

# HULL BUSTERS

FEB 1990




North Dakota Battleship BB29 Hull, Superstructures are finished  
 2 4.8v motors, two shafts and props installed. Needs working guns to finish.  
 \$175.00 & freight if needs shipped.

Buddy Friend  
 7309 Kaha St  
 Orlando, Fla 32822 tel 407/380/0313

For Sale

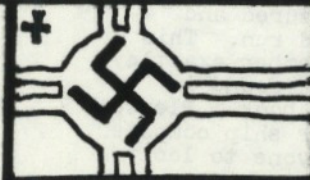
## Observations of the Founding Father



By Stan Watkins 1/19/90

Greetings Combatants!  
 Well here we are in the third decade of R/C Warship Combat. That sounds strange! This NEW hobby is now in its third decade! But the hobby has really matured alot, (except for safety regulation). This maturity has happened through the unselfish contributions of many wonderful people. I want to express my appreciation to all those people who have done more for the hobby than "just play the game". Without these folks the hobby would have been either long dead or just that funny game Stan, Jeff, Fluegel play. I am sure that more good things are in store for us. Recent magazine articles have proven that the appeal of the hobby is still there, and why not, it is an intriguing sport/hobby. The general public loves us, even if they don't want to (or can't) play the game themselves. The latest word from "Skunkworks indicates that they have sold over 40 kits (and the kits are a substantial financial investment). I don't know what the club breakdown is (percent to the R/CWCCI rules and percent to the IAMWC rules). That is a good question for Steven Milholland if you want to call him. Steven believes that he has just about gotten his production operation ready for higher rates of production and is about caught up with the current orders. That is good news! He's even starting to get past the break even cost point. He's starting to make a little profit! Congratulations Steve and "Skunkworks"! So when you have friends who would like to get into the hobby easier just have them order a kit from Skunkworks (at P.O. Box 606, Battlefield, MO 65619)! Be sure and explain to your friends that they will have to specify which clubs rules that the ship kit should be made to (R/CWCCI or IAMWC).

The hobby may just be perched on the edge of a great rise in popularity. Are you ready for it? Thanks again for your help and GOD Bless YOU!



## Hoist Anchors

Ship to ship signals priority channel one. Prepare the Fleet for the Spring South Eastern Regionals. Yes Yes! comrades in arms its that time again. Time to hear the sound of crashing balsa. The Regionals is to be held the first weekend in May thats May 5th and 6th, Saturday and Sunday in Decatur Alabama. We plan to have a Fleet Battle Saturday morning followed by a Campaign Battle that afternoon. On Sunday we plan two Fleet Actions and if time allows some one on one actions. There could be some one on ones Friday afternoon if time exists after lake preparations are complete.

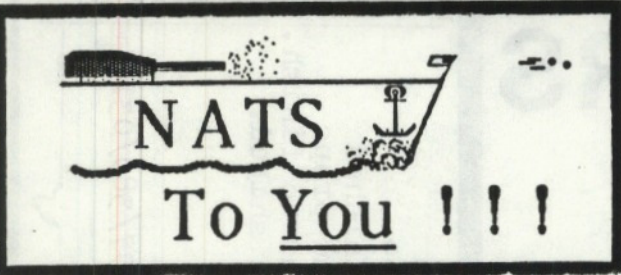
The battles will be held in Decatur on the Albany landing lake, the site of many past Regionals. We had a very large turn out at the last Regionals and many of the same Battlers along with some new faces are already planning to attend this one. The Spring Battle is a time we see new ships on the water and old ones with new systems. It can be very exciting.

This event will be NAMBA and R/C Warship Combat Club sanctioned so you must be a member of both to participate in the action. Also check out the rules and make sure your ship is legal to battle. Save your self and others a lot of trouble be legal, no use wasting time and money only to found wanting at the event.

Entry fee for the event will be Ten dollars this includes lunch at the lake on Saturday and Sunday. This fee is non refundable and must be paid by April 23rd., or a five dollar late fee is added. Large events are much more difficult if not planned in advance, please be prompt.

For more information write or call Dan Hamilton at Rt.#3 box 558 Decatur Alabama 35603 or phone (205-355-1563), if no one is at home leave your name and how to get in touch with you. You will then receive an information packet containing an Entry form, Map of Decatur, Lodging availability, and other information. Also any other specific questions you have please feel free to ask. Hope to see you in the Spring.

Dan



# NATS

## To You !!!

Well, winter is here, I guess most of you are either building new ships or refitting the old ones. It won't be long till most of us will be in Maryland fighting for truth, justice and Allied or Axis way.

The way it looks to me is that due to the amount of people that we expect at Nats, we will have to have 2 fleets, Allied A & B and Axis & B. We expect 15 or so just from the Northeast group. At this time I don't know how were going to divide the teams up. We'll sort that out when we get some sort of list as to who's coming.

Now for the C.D. talk. Before the captains meeting takes place, myself and two captains from each side will inspect ships. The ships weight will be taken, length and beam measured and each ship will run a 100 foot speed run. This seems to be a hot issue. Lets remember exactly what the rules says. The rules are found in Section I, pages 7 & 8 of the rule book. Please read these rules and make sure your ship complies.

The section I would like everyone to look at closely is Section I, #6. It states, "A turning system that enables a ship to exceed its maximum allowable speed in any of these directions will be an illegal system." I think the key here is not to measure the radius of the turn to see how fast the ship is moving but rather run the 100 foot course and move the rudder back and forth so the turning system is engaged and time the ship that way. I hate to have to be this way but some combatants are pushing the rules. Your probably saying wow, in his last article he said, "It's a hobby have fun." Well I believe in that statement and will stand behind it. But I think we will all have more fun if we all follow the rules.

Well enough of the bull, lets talk about the lake. The lake is roughly 380 feet long by 250 feet wide at the widest point. When you come to Nats prepare to rough it at the lake. there is a parking lot in front of the forward lake with a dirt road that borders the entire north edge of the rear lake. This road will act as the pit area. The only time cars will be allowed in this area is to unload in the morning and load in the evening. The walk from the car is nothing like the walk in Knoxville from the dockyards to the lake. The dirt road we will be using for pits is relatively level so portable tables can be used. In this area the club plans to take down some more trees and all of the underbrush. We want to keep trees up to keep the sun off our heads. Thats right we have shade. Using the trees we cut down we hope to make a launch area (on the map this is just east of the peninsula). Tarps are allowed but I wouldn't set them up unless there is the threat of rain that day. They will have to be taken down every night (unless you want to donate it to some juvenile delinquent) it won't be there in the morning. To help with the electricity problem Will is trying to get the use of a portable generator for the week. Thats about all I can think of for now about the pit area. If I think of anything else I'll put it in the next Nats to you.

Now back to the lake its self. Like I said before the lake is about 380' x 250' (I think its even larger). If you've ever seen video from the Northeast, you've probably

noticed the islands. These islands make battling very interesting. At Nats the only person or persons that will be allowed on the islands are the camera persons, "see Mary I'm thinking of you". This will enable us to get some good footage of battling with out having people walking in front of the camera. The water level runs in areas anywhere from 4 1/2 ft. to a 1/2" deep. So you can see there is a chance you may run aground if your not watching where your going. If you don't believe me just ask Danny, he can run aground anywhere.

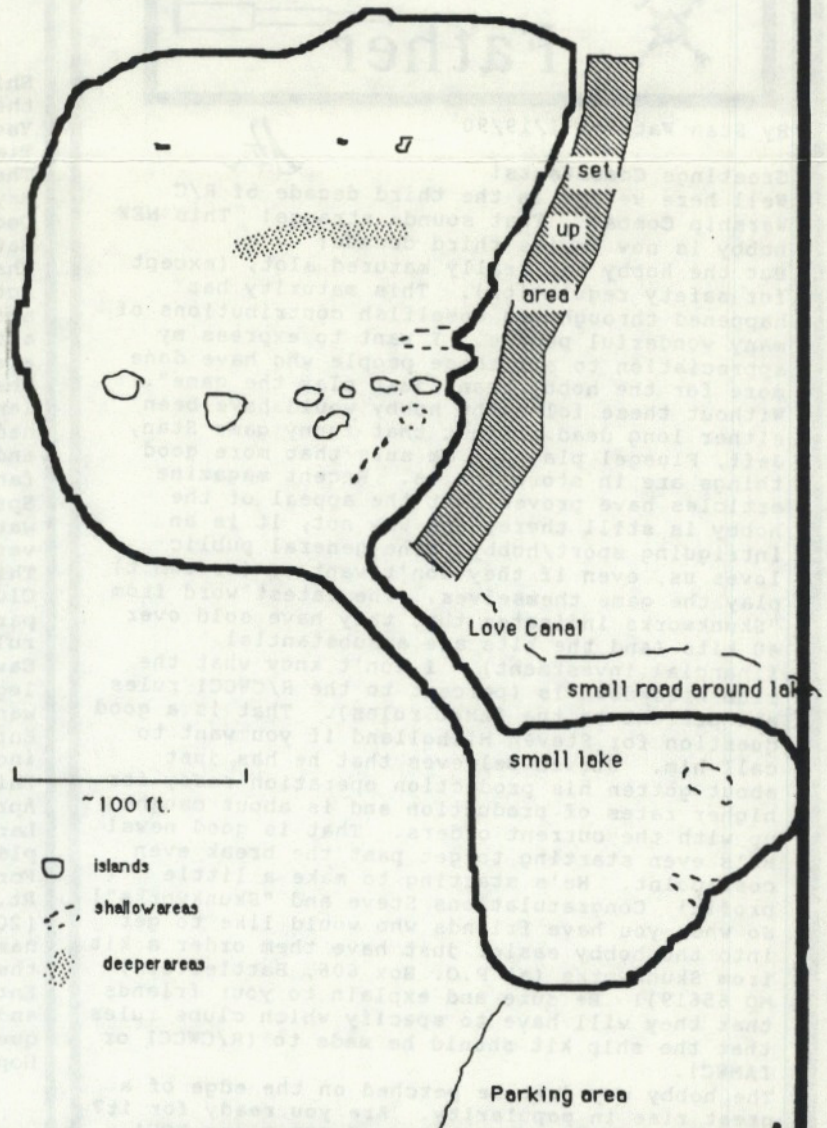
Well I think I've drug this on long enough. My wife (she's my personal secretary), just looked at the length of the article and thinks its long enough. Well till next time take care, and remember its a hobby, have fun!

Your Obedient Servant,  
Bob Amend  
812 W. Poplar St.  
York, PA 17404  
(717)846-3733

### Nationals and the new lake.

Map By Mart. ♥

Patuxent Lake, Maryland



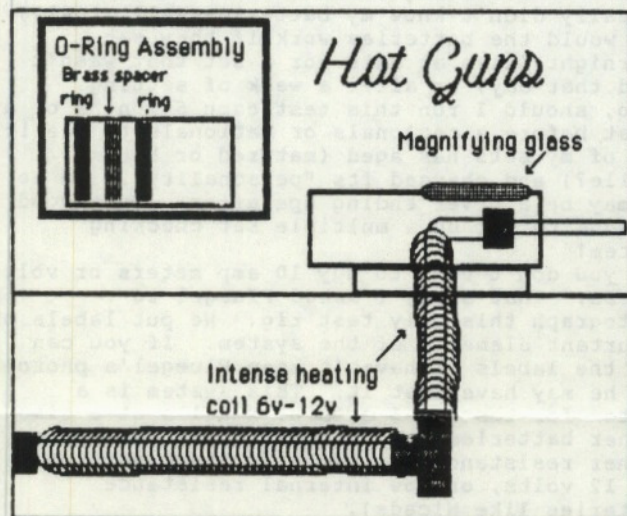
## THE HEAT IS ON!

