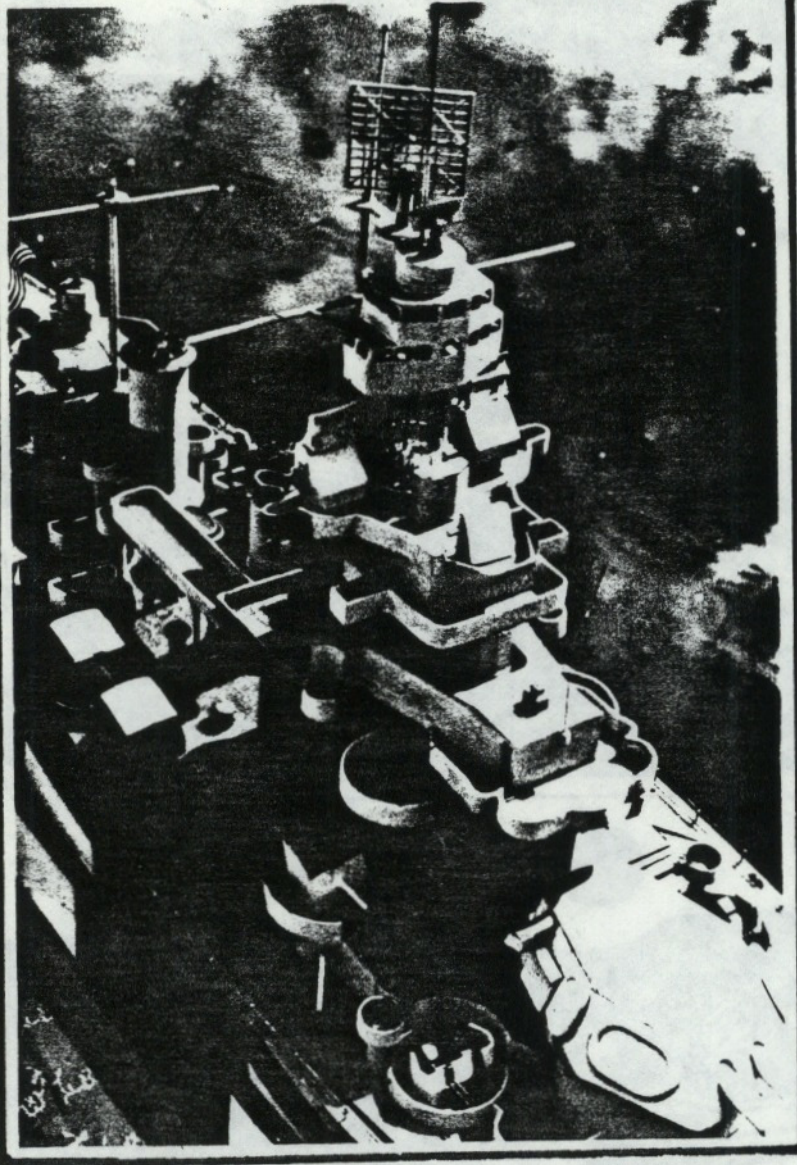


HULL BUSTERS

The Only Strictly R-C Warship Combat Publication



OCTOBER 83

Howdy Friends! This is the employed geologist, Admiral, editor Fluegel. I'm not sure the job is permanent but I think it is. Well, that goof-squad-executive-board is still taking their ugly naps or something because the Official 1983-84 rules are not available for publishing. Terry is the worst! I'm afraid he's going to invoice the club for storage...Terry, are you some sort of Federal Beasreaucrat, Maybe a post-man. (Mailman is redundant...Postal service is paradoxical...Sorry Allies, that's a real word). Now now Fluegel, be nice. There has been a bit of battling since the last Hull Busters. In Tennessee our dear buddy Terry Darby had a 10 ship Regionals! The Rookie (?) James Foster won the overall event with a cruiser (Pensacola) ...Have we restricted battleships too much? Probably not. I'm told a ~~new~~ smoke screen was laid by Larry's Zara, that's a first! I also hear that Milholland's Alabama was sunk twice! That's probably because he was feeling guilty about not having the Special Issue of Hull Busters out. That's alright Milholland, we can't all be like me.

The secret to finishing your issue of Hull Busters is long gossipy introductions, Milholland. (The Allied definition of a copy machine is a sheet of carbon paper.) Anyway, Terry's Regionals was a supreme success. Maybe one or two battle reports will be in the next Hull Busters - I sure hope so.

Hey World! Speaking as the New Axis Naval Commander I would like to encourage you future combatants to build Axis ships! We Axis are very rare and precious items. The Regionals in TN was mostly "America vs. Europe"! Not to realistic but I have to admit some pleasure seeing the Americans blasting the bloody British! (See Milholland, It's easy). "First vee deevide, un den vee conquer"!

The Regionals in Oregon have also erupted in Dan Dees Lake. Dan is great about writing Hull Buster articles so you can look forward to lots of Battle reports in the next issue and a shorter introduction.

Please pay special attention to Stan's safety rules. They aren't recommendations, they are rules and as such everyone of us who own a ship will have to rebuild our gun-servo systems. Stan has included a "How to" to help us get started. Personally I HATE being told I have to change my ship, but Stan is trying to safeguard are good standings with NAMBA. Dictators are great as long as I'm the dictator, well, power is governed by "the Golden Rule"...He who has the gold makes the rules. What am I? A comedian? (Are you paying attention Milholland?) I was talking to an Allie the other day about the early Silicon chips and he thought I was talking about Stone Hinge.....well it's funny to geologists. OK gang, one more thing, if you want to stop these long introductions send me articles! Make them single spaced and 4 3/4 inches wide-if you know how to type- and also send them to me as soon as possible! Believe me I know other jokes and yes, that's a threat. Love Fluegel. please!

OBSERVATIONS OF THE FOUNDING FATHER

Greetings Combatants! The first and main thing on the agenda is the new safety rules. NAMBA in their infinite wisdom has required that we have some written safety rules to show their insurance underwriters. After about \$50.00 worth of coordination with the (your) board members by telephone the following safety rules have been agreed upon:

1. The "BB" will be the only size projectile allowable.
2. Non-strengthened 1/32 inch thick balsa will be used as the hull skin on all areas above one inch below the waterline. Superstructure vertical walls will also be of 1/32 balsa.
3. No CO₂ or other propellant of higher pressure than Freon 22 will be used to power the guns. Freon 22 may not be heated to increase its pressure.
4. No heavy cruisers or other ships with a beam of less than 7 inches may have side firing guns or rotating turrets.
5. Eye protection shall be worn by combatants during combat events.
6. Elevation will not be greater than 5 degrees above the plane of the water.

7. When not in the water all ships will have their barrels safety pinned or will have their pressure supply lines disconnected.

