed by Eastman for the purpose of gluing human flesh during surgery.

Epoxies are two part glues that cure to a very strong bond. They are excellent for high stress areas and for applying fiberglass. They are essentially waterproof. Most hobby epoxies are mixed in equal parts and set up in 5, 15 or 30 minutes. These products can cause allergic reactions after long term (or not so long) exposure and so should be used with rubber or vinyl gloves. The five minute type is more than a bit smelly, so expect a few negative remarks from your roommate if you use it very often.

Epoxy can be thinned slightly with denatured alcohol to allow it to be painted on as a waterproofer on the inside of a hull, for example. This does not seem to change the set up time or surface hardness. Application of a slight amount of heat will help any epoxy to cure more rapidly.

Polyester resins are less expensive than epoxies and are therefore frequently used to form the hulls which come in kits or from independent hull builders. It is quite difficult to bond or glue to cured polyester resin, and polyester too, will dissolve foam. These both create problems in its use. It is also very aromatic and its use is best relegated to the out-of-doors. It has a limited shelf life too...no more than three years, including the

indeterminate interval on the dealer's shelf! And beware of the hardener, the stuff in the little bottle. It's a nasty substance. Get it in your eye...instant and often permanent blindness! Ouch!

Epoxies and polyester can be mixed with microballons, colloidal silica, chopped fiberglass, graphite powder and various pigments to add bulk, density, machinability, color and other desirable features to the finished product.

There are also several speciality products on the market. *Zap-A-Dap-A-Goo*, and *PFM* are one part adhesives and sealants that will glue just about anything to anything (except foam). They work well as insulators over open solder joints such as Dean's connectors

You might even come across *Stabilit Express* which like CA, is a by product of the medical field. This stuff was originally bone cement. It is twice as costly as CA but might have some hobby uses.

Wilhold's *R/C-56* (which is no longer being made) and Pacer's *Formula 560* are white, water resistant glues which will bond vinyls and other plastics to wood or glass. They dry crystal clear and are useful in attaching plastic or glass to portholes, etc. They don't fog plastic as CAs usually do.

In addition to the previously mentioned CAs formulated for plastic, there are tube glues and liquids available for styrene plastics. They both work on the principle of softening the parts, and "welding" them together. The tube cement can fill slight gaps, but takes considerably longer to dry hard enough to sand or paint.

Finally, there are several spray type adhesives which may come in handy. 3M's #77 is such a product. It can be sprayed very, very (very) lightly on fiberglass which then allows the cloth to be pre positioned on a surface prior to applying CA or epoxy. It is also useful in tacking patterns to parts and adhering paper to paper, or sandpaper to foam or wooden sanding blocks.

And then, of course, there's kindergarten paste. It works very well in pasting up paper dolls and paper chains after the above choices drive you crazy!

Jim Smith

January Meeting Notice:

(Third Tuesday of the Month)

Tuesday, Jan. 16th

7:00 P.M.

Centennial Lakes Garage
(Band Room)

Commodore:	Jeff McCabe
Vice Commodore	Dave Bros
Vice Commodore	Doug Campbell
Vice Commodore	Mikio Kirihara
Vice Commodore	Dan Proulx
Treasurer	Gary Phillips

Newsletter Editor	Jim Smith
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