By Mercury Peabody

As winter quickly draws near it is time to go back the dockyard and work up a better zappenkiller for the next short season. In an effort to lengthen the season I have worked out a new gun design. This design gives me a constant pressure for my thermal reactive freon regardless of the temperature.

I was going to name the gun "The Watkins", but when the first few tests came in with speeds of over 1000 fps I thought Stan might object to the use of his name.

The system is basically a gun in an oven. The rule states that the gun can fire at a pressure equal to the ambient temperature pressure of freon. Ambient means: 1. Surrounding on all sides, 2. an encompassing environment. This means it can only be as warm as the area around it.



I have therefore taken the liberty of superheating the magazine and the breach by means of a heating coil which encompasses the gun. The turret boasts a magnifying glass to add that little bit of heat, and the bottom of the "t" fitting has a glo-plug that the B-B can rest on so the next shot is red hot when it exits. This should cause some minor combustion in your foes ship. In order to harness this new power I had to use a double O-Ring with a brass spacer. The rings are of an asbestos material so we don't melt the rubber, and so we can endanger our lives AND attack the ozone layer with every shot.

### HOW WELL DO YOU KNOW YOUR SHIP'S BATTERIES??

By Stan Watkins 1/2/90

#### HISTORY (BATTERY LESSONS TOO SLOWLY AND PAINFULLY LEARNED)

For several years I have been plagued with strange battery problems. I have used X-Cells for many years. (The same X-cells for too many years!). Not that X-cells are bad batteries, but any battery has lifetime limitations.

To start with all my X-cells were used when I bought them, and who knows the age or use history of used batteries? But I had excellent luck (that's true with used batteries) with them for several years. But gradually I learned that one set of 5 amp hour (6 volt, 3 cell pack) x-cells wasn't enough. My USS Salt Lake City

always had trouble with enough battery life on one pack. But R/C Combat was changing. Motors drew more current and pumps became more current hungry with the change in pump outlet diameters. So many things were changing so fast that the problem of battery condition didn't become evident. Also there was the fact that different packs of my x-cells had different energy storage capacities. This was complicated by the fact that I had numerous sets of x-cells.

#### ALL EQUAL BATTERIES ARE NOT EQUAL

When I realized that batteries could be a problem the idea of the difference between my capacities of my own sets of batteries didn't really occur to me. I mean they are either good or bad right? Wrong! So I solved the problem temporarily. I went to overkill and put 3 sets of 6 volt x-cells in my USS Oregon City for the 86 Nats in Springfield and really had power to burn. It was wonderful. But I saw people who were having some success on 1 set of x-cells in a heavy cruiser. These must have been very good x-cells. Then Dirty Dave (who had fewer X-cell packs to draw from and to confuse him) ran into similar problems and encountered similar agonies in battle. Why was it so hard to understand the problem?

#### MEASURING BATTERY CONDITION OR, THOSE PEOPLE ALL LOOK ALIKE, WHO'S THE BAD GUY?

Well let me look at my X-cells. This one is a little rustier than that one maybe it is bad. But is battery case condition indicative of battery capacity. Maybe. If I sunk more with one set than with others, the case would be rustier. Ha! I wanted a better way to measure condition/capacity than that. Fluegel liked to use battery top voltage after charge. But something in my feeble mind told me that a voltage measurement with no load was next to meaningless. Sure it would tell you if a cell or pack was completely dead but what of condition? I was mentioning this concern to Steven Milholland one day and he said that you should give the batteries a discharge test. Sure, I know that, we all do. But how many of us do the test? Just take the ship to the lake and run it for an hour, if it goes that long the batteries are OK, right? Probably not. What about the load of the pump? Well punch some holes in the hull and go for it! Well that might work, but wouldn't it be nice if we could do the testing at home? Yes, especially if we have more than one set of Batteries. I have 10 sets I'd have to be at the lake 10 hours to check them all out. So I built a test rig. I wanted to measure current because I knew it takes about 5 amps to run my ship and pump (I measured it with my Radio Shack multi meter on the 10 amp scale).

So I built a test rig with the 1 ohm resistor (1 ohm, 10Watt) in series with the amp meter. Steve Milholland had told me that the resistor is only adequate if it is submerged in a pan of water. He was right! If the resistor is out of the water it will get too hot and burn up.

This seemed to work good but took about 40 minutes to tell the tale on batteries. I also learned that the relation of current (amps) to voltage was not always linear. In other words some sets of batteries could continue lots of current at much lower voltage. Without monitoring both voltage and current this test could be deceiving. On some sets of batteries a single cell of the battery can fail (go to zero volts) but will still pass the current of the other two cells. This was particularly bad for ships that had items that quite working after loosing 2 volts. My Oklahoma City had had numerous pump system turn-on failures as the batteries ran low. Why? The 5 volt relay that

kept the pump turned on would quit working at about 4 volts. This meant another sink for the enemy and another wading trip for Stan. I also suspect that the fact that my radio was also working on the drive batteries meant that I would loose radio control before the motors went dead too. To further complicate the battery voltage failure mystery, during "radio failure" some servos would stop working before (at higher voltages) than others. This sure gets tricky! But at least I would usually sink without too much damage. Ha!

So measuring voltage as the cells are being discharged is very important. You can spot weak cells by measuring the individual cell voltage during the test too. Testing voltage is done by connecting the voltmeter in parallel with the battery. The positive (+) red lead of the voltmeter should be connected to the + of the battery and the negative (-) black lead of the voltmeter should be connected to the - of the battery. To test a single 2 volt x-cell connect the voltmeter leads to the poles of that cell only. This can help you build up good sets of batteries from old sets.

GRAPH YOUR TEST RESULTS AND STUDY THE GRAPH

See the enclosed graph of 5 sets of my x-cells for an example of some battery characteristics of freshly charged old x-cells. The vertical axis is amps discharge rate from 0-5 amps. The horizontal axis is discharge time from 0-60 minutes (you can see from the readings why I stopped the tests after less than 50 minutes, the voltage were too low to allow battery use in a ship). The voltage readings were written on each individual battery discharge curve. You may also want to graph voltage versus discharge time. Note that while the current on set 7 looks great the voltage is down to 3.9 volts very quickly (probably a bad individual 2 volt cell).

Obviously, the rapid fall of voltage and current of Set 3 would be a disaster if used alone (or with another marginal set like sets 2 and 5). Set 9 and set 7 if used together would be pretty good, but only if the bad cell in set 7 were replace with a good cell (and retested). But what if I hadn't tested? I would use any combination and get varying performance according to my luck or bad luck of mixing sets. See why it is important to know your batteries? Yes, I think I'm beginning to understand. Hmm, that could explain why at Decatur in 198X my ship sank after..... If nothing else it makes good excuses for problems.

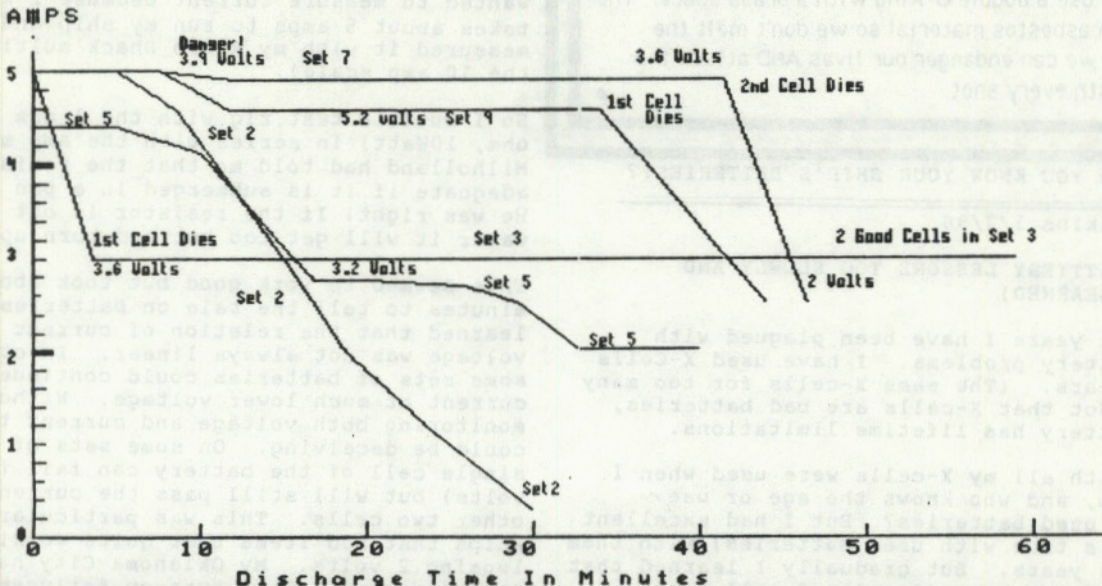
It does take time "Getting to know your Batteries". But you can reduce the time some by simultaneous testing of multiple sets.

THE TEST SYSTEM, SAVE TIME, TEST SEVERAL SETS AT ONCE

Now back to checking batteries. With 10 packs it takes 10 hours to test. By hooking the system up with 10 resistors and 10 amp meters and ten volt meters you could test all of the batteries in a single hour. How? Well, you need to take a reading of current and voltage of each set at 5 or 10 minute intervals. If you read each set 1-10 sequentially you can record the readings and times for readings together for each battery set and continually be getting new readings of the #1 set after the last readings for the #10 set. In this way in just 1 hour you can know alot about 10 sets of batteries. But there is more. Were all of the batteries fully charged? Hummmm?! Better get them charged up good before testing. And (oh no, there is more, I really didn't know my batteries well at all) how would the batteries work if they sat overnight (like at Nats for a set that wasn't used that day) or after a week of setting. Also, should I run this test each 6 months or at least before a regionals or Nationals to see if one of my sets has aged (matured or become senile?) and changed its "personality". Oh no it may be a never ending operation. More good reasons to set up a multiple set checking system!

But you don't want to buy 10 amp meters or volt meters. That's why I asked Fluegel to photograph this ugly test rig. We put labels on important elements of the system. If you can see the labels (I haven't seen Fluegel's photo) and he may have lost it. This system is a system for testing 5 sets of x-cells at a time (other batteries may need different resistors, higher resistance for higher voltage sets, 8, 10, 12 volts, or low internal resistance batteries like Nicads).

Assuming that the test system photo is in this issue of Hullbusters this is what the labels are: A=Batteries (5 sets of X-cells), B=Pan of water with 5 one ohm, 10Watt resistors wired in parallel, C=connector for amp meter, D=0-10 amp meter, (reading 5 amps), E Radio Shack Multimeter.