8. All gun systems will be fitted with a pressure relief valve (rated below the pressure) between the tank and the first valve in the system.

9. Penalties of 100 points may be assessed per violation. The offending ship will also be disqualified until the violation is corrected.

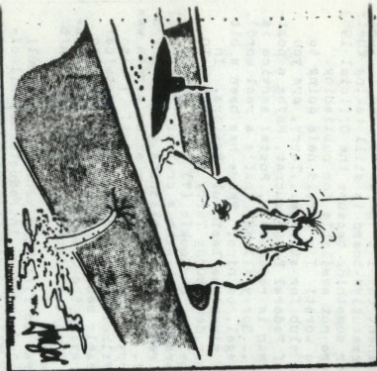
10. The contest director or designated Safety Officer may disqualify any ship, system, or combatant if he deems them to be unsafe.

Well those are an initial starting point. I'm sure other rules will be needed in the future. These concerns will be addressed as required to keep our hobby reasonably safe.

Let's Battle(Safely)!

Stan

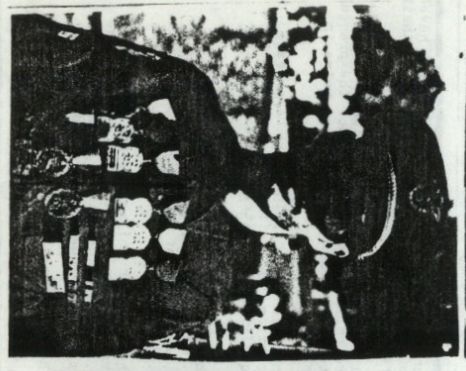
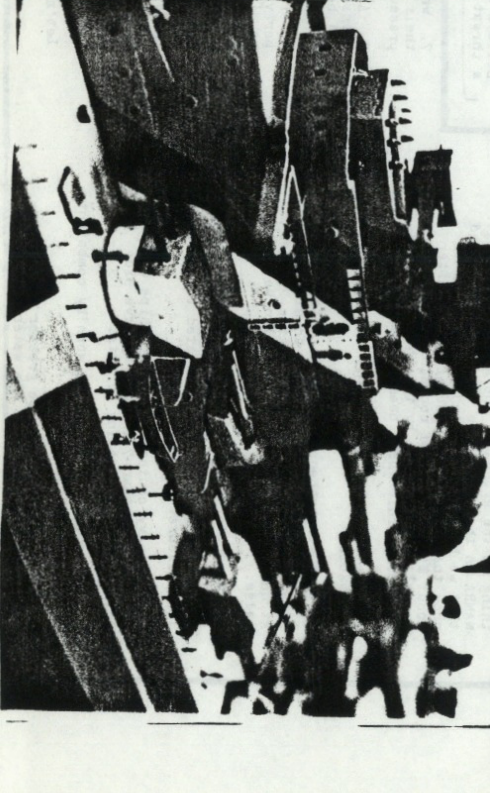
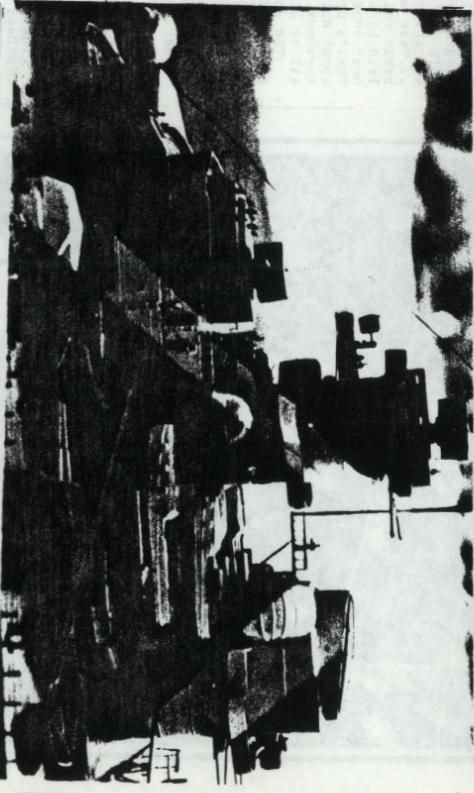
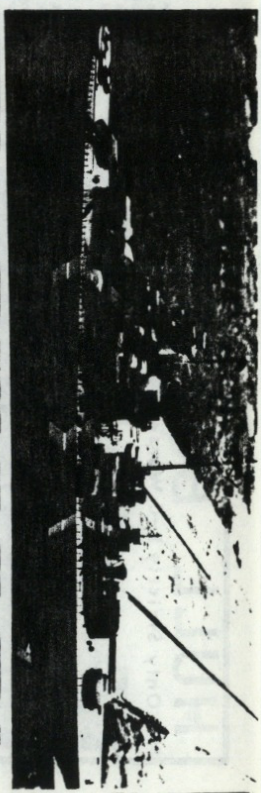
ferman



"How was I supposed to know it fired torpedoes?"

PLAYING ON THE MONEY

Hull Quarters is proud to honor its Editor for the magnificent accomplishment he (Pruessel) and his Bismarck achieved in the 82-83 season. Pruessel's Bismarck won the (1) Von Pluegel Traveling Trophy (most points in the battling year) (2) 1983 Championships winner (most points at championships) (3) 1983 Championships highest points per sortie Capital Ship Fleet Action and (4) Individual sorties. (5) high point winner at the 1983 South East Regatta in Alabama and second place in 1983 Championships "Best of Scale" event.



How to...



Wind Your Own Wah Ming Motors

By J. Salini

I am writing this article to help satisfy the demand for a motor which is no longer readily available—the Wah Ming HR-47.

Before explaining how to wind your own Wah Mings, let me tell you about these motors. They became very popular during the 1983 Nationals in Springfield, Mo. They were used on my Conte di Cavour, Darby's Giulio Cesare, Murphy's Yamato, Beaver's H.M.S. Hood, and a number of other combatants changed their existing motors for Wah Mings during the week. The performance of these ships seemed to improve by using wah mings.

My 2-shaft Italian battleship was the fastest ship at Nationals (20 sec./100 ft.) using two direct-drive Wah Ming motors. Props were 1½" white metal from Model Shipways. Two sets of 12-volt sub-C Nicads in parallel for each motor was more than enough power for a full day of battling. Radio noise interference has not been a problem for me, even when the receiver antenna was tangled through the motor leads.

Wah Mings provide plenty of power with minimal battery drain. They are designed for 12 volts and draw 1 amp when driving a 1½" 3-bladed prop from Model Shipways. Stall current is 3 amps. Wah Mings run slower than most hobby motors and can operate efficiently in the 1500-3000 rpm range desirable for cruisers and larger ships.