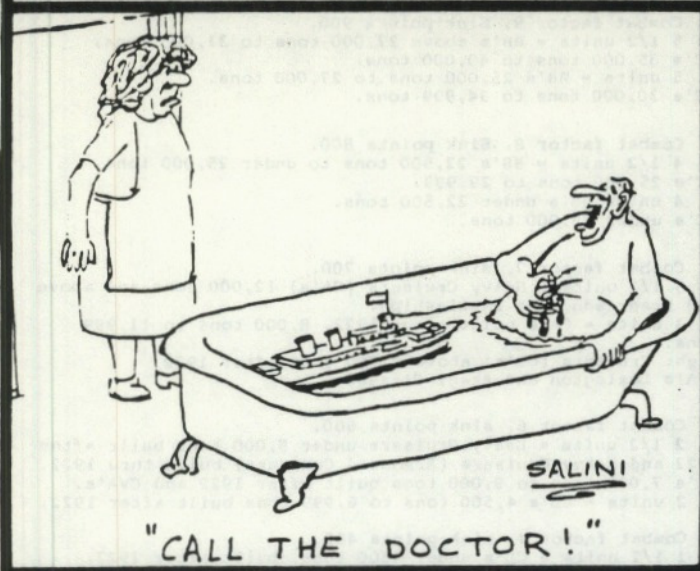
The function of the connectors is to enable the amp meter (which has to be wired "in series" with the resistor and battery to measure amps) to be plugged into each battery/resistor "circuit". The connectors are wired so the batteries are always connected to the resistors directly until the amp meter is plugged in. When the amp meter is plugged in, it is between the battery and resistor (in-series). In this way the batteries are always discharging but the current can be measured anytime by plugging in the amp meter. One end of each of the 5 resistors is soldered together. One end of a heavy current wire (this common wire will be

conducting 25 amps) is soldered to the end of the resistors that is soldered together. The other end of the heavy current wire is soldered to the 5 amp meter connections as a common. For the test system battery connectors, the positive end of the connector should be wired to the amp meter connector that will be used for that battery. The positive battery test connector #1 will be wired to amp meter connector #1, etc. The negative test system battery connector will be wired to the other end (not the end already soldered together) of the resistor for that test system battery (wire the negative of the #1 battery connector the resistor lead for the #1 battery, etc.). A common lead will need to be wired to each of the amp meter connectors to tie them to the heavy current wire. The exact wiring will depend on the type of amp meter connector that you use. The key is to wire it where each battery is connected to its resistor (normally closed style) when the amp meter is not plugged in. The system will be wired where the battery will be connected to the resistor thru the amp meter when the amp meter is plugged into the connector. The connectors will also have to be good for at least 5 amps (since you will be flowing 5 amps through the connector).

#### ALTERNATIVES TO TESTING

Yes testing is a hassle! But so is sinking too often and erratic ship performance. You could just buy new batteries each year and be pretty safe. But (even if you have the money to do that) some new batteries are not very good. Darn! Your Welcome, this is another late Christmas present from Stan. Thank Fluegel too. He asked for this article (just another service of HullBusters).

Stan *Stan*



The first critical test for a new hull is the leak test, aka the "bathtub test". Assuming your ship fits in a bathtub, fill the tub about 4" or 5" deep, so the water is as deep as the hull. If haven't yet installed the props and rudder, plug the shaft openings with wax or tape. Put your ship in the tub and start looking for leaks. Hold the ship down as deep as possible without the water coming over the top of the hull. Look for leaks above the waterline as well as below. If you've done a good job, the inside of your hull will be as dry as toast.

If you do have a leak, most likely they will be from around the propshaft or rudder tubes, or from around the freon tanks. Take your hull out of the tub, dry it out, and touch up the leak points with dope or varnish. Keep retesting until there are no more leaks. Also, check for dark spots or water stains in your finish and touch these up or they could lead to future leaks. If your ship is too big for the bathtub, fill the hull with water and look for where it leaks out.

Now that you have a dry floating hull, you can do some ballasting tests. Put your hull back into the tub and load it up with batteries or lead weights until it floats on its waterline. Shift the load as necessary until the hull floats on the waterline. Weigh the loaded hull on the bathroom scale, noting the weight and compare it with the model weight on the ship list. As you install more equipment, periodically recheck the weight and test if the ship floats evenly. Redistribute the weight if necessary, and once you've found the best location, secure with glue, tape, rubber bands, etc. to keep from it shifting. Now that you have a dry hull that floats on an even keel, get out the champagne and have a little celebration!

#### THE POOKIES' CORNER

by Steve "Still wet behind the ears" Smith  
LAUNCHING

I hope the long delay in writing this column hasn't held up anyone's building program. Anyways, since there's been a lot of articles on construction in HB, I thought I'd write about the next step: Launching.

OK! So you've put on the last "plank" of balsa and slopped on a coat or two of dope or paint and now you're ready for the launching ceremony! Unfortunately, no one sells 1/144 scale champagne bottles and a full size one would do too much damage. Well, so much for ceremony but on with the mundane tests.

# Units By Dan Hamilton

PROPOSAL  
# 1 1990.

This proposal submitted by  
Dan Hamilton, Gerald Roberts,  
Marty Hayes, and Eric Noble.

The following rule proposal is simply a modification to our present Unit rating system for our ships. The entire purpose of the Unit system at the present time and in the past is to give scale capabilities to our ships that are closely related to what the real ships could do in relation to each other in reality. Another major factor in this choice of the unit system is playability. Something that is workable as well as scale. The result is our present Unit system. Which has served us several years very well. But there are some problems which could be solved by relatively minor modifications.

The basic problem is that our classes are very large. The best way to show this is by example. For instance the Dreadnought was the first Dreadnought class Battleship, gets 4 units, had 10 X 12 inch guns, displaced 18,000 tons standard, and was completed in 1905. The Kongo had 8 X 14 inch guns, displaced 27,500 tons standard, and was completed in 1913, yet these ships also get 4 units. The list goes on and on with this type of example, such as the Maryland class Battleship vrs. the Wyoming Class Battleships and the Deutschland Class Pocket Battleships vrs. other Heavy Cruisers. A lot of people are getting the short end of the stick in this. Now I'm not suggesting we just move up these ships to the next class, no because then we just cause the same problem in the next class. So if whole units are not the answer what is? Well how about 1/2 units We simply leave the Dreadnought on the low end of the class with 4 units and move the Kongo to 4 1/2 units. The Kongo would now be more powerful than the Dreadnought but not quite as powerful as a five unit class ship.

That sounds great but what is a half unit. Our present unit is a 50 shot single shot BB gun or a 1/8 inch outlet pump. So a half unit would be a 25 shot single shot gun or a 3/32 inch outlet pump. Also a you could simply add 25 BB's to a present 50 BB gun combined to equal 1 and 1/2 units. In that way you could gain the 1/2 unit extra without adding another poppet valve, breach, magazine, or tee fitting.

This would also solve our age old problem of a Lutzow being more powerful than a standard Heavy Cruiser but not as powerful as a 4 unit ship. All Cruisers above 12,000 tons standard displacement would receive 3 1/2 units instead of 3 units and this could be added in the form of 75 shot bow or stern gun therefore not adding any real complications to building these ships. This increase would affect 4 Classes of Heavy Cruisers on the list, the Lutzows, the Baltimores, the Prinz Eugens, and the Takaos.

The 1/2 unit gun could be used as in a secondary gun position on Capital ships such as the Rodney or Richelieu Class BB'S. The 25 shot gun represents the large secondary gun fire power of these large ships. Full units could not be exchanged into two half units but one full unit could be exchanged for a single half unit. This would make counting units very easy. One final note is that a 1/2 unit should also be able to be used as a 10 shot spurt gun. This option would be next to useless in a large ship as a very unprofitable use of BB's but could be very useful in Destroyers for instance; where weight is a major factor in whether the ship can be built at all is concerned. Look over the categories and see where your ship or the ship you would like to built falls, you might just be pleasantly suprised. You'll also notice that the number of classes are the same with the half units in them

simply being seperated by A. and B designations. This gives only the next full unit class the next increased combat factors and sink points. The sink points and combat factors in each class are the same, this is because they are only a half unit apart and will make scoring no harder than before. One other change is the listing of the most powerful class as number 7 not number #1. This also makes scoring easier. In the past many of us have had trouble remembering our class number which causes problems for the person scoring the battle up. This would stop this as the number of units you have is now your class number as well. For instance if you have a Heavy Cruiser you have 3 units so you're in class 3, simple. If we decide to adopt this system our rudder sizes would remain the same except we would start with classes

- 7. 4.5 square inches
- 6. 4.0 " "
- 5. 3.0 " "
- 4. 2.5 " "
- 3. 2.0 " "
- 2. 1.75 " "
- 1. 1.5 " "
- .5. 1 " "

The Last two Classes should be exempt from the Battery withdrawel rule in Fleet Battle as before. As they now contain the ships which need this exemption now and got it before. These last two classes could also be used as secondary ships in Campaign Battle as before just by changing the class numbers in the present campaign system. Please read the proposal carefully We hope you agree it would help our hobby and cause a greater variety of ships to be build.

#### Classes

- 7. Combat factor 11, Sink points 1100.
  - A. 7 1/2 units = Battleships (BB's) Above 50,000 tons.
  - B. 7 units = BB's above 37,000 tons to 50,000 tons.

- 6. Combat factor 10, Sink points 1000.
  - A. 6 1/2 units = BB's above 33,000 tons to 37,000 tons.
  - B. 6 units = BB's above 31,000 tons to 33,000 tons and Battlecruisers (BC's) above 40,000 tons.

- 5. Combat factor 9, Sink points 900.
  - A. 5 1/2 units = BB's above 27,000 tons to 31,000 tons, BC's 35,000 tons to 40,000 tons.
  - B. 5 units = BB's 25,000 tons to 27,000 tons. BC's 30,000 tons to 34,999 tons.

- 4. Combat factor 8, Sink points 800.
  - A. 4 1/2 units = BB's 22,500 tons to under 25,000 tons. BC's 25,000 tons to 29,999.
  - B. 4 units BB's under 22,500 tons. BC's under 25,000 tons.

- 3. Combat factor 7, sink points 700.
  - A. 3 1/2 units = Heavy Cruisers (CA's) 12,000 tons and above And Predreadnought Battleships.
  - B. 3 units = CA's built after 1922, 8,000 tons to 11,999 tons.
  - Light Cruisers (CL's) above 9,000 tons after 1922.
  - CVA's Lexington and Akagi Classes.

- 2. Combat factor 6, sink points 600.
  - A. 2 1/2 units = Heavy Cruisers under 8,000 tons built after 1922 and Heavy Cruisers (Armoured Cruisers) built thru 1922. CL's 7,000 tons to 9,000 tons built after 1922 and CVA's.
  - B. 2 units = CL's 4,500 tons to 6,999 tons built after 1922.

- 1. Combat factor 4, sink points 400.
  - A. 1 1/2 units = CL's under 4500 tons, built after 1922, CL's (Protected Cruisers) built thru 1922. Destroyers (DD's) Above 2500 tons, and CVL's.
  - B. 1 unit = DD's 1500 tons to 2500 tons, and Submarines.



1/2. Combat factor 2, sink points 200.

A. 1/2 unit = DD's below 1500 tons.

B. 1/4 unit = Gunboats CVE's, and all other ship types not listed.

#### Definition of Units

1 1/2 units = One 75 bb shot, single shot (SS) gun.

1 full unit = One 50 bb, SS gun, one 15 shot spurt gun, or a 1/8 inch outlet pump.