These motors can be run at 6 volts for reduced speeds (similar performance to a Dumas-Pittman 6V. motor), or at 18 volts for very high power. But the current should not exceed 2 amps on a continual basis or the motor will run warm. (Current can be reduced by reducing the propeller diameter or pitch).

The only problem with Wah Ming motors is they are no longer available. But you can have motors which perform the same as Wah Mings by rewinding the wires inside a similar size motor such as an Associated O5 motor. This involves opening the motor and removing the copper wires which are wound around the three cores, then rewinding them with a different size wire. This is not difficult if done carefully, and should take about one hour.

REWINDING THE MOTOR

Start with an Associated O5 motor or similar size motor such as the Dumas 6 volt 10,000 rpm motor (I prefer the Associated motor because it has better magnets).

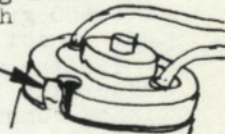
You will need the following parts and tools

- Associated O5 motor or similar
Available from local hobby shops or from Hobby Shack, Cat.# 558007 \$9.86
Tel. 1-(800)854-8471
- Small-tip soldering iron
- Resin core solder (Never use acid core solder on electrical wires).
- Soldering paste
- Exacto knife
- Wire clippers
- Pair of pliers
- 150 feet of #30 enameled copper wire.
This is available in larger spools from wholesale electronic companies,

electronic suppliers, and motor repair shops. (It is sometimes called transformer wire).

STEP 1 OPEN THE MOTOR

Remove any couplings or gears from the motor shaft. If there are nicks or splines on the shaft, file them smooth so the shaft won't get caught as it's being removed. Pry open the metal tabs which hold the plastic motor back in place.



Open the motor by pushing on the end of the shaft. (Back will slide out)

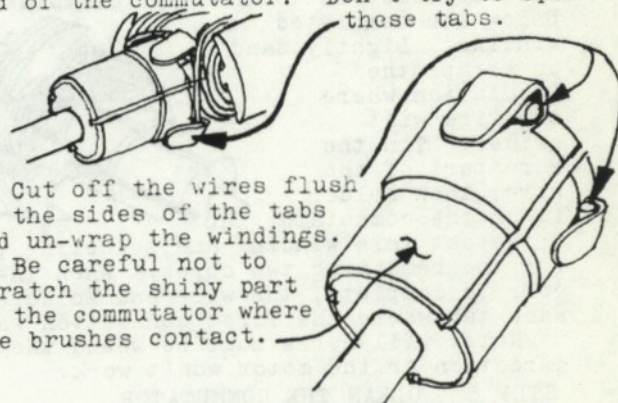
Remove the plastic back and armature, being careful not to damage the brushes.



There are several small washers on each end of the shaft. Don't lose these! If they fall off the shaft, put them back on in the same order as they came off. Then wrap tape on the shaft to keep them in place.

STEP 2 REMOVE THE OLD WINDINGS

You will notice the wires on the armature are crimped under three copper tabs at the end of the commutator: Don't try to open these tabs.



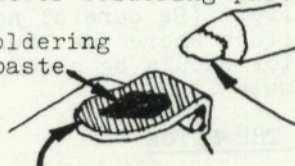
Cut off the wires flush at the sides of the tabs and un-wrap the windings.

Be careful not to scratch the shiny part of the commutator where the brushes contact.

STEP 3 TIN THE COMMUTATOR TERMINALS

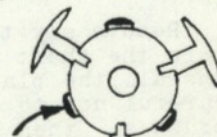
Tin the top side of the three tabs on the commutator. Be careful not to let any solder get on the shiny part where the brushes will contact. I usually scrape the top of the tabs with an exacto knife to expose a bright, shiny surface. Then I put on a small dab of soldering paste.

soldering paste



I clean my soldering iron so only a small drop of solder is on the tip.

Scrape or file to expose a shiny copper surface in this area only.



After tinning, there should be a small bead of solder fused to the top of each of the three tabs.

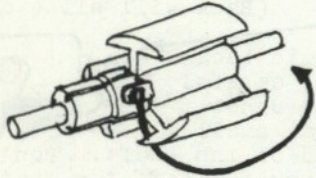
STEP 5 REWIND THE CORES

Each of the three cores will be rewound with 190 turns of #30 enameled wire. This is very delicate wire which can become brittle and break if it is kinked or nicked by dropping tools on it. It has a thin film of transparent enamel on its surface for

electrical insulation. Avoid scraping the enamel off except where you want solder to stick to it.

Begin by setting your wire spool so it will feed freely as you use the wire. Remove about 1/8" of insulation from the end of the wire. This can be done by scraping the end of the wire very gently with an exacto knife. I prefer sanding it with 600 grit emery paper, as knife blades tend to cut into the wire, making weak spots.

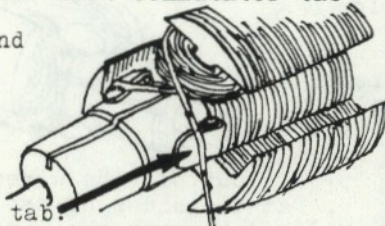
Tin the wire end using soldering paste. Solder the tinned end to one of the three tinned commutator tabs, then wind 190 turns as follows:



Hold the commutator to the left, then start winding counter-clockwise turns on the core below the solder tab.

This is the standard winding direction for these motors, but the cores can also be wound clockwise. The coils should be wound just tight, but not straining the wires. It's good to leave the soldered ends slightly loose so there is no tension against the joint.

When 190 turns have been wound, the wire must be soldered to the next commutator tab below the completed winding. Lightly sand or scrape the insulation where the wire will solder. Tin the bare part of the wire, then solder it to the commutator tab.



Repeat this winding and soldering procedure for the remaining two cores. When the final core is complete, the wire end solders to the same tab where the first connection was made.

Note: All cores must be wound the same direction or the motor won't work.

STEP 6 CLEAN THE COMMUTATOR

Before re-assembling the motor, clean the commutator with a paper towel and alcohol. Do not use electrical cleaners— not even the spray cleaners which are made for motors. These can leave a residue which causes motor burn-outs.

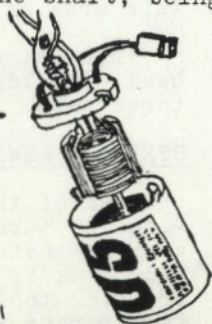
If there is dirt caught between the commutator segments, scrape it out with the edge of an exacto knife. (Be careful not to scratch the shiny surface where the brushes will touch). The motor should be clean and dry when you re-assemble it.

STEP 7 RE-ASSEMBLE THE MOTOR

Remove any tape from the shafts and make sure the shaft washers are in place. Install the plastic back on the shaft, being careful not to damage the brushes. Then hold the tail shaft with pliers and lower the assembly in the motor case.

Bend the two tabs down to hold the plastic back in place.