1/2 unit = One 25 bb SS gun, One 10 shot spurt gun, Or a 3/32 inch outlet pump.

1/4 unit = One 12 BB, SS gun or One 5 shot spurt gun.

#### Classes

#### NOTES

All tonnages are standard as built.

A ship may mount one and only one half Unit in its defensive and offensive armament combinations.

The 25 bb's in 1/2 unit guns may be added to the 50 bb's of existing full unit guns making a unit

and half gun with 75 bb's.

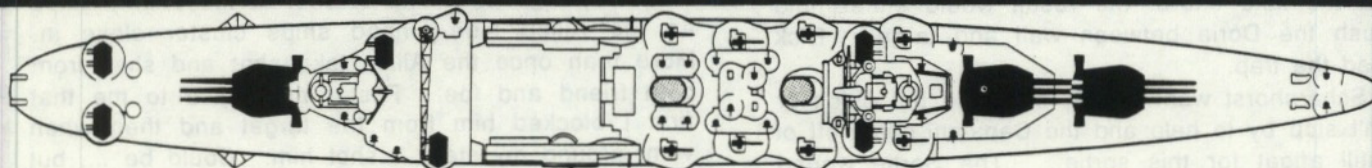
Half units may be mounted in secondary gun turrets of Battleships and Battlecruisers. Side firing gun rules also apply to 1/2 unit guns, ie. no more than one operational gun of any type per side gun quadrant and only Battleships and Battlecruisers in classes 7 thru 4 may have side firing guns.

1/2 unit gun loads (25 bb) can only be used in half unit guns.

Full unit gun loads (50 bb's) can only be used in full unit guns.

1 1/2 unit gun loads can only be used in 1 1/2 unit guns.

This proposal submitted by Dan Hamilton, Gerald Roberts, Marty Hayes, and Eric Noble.



## Blow-by-Blow

## Battle Reports

### Thursday action at Nats - From the deck of the HMS Warspite

The weather was again reasonable (after Weds. messy storm) but the ground under the tents was soggy. The captains prepared their ships for combat and launched with a minimum of delay. The line up for the first battle was as follows:

Allied: 3 South Dakotas (Will Montgomery, James Foster, Steve Mulholland) 3 Queen Elisabeths (Dan Hamilton, Bob Amend, Marty Hayes), the Tiger (Tom Jass), CA Houston (Lief Goodson), CA York (Carl Shafer), CL Oakland (Dan Dees).

Axis: Scharnhorst (Flugel), Andrea Doria (Rick Schultz), CA Tone (Gerald Roberts), CA Zara (Ron Thibault), CA Suzuya (Dave Haynes), CL Capitani (Beth Schultz).

The battle started in what had now become the standard way, the Allied forces launched into the pond directly in front of the dockyard area with a least one Jap cruiser to our rear and Flugel's Scharnhorst and Rick's Andrea Doria between us and the first bridge. Most other Axis units were beyond the first (16 foot wide) bridge defending the second pond.

At the beginning of the first sortie, the Jap cruisers move through the Allied fleet toward the second pond, attracting bb's from Allied units as they pass and not getting any shots off of their own that I can see. The fast moving cruisers may have picked up a hole or two during this transit but I couldn't tell (they would be high on the hull anyway.) Scharnhorst and Andrea Doria defend the bridge approaches for a time and then execute a fighting

withdrawal to the middle pond under extreme Allied pressure from at least 5 Battleships.

As the Allied main body reaches the middle pond the battling has broken down into a few Axis units fighting independently and most Allies looking for something to shoot in a target poor environment. The Warspite was patrolling the eastern coast when her lookouts spotted a limping Italian light cruiser approaching from near the center of the lake. Warspite rang up battle speed (such as it was) and moved to engage the Capitani captained by Beth Schultz. We, on the bridge, expected the Capitani to buzz on out of there, once we got in our first few shots but she was running very slow and we could even catch up with her. Turns out that Beth had thrown a dogbone and was limited to one engine. Since the ship could not get away, Warspite moved in to use her sidemount on the luckless victim. However, it was found the sidemount was now too tight and only fired after a period of several sec. (about 12). When it did fire, it was impressive, leaving about a 2 inch. hole in the water. I think I only got this hole to line up with an enemy boat once during this sortie. After Beth and I had battled to the point where I was low on ammo and Beth was out, Valiant showed up to help me dispose of the Capitani and Gerald Roberts show up to defend. The Tone's defence was limited by running out of ammo,



but his fast speed sure added another factor to the engagement.

During all this time, few other Axis ships seemed to be around. Rick's Andrea Doria was gunning and running with Foster's BB Massachusetts (his spelling not mine) and several others at times, and using the leftover campaign targets to advantage. By moving around the target's edges, Rick could nullify the superior turning ability and sheer power of the Alabama and get in some rear gun action as the following ship came to the corners. Foster apparently tired of such games, and when Andrea Doria was on the shore side of the target, simply shoved his bow against the target moving the target toward the lake shore. The result would either hold or crush the Doria between wall and target. Rick escaped the trap.

The Scharnhorst went by in mid-pond but didn't or couldn't stop by to help and the Capatani came off of five still afloat for this sortie. The Sortie wound down with Allied ships cruising the pond looking for targets.

At the end of this sortie, the Allies were winning and the heaviest damaged ships were the Capatani and the Scharnhorst.

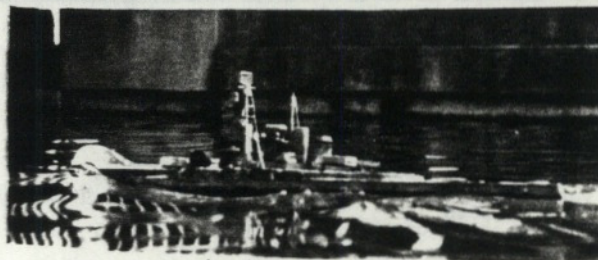
In the second sortie, once the log jam was broken at the Bridge, the Warspite and Valiant returned to destroy the Capitani which sank litterly within arms reach of the wall. Beth only got wet up to her elbow. Scharnhorst runs through most of the sortie leading a parade of Allied ships through all three ponds. Back and forth the party goes with other slower Allied ships firing a rear or forward gun at Fluegel as he passes, then going back to what they were doing. Rick's Doria returns to the campaign targets and Bob Amend's Queen Elisabeth and he chase through the garden paths until Foster and other Allied units show up to spoil the game and Rick exits stage left - low on Ammo. The Valiant chases the Zara, captained by Ron Thibault, into the third pond and in a turning contest is led over a plastic "baggie". Ron laughs as he pulls away rapidly and the Valiant grinds to a stop. Ron said later that he saw the baggie in the water and led the Valiant right over it on purpose. The sortie wears down to the normal end for this nationals as Allied units patrol the now empty lake.

2nd. Battle of the day, involving:

Allied: 3 South Dakotas (Will Montgomery, James Foster, Steve Mulholland) 3 Queen Elisabeths (Dan Hamilton, Bob Amend, Marty Hayes), the Tiger (Tom Jass), CA Houston (Lief Goodson), CA York (), CL Oakland (Dan Dees).

Axis: Scharnhorst (Flugel), Kirshima (Jeff Lide), Jean Bart (Mike Deskins), CA Tone (Gerald Roberts), CA Zara (Ron Thibault), CA Suzuya (Dave Haynes), CL Maya (Scott Lide).

The 1st. sortie involved heavy action around Dan Dees small cruiser which finally sank beneath the waves. However, the Axis ships were defended against by various Allied units and during this and other actions picked up quite a bit of damage. The Kirshima (Jeff Lides) normally seeming to take much



Jeff Lides ; KIRSHIMA

shell fire without too much effect, is heavily damaged in this first sortie and picked as a primary target for the second. There are even fewer Axis targets on the pond in this battle making it difficult at times to get any kind of shot at the enemy ships as the Allied side-gunned ships cluster close in. More than once the Allies take shot and shell from both friend and foe. Foster mentioned to me that first I blocked him from the target and then when went around my stern, I shot him. Could be .... but how many targets are there around for a slow old battleship?

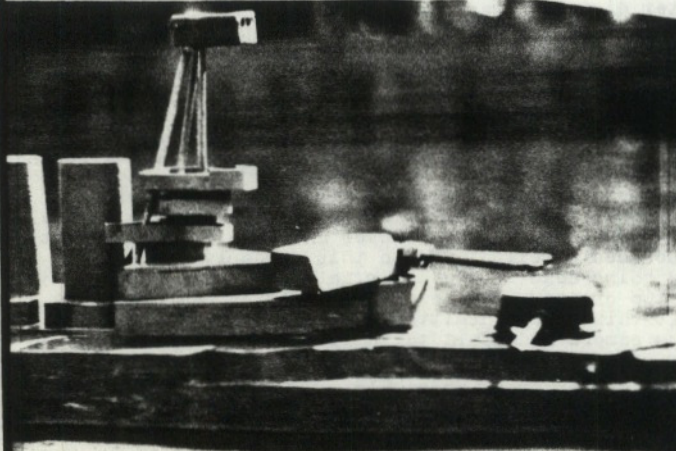


2nd. Sortie - There is a terrific fight under the bridge to the second lake. Seems that the Axis pulled back to just on the other side rather than face us in our pond. It would seem to be sound strategy to force the Allied horde to come through the bridge almost blind and shoot them up as they come out. The Allies sound the charge and at least 6 Battleships dive under the bridge. The Warspite does her normal thing and applies left rudder under the bridge (due to radio interference, I think), and ends up coming out against the left or east shore. The Kirshima, which on several occasions this week has seemingly taken a large dislike to Warspite, attacks the floundering ship. At least two or three Allied Battleships attack the Kirshima from under the bridge at the same time. (she is now broadside to them.) So the Warspite, slowly gaining headway, heads into a right turn, the Kirshima turns slowly to the right tracking the Warspite with her bow gun, and the Allied BBs wail away on the exposed sides of the Kirshima. From the looks of the tape, the Kirshima takes the worst of it by far after going through two or three circles, until finally cut off and then chased off by the overwhelming numbers of Allied units.

Toward the end of this sortie, Kirshima pays the price of her perseverance in this action and those of the first sortie, as she first slows and finally sinks (rolling as she takes the final plunge) while being pelted by no less than four Allied ships (mostly South Dakota classes) from all points of the compass.)



As with most of the week, the numerical superiority of the Allied forces is felt on Thursday. At least by the Allies, who have to hunt hard to find targets for their shells. In Amarillo, last year, when the numbers were reversed, the feeling on the Allied side was not as acute with regard to this as it was on the more numerous side here.



*Crummy, isn't it + !.. Marty's?*

### WATERPROOF SERVOS

(by Lief Goodson)

To the best of my knowledge, the waterproofing process that I am attempting to describe was invented by the Maryland Attack Group. I have taken on the task of documenting said process because I want to help other builders avoid the problems I have had with my waterproof box, and because Gross Admiral Fluegel "suggested" that I write this article. So here goes.