If lubrication is needed, add one small drop of oil to each bearing.



GALINI

SIDE MOUNTS -- AWESOME AND LIMITED

If you have ever gone up against a proven battleship you know what sidemount guns can do; if you had a battleship, the exchange might have been even, but neither ship had an intact hull after a few seconds. If you had (past tense) a cruiser in this exchange, there's a good chance it went to the bottom. Now that may be a little extreme. Some people (including myself) took cruisers out against a battleship, we survived, but it was a fearful experience.

After Nationals and during, there was a lot of discussion as to the power of battleships. Everyone agreed that some of this awesome power should be reduced if we wanted to see cruisers out on the water. It was with considerable difficulty that a rule was posted that limited the battleship. At first we agreed on nothing, but eventually a rule was posted that at least 4 people felt they authored -- that's good -- it shows wide support and acceptance. Unfortunately at that late hour and after a week's worth of battling and damage repair, most of us were tired to take good notes as to what this rule was. I have heard that there is some confusion now as to what was passed and/or its intent. I don't claim to be the last word in this matter, but I do want to express my feelings and let you know how one of your officers interprets this rule and its intent.

I think the best thing for me to do is state the rule I thought I voted on -- the one I wanted passed.

BATTLESHIPS (AND BATTLECRUISERS) ARE LIMITED TO 5 UNITS. A GUN OR PUMP COUNT AS ONE UNIT. THERE IS TO BE BUT ONE SIDE-MOUNTED GUN PER SIDE WITH ADDITIONAL RESTRICTIONS OF 50 BB MAGAZINES AND THE GUN MUST BE HORIZONTAL. THIS 50 BB MAGAZINE WOULD COUNT AS 1/2 UNIT. OTHER MAGAZINES FOR BATTLESHIPS WERE UNLIMITED -- 100 BB MAGAZINES ON BATTLECRUISERS. ONE QUARTER (1/4) OF THE SHIP WAS TO BE LEFT UNGUARDED (NO GUN COVERING THAT SIDE.)

Well, that's the rule I remember. It seems that there may be some confusion as to how many side-mounts a ship can have. The way I view it, if we had intended for these monsters to have more than 50 BB on a side, we would not have restricted the magazine size for the sidemount. It wasn't so much the bow or stern gun that had been doing the damage. It was that 100 round side-mount. Another rule that was clearly voted on was rotating turrets. I don't think anyone really wanted to outlaw those beautiful rotating turrets on the Colorado. We weren't trying to squelch creativity, but a rotating turret would give a ship the capacity to have more than 50 bb on a side. The rule went through -- NO ROTATE. Again I ask -- why was that presented and passed if ships could have more than 50 BB's per side.

I am sure there are going to be people that disagree with my interpretation and my justification for the rule as I remember. I suggest that someone formally ask the executive committee about this rule. I'll abstain from voting if someone else will make the submittal. Let's help those of us that have or are building battleships/battlecruisers and get this clarified.

One final note. I've taken the Ceasare out 6 sorties now with one side mount 50 rounds. Believe me, it still has teeth, but a good cruiser can survive and do damage.

Terry Ruby

How to HOW TO BUILD A SIMPLE SAFETY VALVE

Now that your ships are all illegal it's time to show you how to build a simple cheap safety valve. There are some good "after effects" to installing this system on your tank. Your valve may be easily replaced any time that you want to do such a thing. But to get the full advantages of the new MWP Co. (Standard on all new Mk IX, MOD 1 \$39.95 miniguns, free advertisement #1) you should switch to the new tank/valve mounting system. You'll love it (thank you Stan for making it better). First look at Figure SV it shows the materials that make up the basic safety valve system. The hose used in this system will not withstand prolonged exposure to freon 22 on warm days so you should empty your tank following the days battling. You should make several spare safety valves as you may need them on warm (80 plus degree) days.

Figure V/T shows the manner in which the valve, safety valve, Tee, and tank assemble.

Figure MT illustrates the mounting bracket and valve knob arm as they install on the valve.

Finally, Figure SM illustrates the servo mounting bracket.

Since these figures tell the story will not elaborate except on the figures.

Sincerely,

Safety Sam *Sam*

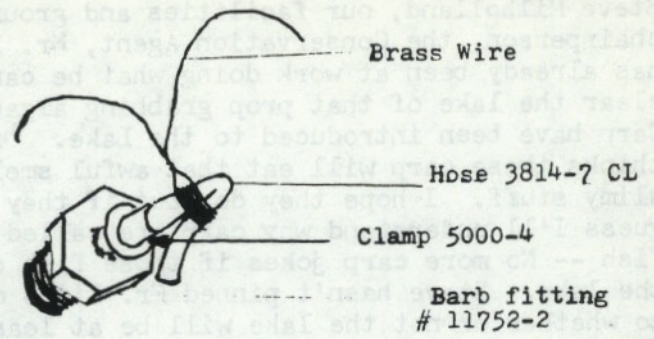


Figure SV.

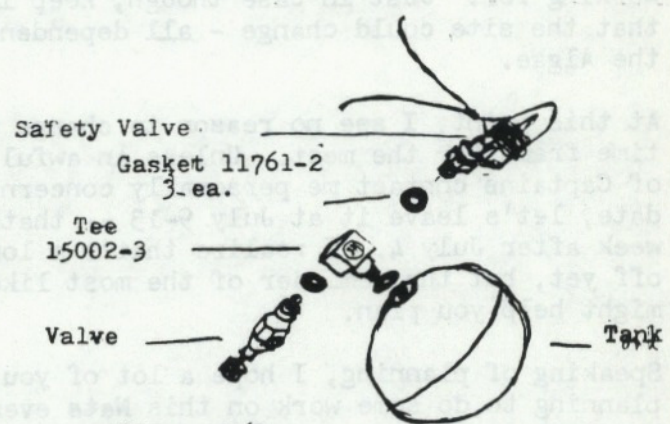


Figure V/T.

Figure MT.

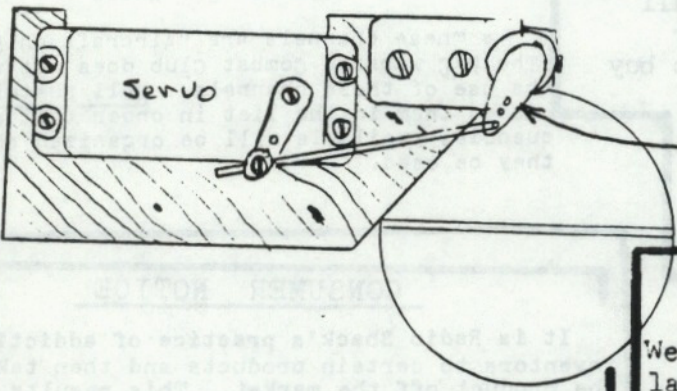
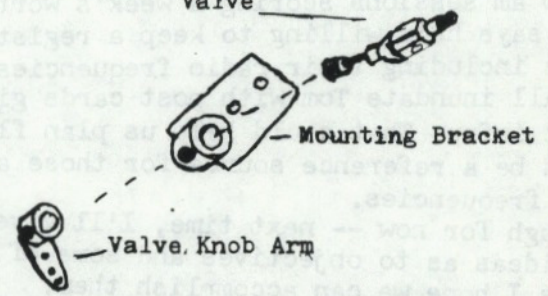


Figure SM.



Figure MT



GNATS TO YOU, TOO!

Well, it seems that between Fluegel and Milhol-land, a tradition has started - GNATS! to you - Oh - I guess that's suppose to be NATS to you! Just in case you haven't heard, we don't have Nationals -- we have a championship. NAMBA, who is still your ruling body defines Nat's as the once a year gathering for all their speed boats, etc. We are welcome to take part and have meet with them but we have little say in when and where -- anyway NAMBA has suggested that we hold a Championship -- that's fine, maybe it will reduce the number of those little buggers (gnats).

It looks like Springfield will be the site for our '84 Champs - (That just doesn't sound right. At our business meeting in Springfield, it was left open. More or less dependent on if the lake would be open (Alfae free). According to



Steve Milholland, our facilities and ground chairperson, the Conservation Agent, Mr. Pitts has already been at work doing what he can to clear the lake of that prop grabbing algae. Carp have been introduced to the Lake. Mr. Pitts thinks these carp will eat that awful smelling slimy stuff. I hope they do, but if they do I guess I'll understand why carp are called trash fish -- No more carp jokes if those fish clear the lake. Steve hasn't pinned Mr. Fitts down as to whether or not the lake will be at least as clear in '84, but it appears that's what he is working for. Just in case though, keep in mind that the site could change - all dependent on the Algae.

At this point, I see no reason to change the time frame for the meet. Unless an awful lot of Captains contact me personally concerning the date, let's leave it at July 9-13 -- that's the week after July 4. I realize that's a long way off yet, but the reminder of the most likely dates might help you plan.

Speaking of planning, I hope a lot of you are planning to do some work on this Nats event. I'll be farming out some responsibilities. I want to play too. Tom Jass has already volunteered. You wouldn't believe the time he's put in and the time he's saving us by developing a computerized scoring system. No more math errors and hopefully, no more 3:00 am sessions scoring a week's worth of battling. Tom says he's willing to keep a register of combatants including their radio frequencies. What say we all inundate Tom with post cards giving all that info. That could help us plan fleets or even be a reference source for those about to buy new frequencies.

Enough for now -- next time, I'll give you my ideas as to objectives and some of the ways I hope we can accomplish them.

See you at the lake,

Terry Darby

RADIO FREQUENCY CONFLICTS

by Fluegel

One of the hottest issues to precipitate out of the 83 Championships was how to handle radio conflicts. A rule recommendation that almost passed was "One's frequency is one's alliance". What that means is if your battleship New Jersey has an Axis frequency, it fights on the Axis side. The reason I'm telling you this is to emphasize the importance of obtaining the correct frequencies for your ships.

The club has a "Recommended Radio Frequency" list and you need to try to be on the Allied frequencies if your Allied, etc., etc. This is particularly true for large fleet battles. If the New Jersey is on my Bismarck's frequency guess who came to the Championships to watch my Bismarck battle? That's right, the Contest Director's first question when handling radio conflicts is "whose frequency are you on?". Answer "Axis.", reply "The Bismarck sails".

There are other circumstances that can and do determine the decision of the contest director and ideally he can rule in such a way that everybody gets to battle as much as possible, however, the problem can be significantly a-

voided if one has correct frequency.

The number one goal in this hobby is FUN. I like watching battles, but I have fun when I'm battling. It's a little sad to travel hundreds of miles with a ship that took you months to prepare, and then battle every other battle or every 3rd or 4th battle. Do yourself a favor and get the right frequency. If you really want to help yourself, select a radio that you can plug in other "right" crystals. After all, the more ships in the water, the more fun it is for everybody.

channel	Frequencies	
?	26.975	Allies
?	27.095	Allies
?	27.145	Allies
?	72.400	Allies
?	72.960	Allies
?	27.095	Axies
?	72.080	Axies
?	72.160	Axies
?	72.240	Axies
?	72.320	Axies
?	75.640	Axies
* 12	72.030	Allies
* 38	72.550	Allies
* 40	72.590	Allies
* 42	72.630	Allies
* 44	72.670	Allies
* 46	72.710	Allies
* 48	72.750	Axies
* 50	72.790	Axies
* 52	72.830	Axies
* 54	72.870	Axies
* 56	72.910	Axies
62	75.430	Allies
64	75.470	Allies
66	75.510	Allies
68	75.550	Allies
70	75.590	Allies
74	75.670	Allies
76	75.710	Axies
78	75.750	Axies
80	75.790	Axies
82	75.830	Axies
84	75.870	Axies

* these channels are "Aircraft only".

The R/C warship Combat Club does not promote the use of these channels. Hull Busters included them in the list in order that all frequencies available will be organized should they be used.

CONSUMER NOTICE

It is Radio Shack's practice of addicting us inventors to certain products and then taking the product off the market. This results in the dreaded disease "goody withdrawal". It also results in "goody hoarding". Well, Tom Jass told me to go buy all the Radio Shack electric connectors I could because Radio Shack is discontinuing them! On 9-29-83 I visited my local Radio Shack and found Tom was right. The "Two Prong Connectors, 6 plugs, 6 sockets, 2 red, 2 black, 2 ivory cat no. 274-342" come in a clear plastic bag, with a red piece of card-stock at the top. They are regularly priced at \$2.49 but at some of the Radio Shacks they are on sale for \$1.25. So far I have hoarded 10 packs. These connectors are well worth the money and found in 90% of R.C. combat ships.

By the way, I discovered a new Radio Shack 1.5-6 volt motor (99¢) cat # 273-222. In a preliminary evaluation I found they were electricly quiet (Putaba radio) had fair torque but seemed to have an unacceptably low rpm; however they are small and possibly good motor for destroyers. Well, I think I will go in the garage and look at my connectors.....Thanks Jass.