At the 1989 nationals, I missed two fleet battles because my water-tight radio box leaked. One time it leaked (from the bottom) when I hadn't even been sunk. On the final day of nat's, Rick Schultz's Andrea Doria sank after being attacked by four battleships. He retrieved his boat, dumped the water out, and sailed her back to port proclaiming the effectiveness of waterproof servos. I became a believer in waterproof servos that day. Both my DKM Lutzow (newly acquired from Cris Pearce) and my SMS Von Der Tann utilize waterproof servos in lieu of a waterproof box. During the 1989 fall southeast regionals, the servos in my Von Der Tann sat in an inch or more of water for most of two days. None of my servos leaked. Although I did not get sunk, I felt this partially proved the validity of the waterproofing process.

The waterproofing process consists of basically two steps - sealing of the servo body and sealing the top opening where the control horn connects. Sealing of the servo body is achieved by dipping the servo in PLASTI-DIP. PLASTI-DIP is designed for dipping the handles of hand tools to provide a protective coating and firmer grip. It is available at most hardware stores and cost about seven dollars for a 14.5 ounce can. The 14.5 ounce can holds enough to coat about a dozen servos, and the dip is available in a variety of colors. I tie a string around the partially threaded control horn screw so that after dipping, I can allow the rubberized plastic coating to dry overnight, while being hung from the shop bench. I place a towel beneath the servos because they tend to drip. As an extra precaution, I usually

### New Battling Members Coming Right Up

This could be true with a little more help. Several interested individuals have contacted me since last Nationals. These contacts have come as a direct of the magazine articles by Tom Jass, Stan Watkins, and Carl Shafer. All who inquired have received an information packet that consisted of two 90 minute cassette tapes dubbed from tapes by myself, Fluegel, and Curley, an issue of Hullbusters and a list of people to contact for more info. such as Marty for Club membership.

Below you'll see a list of all these folks names and addresses of those who have written in. But this is just the beginning. Look these over carefully if any of these new prospective targets and future friends live near you contact them and offer your assistance. The more we help the longer we play.

Thanks

Dan

Barry Wile  
PO Box 73  
Truro, Nova Scotia  
Canada B2N 5B6

Daniel Hutchens  
59 Hollywood Ave  
Hampton Virginia 23664

Brian Craven  
12310 Ocean Laurel Lane  
Houston Texas 77014

R D Symons  
1131 4th West  
Kemmerer Wyoming 83101

Clifford Armstrong  
210 W. Crest Ave.  
Tampa Florida 33603

Dave Allen  
423 Marlberry Drive  
Orlando Florida 32819

Frank Waters  
648 Mercer St.  
Albany New York 12208

Vaughan Meatte  
24674 Lexington  
E. Detroit Mi. 48021

D k W  
6681 Horseshoe Curve  
Chamhassen Mn. 55317

Dave Tyson  
1179 Howell Creek Drive  
Winter Spring Florida 32708

Bill Blundell  
3208 C E Colonial H91  
Orlando Florida 32803

Rob Malinski  
PO Box 140394  
Austin Texas 78714

Robert Eller  
PO Box 2603  
Shallotte North Carolina 28459

Pat Hite  
912 Chestnut Blvd.  
Cuyohoga Falls Ohio 44221

John White  
7242 Bestel Ave  
Westminster California 92683

Bill Rogers 937 8th Ave  
Pleasant Grove Alabama 35127

C N Waggener  
3618 Ternbrook Drive  
Smallville Georgia 30278

Tom Brandenburg  
1018 Shawnee Drive  
Elizabeth Town Kentucky 42701

seal the servo housing with silicone before I dip it. After I have installed these servos in my ship, I apply a little dip around the cord exit area of the servo for extra protection.

I use petroleum jelly (vaseline) and a o-ring to seal the the top of the servo. I apply a generous amount of jelly to the o-ring and slip it over the white splined power take-off (I don't know what its really called) on the servo. I then bevel the mating end of the servo control horn so that it (sort-of) matches the contour of the o-ring. Next, I press the control horn on to the power take-off until it seats against the o-ring. Finally, I put a little vaseline on the upper threads of the control horn screw and tighten it down - insuring a tight fit, while still allowing the servo motor to turn freely. Use of waterproof servos saves much needed hull space, while also allowing for the quick changing of servos should the need arise.

## A Rookies Regionals

Well it has been a long trip to getting a working combat ship to enter a regional. I started out with an article wrote by Daniel Dees in Scale Ship Models Mag. That got me going, I had to get involved! It started out with the group in Gig Harbor, Wash. After moving to Fla I dropped out for a short time. Then another article caught my eye.

I was thinking how I got in all of this as I was driving to the South East Regionals in Decatur, Ala. The Friends and Fellow lunatics that was supposed to drive with me had changed, one was in Tenn., the other had to cancell out. So I was out here at Three O'clock am. by my self. Dreaming of what I had seen and hope to see my untried cruiser victorious in battle. Well it turned out to be along drive, longer then I had thought. Finally reaching Decatur, I found the Hotel and managed to find some combatants from Maryland. Eventually I got to meet every one that I had heard about.

We cleared the lake shore on Friday night so as to have a good area for Saturday. Then back to the hotel where I got to meet more people and look over some fabulous ships. Out to dinner with every one and listen to all the stories and arguments.

Up early Sat. morning and get every thing ready to go. Oops running short on BB's, hey Leif did you get more BB's? The answer was No he needed some too. After getting our ships to the lake we made a quick run to Walmart. Then back to the lake and hurry to put finishing touches on. Shoot I'm late getting in to the first Fleet battle. In my hurry to get in, I didn't pay attention as to where my comrades where. Once in the water I started running between the islands to catch up.

This was to be one of many mistakes. In the process of doing this I made another foul move. I made contact with H.M.S. Valiant which started shooting holes in my ship. I tried desperitly to shake him off my stern but to no avail. I thought by running to shallow water that maybe he would swing away in hunt someone else. This also failed for the Valiant followed me in. In the process I suddenly stopped, no forward movement. I moved the lever for Full reverse, again no movement. My slight lead had just dropped to nothing. Valiant glided up gracefully and started filling, my Port side with BB's, help arrived but I was already settling to the bottom.

I could tell that this was going to be along day! As things went on my Proud cruiser started having problems first my forward gun started firing multiple shoots.

Unable to stop this, I went forward in to campaign with a stern gun. After spending time on the water and trying to cause trouble it was time to run for shelter. After engaging a couple of enemy cruisers another problem arose my water pump with a float switch decided to quit. Just barely made five minutes and pulled it out of the water. That was pretty much how my first day went, fix one thing and something else would quit.

Saturday night was out to dinner with every one and swap stories about the afternoons action. Then there was discussion about rules and ideas where we would like to see our hobby go. After dinner it was back to the hotel and try to figure out why different things had quit working. Repair work was done on the hull, all patches were put on over the holes put there by the enemy. Put all the batteries on chargers and try to get some rest for the following day.

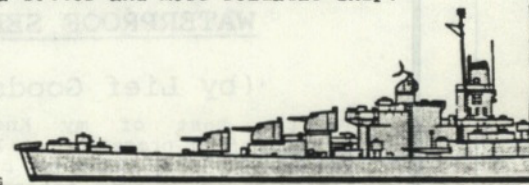
Sunday was to be Fleet battles. I was planning on entering the first two sorties. Then would have to start for home which was eleven hours away. Any way every thing was hooked up and ready to go. Put the ship in the water and wait for the word to start war, there it is War! Started out just great, rounded one island was about to close in on enemy cruiser, decided to try a long range shot. I pulled the lever and nothing happened! At that time I decided to retreat, add to this suddenly losing all control and going dead in the water. Well here came another pounding, by two cruisers before my five minutes could run out.

At this time I admitted defeat and decided to whip out the 35mm camera and start taking pictures. I really enjoyed watching the rest of the battling, and visiting with the rest of the people. I wished I could have stayed for the whole thing, but atleast I had to be at work come Monday morning. On the way home I thought of the new friends I had made, the faces that I could now associate with names.

Once at home I went through the new things I had learned started putting these in to my ship. Trying to change the things that had gone wrong and start over again. Also explain to the fellows and show them the pictures of what had happened. I had a few people ask if I would do it again, there is no hesitation you better believe that I would! I plan on being there for the Spring Regionals with a better and more reliable ship!

Sincerely yours

Buddy Friend  
Capt. U.S.S. Indianapolis



## The Maryland sinks again!

- Danny Schultz

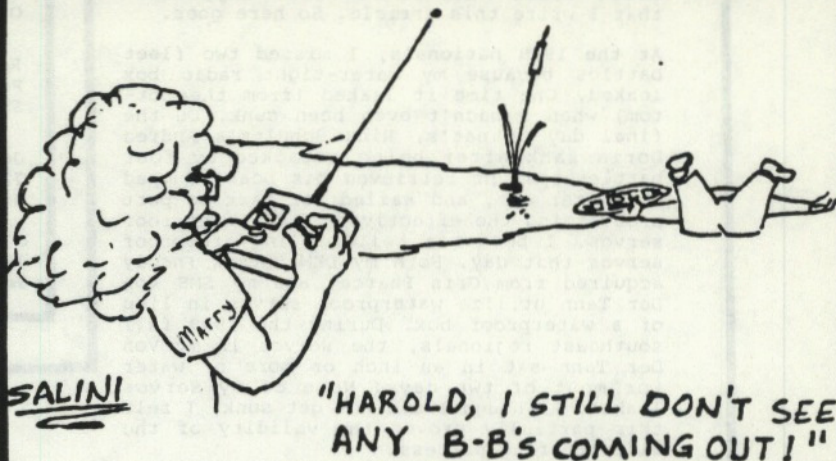
So what, everyone wants the Maryland to sink. It took my brother (Rick) and Chris Pearce 4 sorties and almost a hundred holes (many 3 and 4 times the size of a bb) before the Maryland sank. There's no doubt in my mind that the grounding of the Maryland was "a good idea". The only problem was I couldn't find a reef soon enough. Oh well, sooner or later you just have to say "Abandon Ship". Now let's focus our attention on the real issue: Why?

Why is the Maryland such a attraction when it sinks?  
Why is the Maryland "a pig" even though it is on the Allies side?

Why is the Maryland one of the few "old" U.S. Battleships still active in our hobby?

With the exception of the first one, just read over that nice "book" that is called our rules or read rule proposal #20.

I sometimes do't understand you-all's thinking. There was a lot of discussion about the Yamoto and if it should have another unit due to size and weight. I'm still waiting for another one to be built. Ships like the South Dakota and North Carolina class, they are everywhere. They also have 6 units and a higher weight factor, plus look at how much freeboard they have.



SALINI

"HAROLD, I STILL DON'T SEE ANY B-B'S COMING OUT!"

Marty, a long time ago, wrote an article about doing a number of data entrys (gun & ship size and several other specs) and came out with the number of ammo (bb's) each ship could carry during a sortie, saying that any gun turret could be armed. This way many ships could have a dozen guns and they could have full mobility - WOW! That does sound kind of neat. I imagine that pumps and capacity could be incorporated into formulas or for 'x' # of bbs is worth a 1/8" outlet, or I think a formula from the ships armor would be a good way.

Rule proposel #20, it didn't even classify the Maryland and 11 other ships. These ships weigh

between 31400 and 32600 tons. All but two japs wee U.S. "old battleships" and 28 sec. How would one interpret where these ships fit in? If it passes, beings they were class 2 before, they should remain class 2 until the club can vote again in 1990/ Yes, I feel that way. 7 Units, WOW, I just can't wait to see Fluegel's face.