START A 'SHIPS LOG'

by Fluegel

I'm not sure if it was Stan of Jeff who talked me into keeping a 'Ships log' but it was good advice (I guess it couldn't have been them...). Anyway, I now have 68 pages of history about my Bismarck (1978-1983). It's difficult to estimate the "logs" value but it has had some. Be specific Fluegel! OK, how about pre-battle predictions of my ships strong points, weak points, and the strategies I anticipated would be suggestful. Oh, so you don't believe that will persuade you to keep a ships log. Well, how about the post battle section I call "lessons learned" where I reassess my strategies and list modifications I need to make to the ship before the next battle, ha, how about that for persuasion!...Oh! well, how about having the sea trial results all recorded. You ask, 'what's that good for?' evaluating ones ship after modification. Be specific Fluegel! OK Over the life of ones ship one will make several modifications (motors, props, batteries, ridders, etc.). After the modifications you take the ship to the lake and you see how the modifications helped-or hurt. You stand there on the shore, tilt your head and say, "Boy, that's a lot better...?" Is it really? Let's say you had changed the motors. If you had kept a log you could clock your ship with its new motors and KNOW how much better/worse your ship was doing. My sea trials have become quite an event. I tested eleven different ship performances, which requires about 2 hours and 10 minutes. That is alot of work (fun) and when all is said and done I KNOW exactly what my ship will do. Be Specific Fluegel! OK, my 1983 Championship Bismarck would do an

average running start 100' in 24.21 seconds,
 average standing start 100' in 26.21 seconds,
 average 360° running start in 13.84 seconds,
 average 360° running start Port in 14.53 seconds,
 average 360° running start Starboard in 13.15 seconds, Stop from full speed in an average 3.7 seconds which takes it CLASSIFIED ft. Reach full speed in 2.00 seconds which requires a calculated 8.26 feet, After 1 hour and 41 minutes of 70% full speed and 30% slow speed the average propulsion battery level will have fallen from 100% full charge to 81.25% charge. Now that I'm looking at my ships log there are several other observations I also routinely measure or calculate. OK, how is that for specific?, Go on Fluegel, well Salini showed me some good looking props and I'm going to see how they will perform on my ship. I may find that my ship may have a better reverse but may have a slower 100'/second. Battery drain, turning, acceleration, everything may change, some things better, other things worse. After the new sea trials I will know exactly how the new props have affected my ships performance. Then I can consider the ships strengths and weaknesses and make an informed decision whether to reinstall the old props, or keep the new ones. I hope I have convinced you to keep a ship's log. They are technically helpful and I enjoy reading about the battles of my favorite ship. Just think about it....a 68 page paragraph.

OFFICIAL POINT STANDINGS

D.W. Fluegel	375
M. Schneider	80
B. Gainer	40
J. Poindexter	40

RULE RECOMMENDATIONS

- 1.) Battleships and Battlecruisers with a beam equal to or greater than 7 inches may have rotating turrets. Fluegel.
- 2.) Heavy Cruisers may have rotating turrets that rotate no more than 30° off the "keel line or a total of 60° rotation. Fluegel.
- 3.) All rules (in the future) take effect the following January 1st. Fluegel.
- 4.) The factors for determining fleet points shall be set equal to the number of "offensive/defensive units" that each ship has on board. I.e. Gunboats = 0.1; Destroyers and subs = 0.2 Light cruisers under 9000 tons = 2; Heavy cruisers and Light cruisers over 9000 tons = 3; Battle cruisers and Battleships = 5. Fluegel.
- 5.) Points awarded for sinks will be equal to 100 points per offensive/defensive units. Fluegel.

START YOUR OWN R/C COMBAT CLUB

Dear Prospective R/C warship Combatant,

We of the R/C Combat Club would like to invite you to create your own local subsidiary club affiliated with our national organization. You may start your club by having at least two members.

To charter a new club send the list of names of your members plus \$5.00 for a charter fee along with the name of your club as you want it to appear on your charter certificate.

To become a member of the national club each of your club members will have to send an annual \$10.00 dues fee which entitles each member to a subscription of THE NEWSLETTER OF R/C WARSHIP COMBAT "Hull Busters" and a membership card. All memberships expire on December 31 of each year so join in January to get your maximum benefits and all six annual bimonthly 'Hull Busters' issues.

If you do not wish to form your own local club you may simply send your \$10.00 membership fee. You will then be a member of the national R/C warship Combat Club and will not be a member of any local club. Your voting privileges will be the same.

Most modelers choose to procure liability insurance. The R/C warship Combat Club is affiliated with the North American Model Boaters Association (NAMBA). An insurance policy for \$1,000,000.00 is available for \$18.50 per year. This policy also expires on December 31 of each year.

To participate in sanctioned (major) battles, combatants must have the insurance coverage and must build ships to the official Rules of R/C Warship Combat and battle within the guidelines of these rules.

Each year changes to these rules are voted on. As a member of the R/C Warship Combat Club organization you may submit and/or vote on these changes if you have participated in at least one sanctioned battle in the last two years.

Rule suggestions appear in the Hull Busters newsletter to inform all members of the legislation that is pending. Members who will not attend the National Championships are required to send their votes to the contest Director of the Nationals at least two weeks before the Nationals begin. Members who attend the Nationals will have their votes counted twice.

That's the way the organization works, if you would like to join send the appropriate fees along with a self addressed envelope to the club Treasurer; Terry Darby, Chilhowee station, Tallassee, TN 37878.

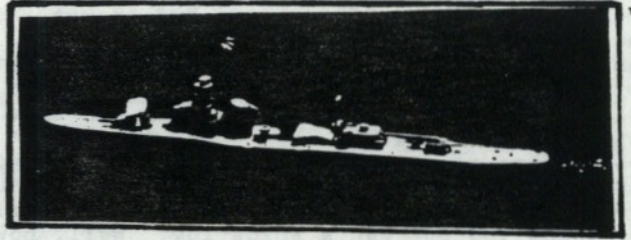
Thanks for your interest, welcome aboard, and Let's battle!

By Clinton Ich

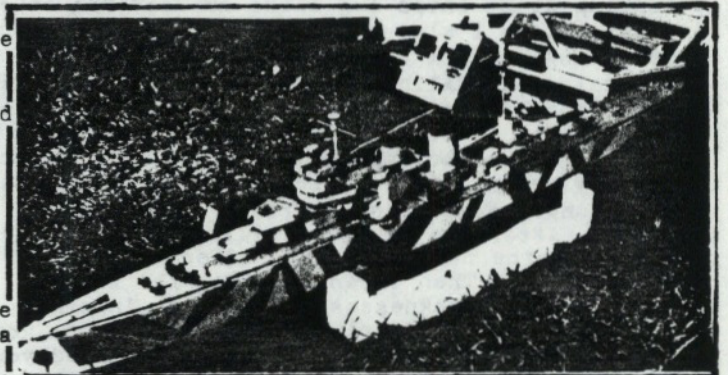
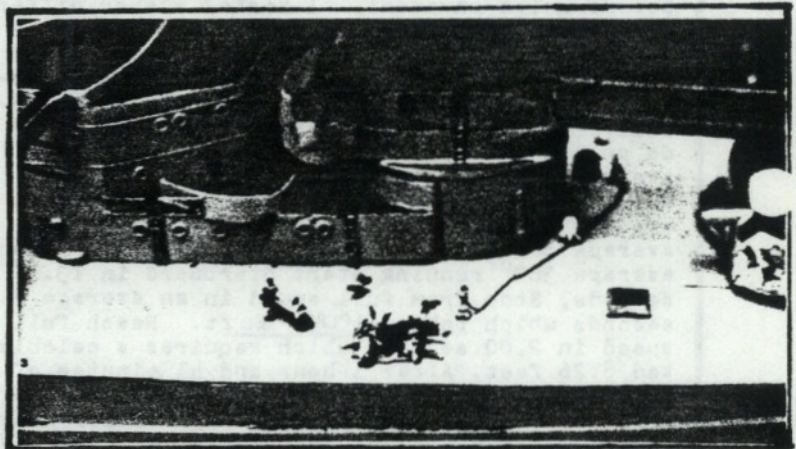
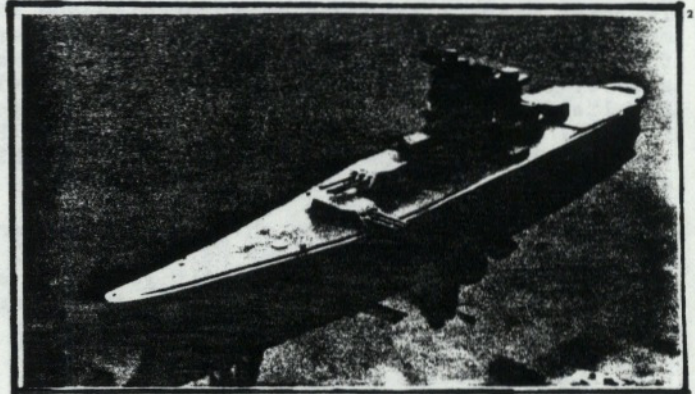
She carried 4 guns and was a much improved version of his first Hood. Photo #13 is owned by Chris Lawrence. Chris' St. Paul sank by the bow late in the week. Her pump was low capacity, but Chris is a newcomer that will someday

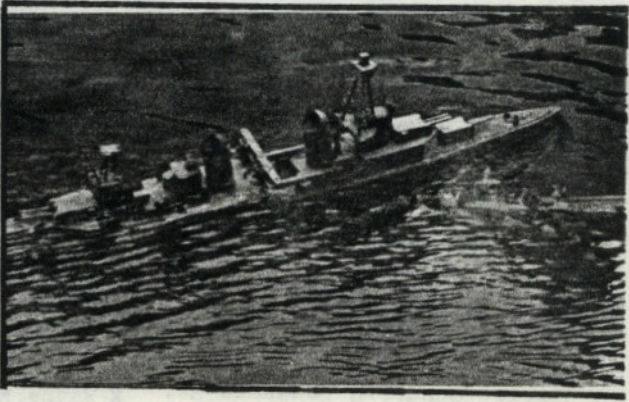
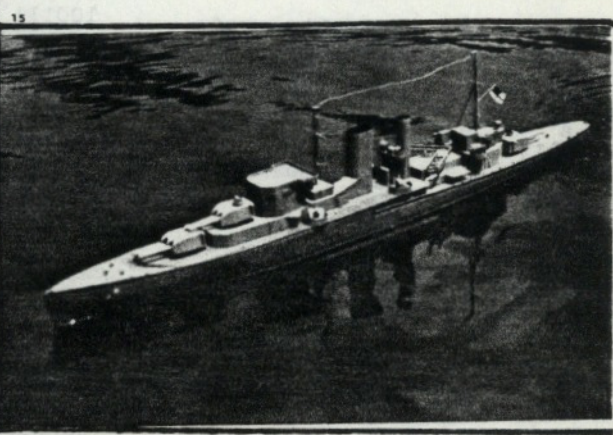
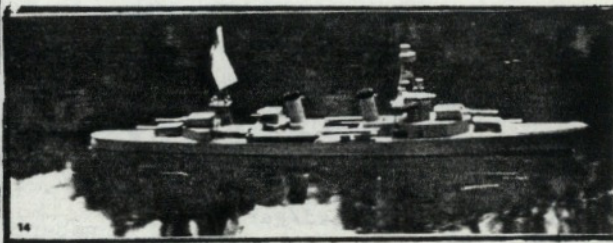
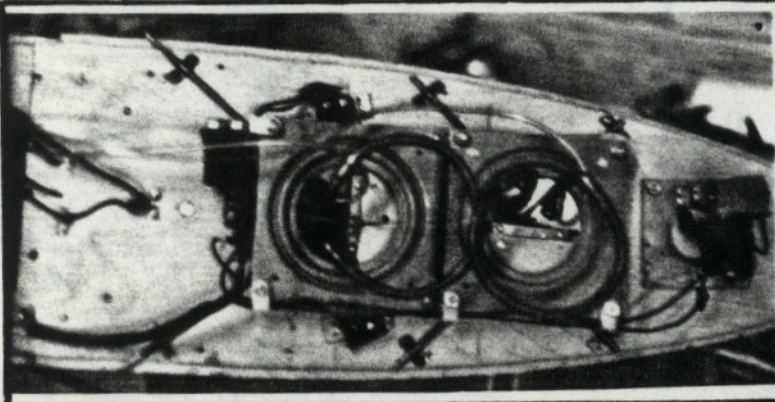
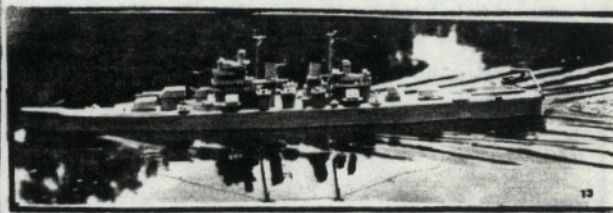
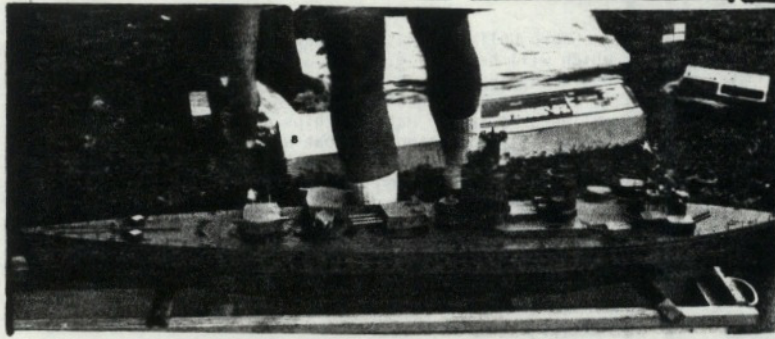
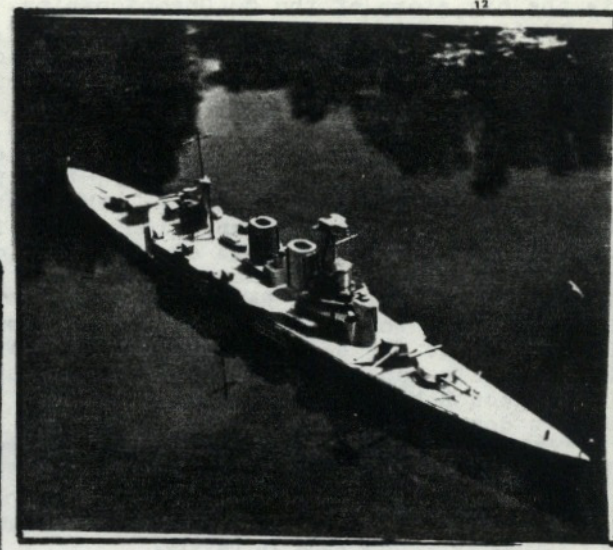
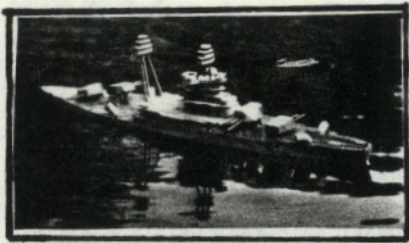
I opened the back of my camera and ruined my 2nd row of film, but let's talk about the photos from the first row. On this page you can see the Axis ships. Besides the fact that these guys are the winners, they are also the pillars of their communities. You know, Sunday School teachers, Kwana Club, etc, etc. In photo #1 we have Dave's Aoba. This ship has the best deck seals in the universe, she also hosts a bow and stern gun. Photo #2 is of Dennis Murphy's huge Yamoto. The Yamoto carries 3 or 4 guns and 4 bilge pumps. Dennis went home with a terrible back ache. Photo #3 shows a direct hit to the deck of the Bismarck. Fluegel's Bismarck carries 22 amps of batteries, 6 guns (2 port and 2 starboard), 4 bilge pumps (14 gallons per minute) and is powered by .05 car motors. The Giuseppe Garibaldi of Dave Garret is shown in photo #4. Dave's ship is a large heavy cruiser that mounts a bow and stern gun. She also hosts a bow and stern gun. Her pump is of unknown origin. The last of the Axis ships is the awesome Battleship Tirpitz. Martin's monster carries 6 guns (2 port and 2 starboard) and 4 bilge pumps. The radio is Kraft, and the motors are the \$24.00 6 volt dumas type. The power is supplied by two yausa 5.5 AH lead acid batteries. Well that takes take of the pillars of society. The photos on the next page are owned by a group whose headquarters are just outside of reality. When they are not battling they are visiting their parole officers. Photo #6 is Stan's Arizona. The Arizona is the first ship of the hobby and is still alive and pumping. The Arizona was the casualty of a massive 11th hour refit. She busted the old record for most guns mounted with 6 guns glaring off of each side! The only problem with that is a terrible maintenance problem that left the Arizona rather limp. Her real strength was with her newly designed bilge pumps, 20 gallons! Power is supplied by 3 (?) Yausa 6 volt 5.5 AH lead acid batteries and 4 12 volt radio shack motors. Jeff copied Stan's pump system except he put a larger motor on his pumps. This gave him a pumping capacity that may never be surpassed, 24 gallons! However, in photo #7 you can see that even the best pumps require a reliable activation system. Jeff's Futaba controled Texas mounted 4 guns and uses the same power system as the Arizona (basically). Props are homemade on both ships. The Texas scale appearance is in the same category of the Tirpitz or a broken brick. It looks 50% better when 1/2 sunk. Photo #8 was built by Tom Jass and operated by his son John. This delightful duo brought a turtle named Nelson. The Nelson carried 2 guns (1 starboard and 1 port) and carried them very slowly. This ship looked really clean and is a ship of the future. Photo # 9 is of Dan Dee's Colorado. The Colorado won Best of Scale-look at the logo, back to photo #9, these are rotating turrets! They worked beautifully but added little tactically. The Colorado was ineffective due to a terrible radio problem(Futaba). She beautifully carried 4 guns. Photo # 10 is of Steve Milholland's Alabama. The Rama was fast, manueverable, reliable. She carried 2 guns in each turret and knew how to use them. Her pump capacity was fair but inadequate as the Rama settled to the bottom more than once. The motors were hand rewound and the radio was an Ace.