I did call Dan and he stated that it was a typo and the Maryland was still in fact 5 units. Marty looked at the copy Dan gave him and the "typo" was there. Marty said he didn't notice when he copied them over. Speaking of facts - Try these on for size:

1. The Maryland and Yamoto class ships are the only ones with armor greater than 15" (they both have 16").
2. The Maryland's guns are the only 16" guns which are not in class 1.
3. The Maryland weighs in at 32500 std. and 40400 full, that's almost 8000 tons or 24%. (the Yamoto only increases 8000 tons or 12.5%)
4. The Maryland's gun dia. is larger than 4 different class 1 ships (that's of a total of 8 ships).

5. The Maryland misses the 6 unit break by only 500 tons (providing everything is already in "english tons).

6. The Maryland has a lot of freeboard. (enough said)

7. The Maryland is slow. (that's okay, it just decreases the odds of ranning somebody and lets Axis ships catch up to be blasted.

8. In the first four years of legal ships the U.S. built 13 heavy cruisers, 3 light cruisers, and 11 predreadnoughts. The nex 13 years, we put out 22 battleships of which over half saw WW II. "these suckers were over 13 years old when they entered WW II."

9. Due to the weight factor the only way to win a regional or Nats. is to build a "big" battleship, put on 3 pumps (you don't want to sink), be on the winning side (or on the smaller side if you don't lose by much), and be in every sortie. (you don't even have to shoot.)

These facts came right out of the official rules, ship lists, and the model itself. Don't you think MARYLAND deserves a higher classification?

## The Letter of the Law or It's intent?

by Marty Hayes

As a observer to life it seems that about 80% of people live within the intent of the law and the remaining 20% try to live the the extremes of the letter of it. You might well ask what I am talking about at this point, unless you have dealt with teenagers at some point. Teenagers have a higher percentage of law livers (rule benders) than the general population, and are generally considered to be self-centered because of it. A teenager is an wonderful example of those who live try to live to the letter of the law. When dealing with teenagers, you must be careful with your terms as any ambiguities are turned in directions you had never thought of.

In our hobby we seem to have quite a number of "letter of the law" people, who have made it a necessity to complicate the rules to try to contain them. Of course, like teenagers, it just seems to egg them on. The vast debate over turning systems which filled the pages of our newsletters several years ago is but an example. The result was changes to our rules calling for turning engines which were no larger and recieving no more voltage than the drive engines. Now ships don't add more voltage to the turning engines, they turn on additional engines; they don't have motors physically larger, they rewind the motors to deliver twice or more horsepower, and then they look at the two shaft vessels and say they can't add voltage to their drive motors during turns - which is not expressly in the rules either. Can't anyone see that any of these methods add additional thrust to the vessels? We have some members who will build in 150th. scale and weight their ships in 144 th. scale. - is this the letter of the law or is this the intent? In looking over the ships in combat today, some have moved rudders, prop shafts, or redesigned the hulls, yet complain that others are "not scale" if their freon tanks hang below the ship. Stringers have been added to the bows and waterlines at times - "because the shape of the hull dictates". This was a rule added for casement decks, torpedo bulges and chopped off sterns like the New Orleans Cruiser. A one inch. solid area in the stern of a South Dakota consists of a solid shield almost seven inches across behind which up to three guns hide. These people will find ways to ignore rules by loop holes each time the majority tries to balance the hobby. How can our Contest directors rule on intent while half the hobby only wants to go by the letter of the law (for their ship) but not for others.

I don't think we need a "kinder, gentler" hobby, but we do need adult interpretations of the rules in which ships go the correct speed (even when the rudder is wigged), and ships float at the proper waterlines, etc.

## Blow-by-Blow

## Battle Reports

1989 FALL SOUTHEASTERN REGIONALS

By Tom Jase

### PREPARATIONS & THE TRIP SOUTH

I came home from the 1989 Knoxville Nats and rested for a few weeks. (Actually, I was laughing so hard about Fluegel's two sinks and the plight of the Axis at Nats that I couldn't even hold an X-Acto knife steady.) I started on my duties as president, but left the ships alone. Some of the time I spent writing an article for US BOAT & SHIP MODELER about the Knoxville "Turkey Shoot". Look for it in the winter USB&SM!! Stan's article in the Fall USS&BM has sparked a good number of inquiries from interested modelers. Good job, founder!! I refitted and repaired the HMS TIGER, patching her hull and casements and installing new X-Cells to overcome the power (lack of) problems I had had at Nats. My HMS BELFAST was in good shape and she really didn't need much work except some paint touchup. The CVE convoy ship just required hull patches and a coat of paint.

In early October John came home from his summer job in Michigan. He was (and is) looking for work in the Lombard area; he planned to go to Fall Regionals with me and pilot the HMS TIGER. We left lovely Lombard on Thursday evening at 7:30 PM in a driving snowstorm. (The Saturday before we were raking leaves in the yard in our shirtsleeves!!) The weather reports were predicting 4-5" of snow for southern Indiana during the night -- great!! But, we weren't about to miss a regionals at Decatur just because of threatened snow. After all, we're tough Illinois battlers who are veterans of midwest winters.

The trip to Alabama wasn't too bad once we got south of Indianapolis and the snow stopped. Until that point it was snowing quite hard, but the junk was not sticking to the highway. The roads were wet but not slippery or icy. We zipped through Kentucky, Tennessee and northern Alabama on dry pavement and arrived at Dan's home at 6:00 AM (that's morning, Fluegel); John and I sacked out on their new sleeper couch until about 10:30 AM. Mary, Dan, John and I went for "breakfast" at a Chinese buffet and then back to the motel to see if any battlers had appeared. John French and Will Montgomery had arrived from Maryland and the Springfield, Missouri contingent of James Foster, Steve Milholland and Jay Edwards pulled in right then. Steve was without a ship to battle, but was armed with a video camera and a slide shooter to get some PR shots for the Skunkworks advertising. Buddy Friend (from Florida) was present, but Leif Goodson (also from Florida) was still in Tennessee on business.

#### FRIDAY TESTING & CRUISING

We trekked to the battling pond and proceeded to cut down the brush and bushes that had grown up around the pond since spring. Thank God for power tools, as the undergrowth was really thick. Dan had purchased a gas weed eater and a chain saw; these and a power mower were used to level an area for the pits and carve out a path around the edge of the pond. When the campaign targets were assembled and the launching docks installed in the water at their proper locations, I pulled HMS BELFAST from the Chevy wagon and got her ready for a speed test. One of her 6V Dumas motors was dead (it is only 8 years old). That killed my speed testing for Friday.

We all went to Western Sizzlin' for supper (a Decatur tradition) and told sea stories to the rookies to impress them with their 100% certain demise on Saturday. Dan assigned R/C frequencies and only Steve Baker (a rookie from Atlanta) had to change out his radio on Friday night. I loaned him one of my spare Futabas (without servo reversers, yet) and he refit his DMB POLA. I borrowed a spare 6V motor from Dan and installed it in BELFAST. Skunkworks had brought along their first DKM LUTZOW kit and we all eyeballed their efforts -- some real good ideas in the kit!! The remainder of the Maryland battlers did not arrive until after midnight, so I missed their entry. John and I sacked out in the luxurious "Motel Americanna" and dreamed of sinking BBs.

#### ORDER OF BATTLE

Dan had divided the fleets up into USA versus the World; this split seemed to balance out the capital ships and the rookies somewhat on each side. The USA would have Foster and Montgomery on the same fleet (each with very effective SOUTH DAKOTAs), but the World would have more capital ships, even though their capital ships had fewer units per ship. We could do it; after all, the Axis had faced 4 of these SOUTH DAKOTA beasts at the Knoxville Nats -- and they had been slaughtered.

#### WORLD FLEET

The World fleet was composed of three BRs, two BCs and four CHs. The units totaled 36 and there were four rookies in this fleet.

#### DMB VITTORIO VENETO

Jay Edwards, a rookie from Springfield, Mo., was piloting James Foster's Italian BB. The VITTORIO VENETO is the only ship that survived the "Foster Fire"; she is a six unit ship with 30 knot (24 second) speed. She was armed with 2 bow, 1 stern and a broadside gun (and 2 pumps). Although Jay is a rookie the World was expecting the VITTORIO VENETO to be an effective, trouble-free ship.

#### HMS VALIANT

The veteran capital ship of the World fleet was

Dan Hamilton's 5 unit, 26 second BB. VALIANT was armed with 1 bow and 2 broadside guns. She always fights close in with her broadside guns. Her two pumps are effective and she has not been sunk since the Amarillo Nats.



#### HMS WARSPITE

Marty Hayes from the Maryland Attack Group (MAG) brought his British Queen Elizabeth class BB. She is a 26 second ship and Marty had armed her with 2 stern guns, a bow gun and 1 broadside weapon. She is a new ship in 1989 and had a good record at Nats. She and Marty had just won the overall prize at the MAG 1989 Fall Regionals.

#### HMS TIGER

John Jass' English WWI BC is a 4 unit, 24 second ship which has given the Brits a fast capital ship. She had experienced battery troubles at Nats, but I had purchased new X-cells for her (too many \$) to solve the problem. John had invested some time in detailing her superstructure -- she looked to be a contender for Best of Scale. Could she successfully battle against 2 USA SOUTH DAKOTAs? John does not lack aggressiveness.



#### DKM VON DER TANN

Leif Goodson brought his new German WWI BC to the battle. She had been built since 1989 Nats and Leif had installed a slick, simple rotating gun in A turret and 2 stern guns. He was using 4.8V Dumas motors (against my advice), but she was fast enough at 26 seconds. Leif is the leader of a new and active Florida R/C Combat club.



HMS BELFAST

I was conning my veteran CH which is a typical 3 unit, 24 second CH. She had seen minimal action at 1989 Nats, and she was ready to contribute her units to aid the World cause. She surely is easier to maintain and feed than a capital ship is.

DKM LUTZOW

Chris Pearce (an adopted MAG member) brought his German CH; she is a 3 unit ship with 26 second speed -- although she looked faster throughout the weekend. Chris had been battling her during the 1989 MAG battling season, so she should be bug-free. She looked clean on the inside and outside. Could the Brits refrain from shooting her out of habit?

DMB POLA

Frank Pittelli, another MAG member, brought his Italian CH to do battle against the USA. She had 2 stern guns (Frank detests bow guns on CHs) and had already gained experience during the MAG battling. Frank also had a VON DER TANN that he was planning to use if he felt the need for more gunfire.

DMB POLA

Steve Baker (from the Atlanta area) was a rookie captain with a new 3 unit Italian CH. She was the most cleanly constructed rookie ship that I have seen since Foster broke in with his AUSTIN!! Steve had even provided her two 4.8V Dumas motors with water cooled coils. The USA would be gunning for her -- would she be reliable enough to avoid easy sinks? Because of the confusion that could occur with two POLAs on the same fleet, someone suggested that we call Steve's POLA the "Good" POLA and Frank's POLA the "Bad POLA". Everyone agreed.

USA FLEET

The USA fleet was composed of five BBs and two CHs. Two rookies (Buddy Friend and Nathan Blattau) were captains in this fleet. The fleet USA contained 33 units, so the unit count was fairly equal between the opposing fleets, although the USA had more heavy capital ships.

USS SOUTH DAKOTA

Will Montgomery's 6 unit, 26 second BB was armed with 3 stern guns and a broadside off each bow in A and B turrets. She is a veteran ship and Will was the 1988 Von Fluegel Nats winner. He is always effective, and her 3 stern guns cause damage that reminds one of our old spurt guns!

USS MASSACHUSETTS

A mouthful to spell and a handful to fight, James Foster's BB was the 1989 Von Fluegel winner at Knoxville Nats. She is a 26 second, 6 unit ship that James had equipped with 2 bow guns, 2 stern guns, a broadside gun and a super effective turning system. James doesn't make piloting mistakes and his BB is always reliable and effective.

USS MARYLAND

Danny Schultz (another MAG captain) had lugged his extremely veteran (old) American BB to Decatur. She was decked out with 2 stern guns, 1 bow gun and 1 broadside gun. Because of her 28 second speed and her generous freeboard she was definitely going to be a target for World fleet attentions.

USS CALIFORNIA

Steve Andrews (Marty Hayes' son-in-law and a MAG captain) was fighting another USA BB that is extremely similar to the MARYLAND. Her paint scheme rendered her easily distinguished. Steve had armed her with 2 stern guns and 2 broadside weapons. She was also a 28 second ship, so she was also a prime target for the 24 and 26 second World capital ships.

MORENO

Nathan Blattau, a rookie captain from MAG, brought his Argentinian BB -- a five unit 28 second ship. She was armed with 2 broadside guns forward and 2 stern guns. Rumors from MAG had it that Nathan was an aggressive captain and the MORENO was a turning ship that would slug it out in-close. Nathan changed her paint scheme on Saturday night to further confuse the World fleet.

USS NORTHAMPTON

John French was fighting with his American WWII CH to close the 1989 battling season in Alabama. She is a veteran 3 unit ship and John has gained much experience battling her throughout the past years. He was definitely going to be a serious contender for High Point CH for the weekend.

USS HOUSTON

Buddy Friend, a rookie from Florida, would get his baptism of fire with his American 3 unit CH. She was originally built to battle within the Northwest Club rules (you know, with ball bearings), but Buddy had modified her after he had moved to 'gator land. She would definitely be singled out for attention by the World fleet -- could she stand the heat?

SATURDAY BATTLING

Saturday started out a little chilly, but the sun warmed us up enough during the day for some of us to don shorts and revel in the Alabama sun. The water was calm with small waves and a light breeze. When the video introductions of the ships and captains were completed, the battling started (only about 30 minutes late).

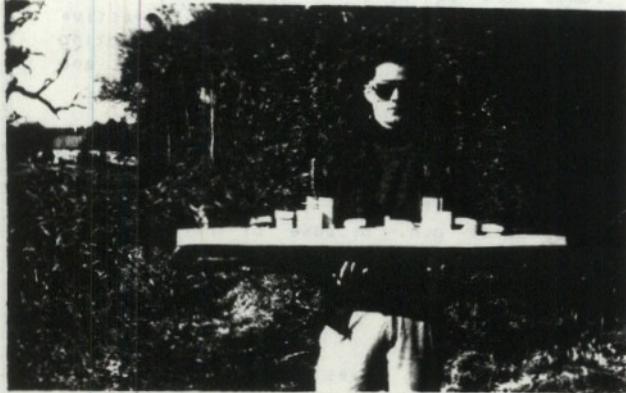
FLEET BATTLE 1

All ships were ready to go -- the USA Fleet fielded 7 ships while the World Fleet numbered 9 ships.

The first sortie began at 10:34 AM. MASSACHUSETTS and SOUTH DAKOTA steam through the channel and are intercepted by VALIANT. NORTHAMPTON and BELFAST tangle with their stern guns. MASSACHUSETTS and MORENO join forces against VITTORIO VENETO.

WARSPITE is battling CALIFORNIA and BELFAST leaves NORTHAMPTON and picks on the slower CALIFORNIA. WARSPITE and "Bad" POLA exchange shots. Meanwhile, at the other end of the pond TIGER and VALIANT have joined forces to introduce HOUSTON to the hobby -- using only bbs rather than ballbearings. Quickly, HOUSTON takes on a serious list to starboard; MARYLAND rushes (slowly) to aid the HOUSTON. LUTZOW has run aground near the USA target and SOUTH DAKOTA and CALIFORNIA line up their stern guns. After some punishment LUTZOW

Nathan Blattau MORENO



freed herself and backs off. WARSPITE goes on "five, out of control" and slowly circles. MASSACHUSETTS blasts the crippled WARSPITE. TIGER defends, but MORENO and SOUTH DAKOTA add to the BB's woes. TIGER appears grounded (she had wrapped a sunken baggie around her screws) and BELFAST hurries to help the Brits who are in trouble. MASSACHUSETTS turns her attention to the TIGER while BELFAST and LUTZOW defend the cat. NORTHAMPTON pokes her bow in, but TIGER is not declared (just stationery). TIGER rakes NORTHAMPTON. CALIFORNIA and VALIANT are attracted to the battling -- they add to the melee. WARSPITE (who was back in commission after a ram jarred her) and SOUTH DAKOTA are blasting each other throughout the time this other general firefight is going on. MORENO holes TIGER and VALIANT returns the favor. After TIGER regains her speed the fighting breaks up into smaller groups as the capital ships exhaust their bbs on each other. VITTORIO VENETO still has ammo and chases MORENO and SOUTH DAKOTA. The battle ends at 10:55 -- 21 minutes of blasting and battling.

No scoring was done after the first sortie as all the ships were going to be fighting (but some were wounded --TIGER with depleted batteries and HOUSTON with serious damage) in the second sortie.

Sortie 2 begins at 11:38 AM and immediately VON DER TANN declares "5 minutes"; seems Leif has punched a large hole in her hull (with his hand) as he launched her. MORENO and TIGER battle as TIGER defends the hapless VON DER TANN. "Good" POLA steams over to CALIFORNIA to join battle. VITTORIO VENETO and VALIANT add to the confusion by attacking MORENO and CALIFORNIA. At 11:41 TIGER sinks (off camera). She has paid the price for defending VON DER TANN. During the time TIGER is being removed from the water, VON DER TANN's "five minutes" are over and Leif pulls her from the water. After battling is resumed WARSPITE and SOUTH DAKOTA keep northeastern rivalries alive. MASSACHUSETTS picks on LUTZOW. At 11:43 MARYLAND joins TIGER at the bottom and the damaged HOUSTON does likewise. Later analysis determined that VALIANT had caused the sinking damage to MARYLAND. It all happens that quickly! MASSACHUSETTS senses that WARSPITE (pumping steadily) is also in serious trouble and the USA BB stalks WARSPITE; BELFAST attacks MASSACHUSETTS but MASSACHUSETTS will not be deterred. SOUTH DAKOTA comes to join MASSACHUSETTS; the 2 USA BBs sink WARSPITE at 11:47. Four ships have been sunk in just 9 minutes

of battling. BELFAST and MORENO continue the fight. LUTZOW attacks CALIFORNIA to avenge WARSPITE but SOUTH DAKOTA unbalances the fray and LUTZOW retreats. "Good" POLA and VALIANT take on MORENO; VITTORIO VENETO and MASSACHUSETTS attach themselves to the fight in progress. BELFAST (on five) steams through the group and MASSACHUSETTS and SOUTH DAKOTA peel off to chase her; BELFAST's speed outdistances the BBs and VALIANT enters the stern chase. VALIANT turns her attention to CALIFORNIA; MASSACHUSETTS and SOUTH DAKOTA abandon the chase of BELFAST and return to defend CALIFORNIA. VITTORIO VENETO and VALIANT chase SOUTH DAKOTA and MORENO enters the fracas. Even the BBs finally exhaust their bbs, and the sortie (and battle) ends at 12:08 -- 30 minutes of shooting and sinking.

Four ships were sunk during the second sortie -- 2 capital ships from the World Fleet and 1 BB and 1 CH from the USA Fleet. Total damage to World Fleet ships was: VALIANT, 745; VITTORIO VENETO, 220 (plus 200 ram penalty); WARSPITE, 1640 (sunk); VON DER TANN, 1045 (52 above, 5 on and 8 below the w); TIGER, 1215 (sunk); "Good" POLA, 30; LUTZOW, 305; "Bad" POLA, 60 (200 ram penalty); BELFAST, 360. The USA Fleet was blasted for the following damage: MASSACHUSETTS, 300; SOUTH DAKOTA, 630; MARYLAND, 1155 (sunk); CALIFORNIA, 355 (200 ram penalty); MORENO, 670; NORTHAMPTON, 120; HOUSTON, 1200 (sunk). After deducting the 3 ram penalties, the USA Fleet had blasted out a convincing 5420 to 4030 win.

#### CAMPAIGN

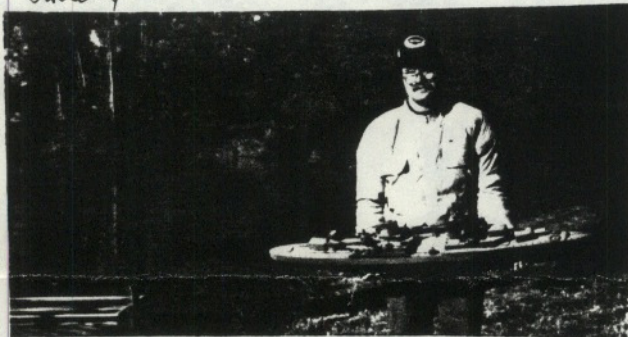
After everyone patched and ate lunch, the Campaign battle begins at 2:20 PM. The fleets are still divided into USA versus the World. The USA Fleet convoy ship (piloted by Danny Schultz) is launched immediately and NORTHAMPTON steams to attack the World Fleet target. WARSPITE defends the target and sounds the alarm that an enemy convoy ship target is on the water. LUTZOW streaks to intercept the convoy ship and promptly rams her. Since the ram is damaging, the SA Fleet convoy ship is immediately awarded a successful run. VON DER TANN and "Good" POLA attack the USA target; MASSACHUSETTS and SOUTH DAKOTA defend -- not an even fight. TIGER and VITTORIO VENETO arrive on the scene and the battling around the USA target is brutal. VON DER TANN and "Good" POLA retire after expending their ammo and MORENO steams in to aid the USA. The 2:40 target check reveals no damage to the World target; the USA target has lost 5 cups (2 supply and 3 troop) due to bb holes.

James Foster. MASSACHUSETTS  
OVERALL WINNER!



The World convoy ship launches and MASSACHUSETTS runs over to blast her. VALIANT joins the convoy ship and attacks MASSACHUSETTS. NORTHAMPTON and VON DER TANN also join in the fray. After a harrowing run, the World convoy ship limps into her forward base and delivers a load of supplies -- but she is seriously damaged. Meanwhile, TIGER and VITTORIO VENETO remain at the USA target and expend their bbs. The USA convoy ship is relaunched from her home base for run #2 after being patched. LUTZOW tails her (be careful, Chris). The World convoy ship is also launched for her return trip home; she sinks about 3 minutes into the trip -- her damage from MASSACHUSETTS during her inbound journey has done her in. The USA convoy ship arrives at the USA forward base with her second load. LUTZOW and HOUSTON battle around the USA forward base -- they're the only ships on the water. 3:00 target check shows no further USA losses, but the World loses 2 targets. When the war resumes at 3:04 the USA convoy ship relaunches from her forward base to begin the long journey home. LUTZOW rams her again, but this time no damage occurs. VALIANT has joined the fight and sinks the USA convoy ship at the entry to her home base. VALIANT then runs hard aground (speed control servo problems), and declares "five ooc". SOUTH DAKOTA pounds the hapless BB, but VALIANT survives the ordeal.