Photo #11 shows the rocky shore that surrounded the mossy lake. Jeff is trying to hide his Texas from view. Don't confuse his Texas with the rocks of the shore, the rocks are the good looking things. Photo #12 sinks like a rock but looks like a jewel. Dale Beaver's Hood saw little action due to radio frequency conflicts.



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help his Allied friends. Photo # 14 is of James Foster's Pensacola class cruiser. Foster is the big story of the 83 Championships. He couldn't get his guns in time from M.W.P. Co. so he designed and built his own! Boy did they work! Foster is writing a How to Article on these guns. But guns don't make a ship. Foster's cruiser was fast and well captained. This rookie won the trophy for cruisers. Foster isincredible! His ship's flag isn't. Photo #15 is of Dan Hamilton's Exeter. The Exeter is best remembered for the explosion of her freon sphere. She lost 22 inches of balsa off one side and 15 inches off the other but battled the next day - Alabama Regionals Story. The Exeter fought the Axis battleships and survived. Finally photo #16 depicts the Allied 83 effort. Spychalski's Pensacola settling to the bottom. Looks good Bob. Aren't you glad the 2nd roll didn't develop.

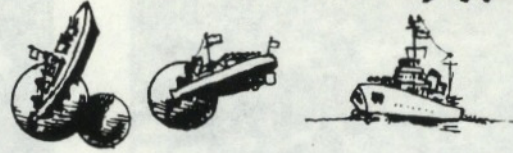
MISCONCEPTIONS

- 18) The worst thing that can possibly happen to a rookie is to get sunk in battle.
- 19) If I build a large ship I will have lots of extra room inside the hull.
- 20) As long as I have adequate pump capacity I won't get sunk.

Dan Weas

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CONCLUSION

Carl Camarati and Josah Valar^{aw} have started bat-
tling each other in New York. If you are in
their area you might want to look them up.
The official 83-84 point standings are pretty
old. If you want your points to count, be sure
to send your Battle Reports to Kay Poindexter.
Well, I would like to thank Tom Jass for the
FREE PRINTING of this issue! He is just one
more example of what we mean when we say "The
Best thing about the Magnificent Obsession is
the People."

Flüegel

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