Buddy Friend. INDIANAPOLIS



3:20 target check -- no further damage to targets as both fleets were heavily engaged in convoy attacks during this period. VON DER TANN proceeds to the USA target to shoot some cups. BELFAST joins up with the World convoy ship to begin her second run. MASSACHUSETTS, MORENO and NORTHAMPTON attack the convoy ship as BELFAST and "Good" POLA defend. The World convoy ship is sent to the bottom with less than a minute left on her 5 minute run. This is a serious setback for the World Fleet as they now have only one convoy ship sink left during the campaign. Besides, they have only made one successful run during the past hour -- supplies are running low. VITTORIO VENETO has rearmed and refueled at the home base and reenters the battle. She attacks the USA target with a vengeance. Defending USA ships attempt to run her off, but to no avail. VITTORIO VENETO scores on NORTHAMPTON who is defending the USA target. At the 3:40 target check the USA loses 4 more cups, but their successful convoy run replaces 2 of the cups. The World target has lost another cup.

At 3:44 MASSACHUSETTS, MORENO and MARYLAND launch the biggest attack of the day against the World target. WARSPITE and VON DER TANN defend. The USA again launches their convoy ship -- perhaps the target attack has been a diversion. TIGER, "Good" POLA and LUTZOW rush to destroy the USA convoy ship. TIGER is somehow taking on water and must stop to pump out. MORENO attacks TIGER, but TIGER dewaterers successfully. The USA convoy ship escapes for another successful run and the World ships turn their attention to the USA target. Only MORENO is around to defend. Meanwhile the World uses all this distraction to launch their convoy ship. They badly need supplies. VITTORIO VENETO escorts from a distance (per our fleet orders). As

the World convoy ship passes the USA target, MORENO doesn't recognize whose ship she is, and MORENO neglects to attack. The World convoy ship runs the gauntlet and docks at the World forward base. The 4:00 target check reveals that the World target has been blasted -- they lose 6 cups. The USA has lost 5 cups. Heavy duty destruction!! However, both fleets have made successful convoy ship runs; each fleet has replenished their forward base with 1 supply depot and 1 troop battalion. Convoy runs are the name of the game!!

OLD MAN JASS. More British Junk.



The World convoy ship is relaunched for a return trip to her home base. MORENO attacks and is joined by NORTHAMPTON and CALIFORNIA. The World warships escort their convoy ship and she fights her way through to her home base. CALIFORNIA then gives her attention to the World target and VON DER TANN defends. SOUTH DAKOTA arrives and so does TIGER to somewhat even the sides. The campaign ends at 4:20 (neither side asks for an extension) and the supply charts must be added up to determine if there has been a winner.

Since the USA has 10,000 more tons of supplies remaining at their forward base than did the World, the USA won a "Tactical Victory". The USA Fleet split 600 points for the victory plus 600 sink points for the 2 convoy ship sinks. The World ships split 300 points for the single convoy ship sink they recorded.

Dan Ham. Iten. Valiant.



#### SUNDAY BATTLING

Sunday was the type of Alabama spring day we had driven 10 hours to experience. It was sunny and warm (in the 70s) and the water was dead calm. Those of us who like to wear shorts donned them at the start of the battling. Beautiful weather!!

#### FLEET BATTLE 2

For this battle Frank Pittelli had switched to his VON DER TANN Battlecruiser (identified in this article as "Bad" VON DER TANN) in order to boost his gun power. Otherwise, both fleets were composed of the same ships that had battled on Saturday.

The fighting begins at 10:02 AM with "Good" POLA, BELFAST and TIGER rushing around the island to charge the USA Fleet. BELFAST closes on a stationary MARYLAND and fires from her bow gun. MASSACHUSETTS blasts the reckless BELFAST and TIGER blasts MARYLAND with a few broadsides. SOUTH DAKOTA engages TIGER who is concentrating on MARYLAND (still sitting still). MORENO shoots TIGER who shoots SOUTH DAKOTA; MASSACHUSETTS steams into position to get off some shots.

VALIANT and WARSPITE rush in (at 26 seconds) through the channel to aid the 3 World ships. BELFAST sterns MASSACHUSETTS, while TIGER is still firing on MARYLAND. "Bad" VON DER TANN shoots MORENO to add to the destruction. (At this point on the video tape I count 8 warships within a 20' circle -- does everyone have a death wish?) TIGER breaks off blasting MARYLAND and VALIANT takes up the task -- it's dirty work, but someone has to do it. As TIGER steams away she is slowly settling; there is no stream of water from her pump outlet! TIGER settles under the waves at 10:06 -- "something seems to be wrong with our bloody battlecruisers, today." After battling resumes, MASSACHUSETTS holes WARSPITE who is grounded. Not 10 feet away VON DER TANN is also grounded. MASSACHUSETTS and SOUTH DAKOTA rush over to take advantage of the grounded ships. VITTORIO VENETO attacks both USA BBs with her bow gun. NORTHAMPTON fires at VITTORIO VENETO. Meanwhile, VALIANT and MORENO are hottly engaged in a turning battle. MORENO misses with her bow gun and VALIANT attempts to bring her broadside to bear. At 10:15 the CALIFORNIA is retrieved from the pond; her "5 minutes, ooc" has ended. Evidently a separate battle has been raging out of range of the video camera throughout the sortie; in this battle HOUSTON is badly damaged. The sortie winds down as the VITTORIO VENETO and VALIANT fight with SOUTH DAKOTA, MASSACHUSETTS and MORENO.

With the sinking of TIGER (due to a bb blowing off the pump outlet from the plastic tubing) we had to score the damage after the first sortie. World Fleet damage was: TIGER, 1050 (sunk); VITTORIO VENETO, 30; WARSPITE, 740 (hurting); VALIANT, 810 (pumping); VON DER TANN (Leif), 100; "Bad" VON DER TANN (Frank), 125; "Good" POLA, 10; LUTZOW, 145; BELFAST, 125. USA Fleet fared slightly better; MASSACHUSETTS, 805; SOUTH DAKOTA, 320; MARYLAND, 310; CALIFORNIA, 365; MORENO, 70; NORTHAMPTON, 265; HOUSTON, 565 (in real trouble).

The second sortie begins at 11:14. HOUSTON has withdrawn from the second sortie due to battle damage -- the first victim. WARSPITE is pumping hard; MASSACHUSETTS goes right after her while VITTORIO VENETO joins WARSPITE to offer help. SOUTH DAKOTA adds her guns to the cause; VALIANT attacks SOUTH DAKOTA. During this melee SOUTH DAKOTA gets in 6-8 stern shots on VITTORIO VENETO as SOUTH DAKOTA can out turn the Italian BB. VALIANT aids VITTORIO VENETO and they drive off SOUTH DAKOTA. At the other end of the pond MORENO has gone out of control and BELFAST and "Good" POLA turn their attention to her. In this same area MARYLAND is parked against the USA target. BELFAST leaves MORENO to "Good" POLA and steams over to MARYLAND. BELFAST backs in to deliver some stern shots on the stationary MARYLAND. At 11:18 WARSPITE finally sinks on the other end of the pond. As the video camera swings to catch Marty Hayes wading into the pond to raise WARSPITE, MARYLAND sinks at the USA target. After the MAG

Mr Bubble... Chris Pearce. DEUTSCHLAND



## Proposed Additions to the Turning System Rules

Ronald Thibault

9/19/89

IN ADDITION TO THE EXISTING RULES THE FOLLOWING CLARIFICATIONS BE ADDED.

1. A Turning System may add no net thrust to the ship in forward, reverse, or standing still.
2. If all available shafts are used for propulsion then the turning system may only turn off, reduce speed (voltage), or reverse (from the direction of travel) one or more shafts. No increase in shaft speed or voltage is allowed.
3. On ships with 3 (three) or more shafts turning systems may either turn off, reduce speed (voltage), or reverse propulsion shafts or turn on an even number of turning shafts. Any combination of the proceeding may be used (ie. reverse a propulsion shaft and turn on turning shafts. THE TURNING SHAFTS MUST PROVIDE EQUAL AND OPPOSITE SIMULTANEOUS THRUST (ie. if two turning shafts are used one must provide forward thrust when on and the other must provide reverse (opposite) thrust). Equal thrust is further defined as the same size props with the same pitch and number of blades, the same type of motor driving both shafts with the same voltage applied to both motors, and the same shaft speed.
4. If the ship has an odd number of shafts and the center shaft is not used for propulsion it may be used in the turning system. However if the center shaft is used one or more of the "regular" propulsion shafts must be turned off. A further restriction on the center shaft is that it must have the same size, pitch, and blade number as the "regular" propulsion shaft(s), and the shaft speed can be no higher than that of the "regular" propulsion shaft(s).

Jay Edwards ; VITTORIO VENETO

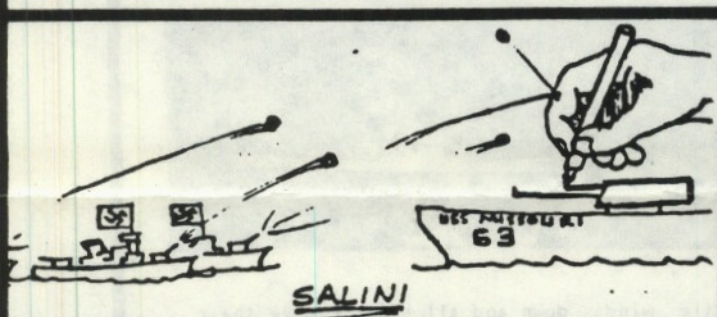
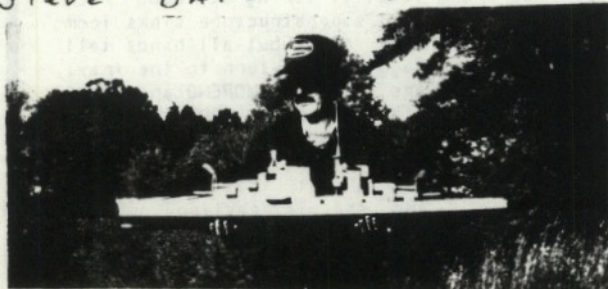


hulks have been removed from the pond, BELFAST and VALIANT return to the circling MORENO to avenge WARSPITE. A new battle forms in the middle of the pond; NORTHAMPTON out turns VITTORIO VENETO to neutralize the VITTORIO VENETO's speed. MORENO and SOUTH DAKOTA tackle VALIANT and "Bad" VON DER TANN. VALIANT is alongside MORENO and the two ships exchange broadsides. Again off-camera another sink occurs -- CALIFORNIA has sunk "in the Marsh" (according to Steve Andrews). I didn't know there was a marsh in the area. VALIANT battles MASSACHUSETTS and SOUTH DAKOTA. VITTORIO VENETO chases NORTHAMPTON around the island. VALIANT steams through the channel with SOUTH DAKOTA in pursuit. At 11:26 SOUTH DAKOTA runs hard aground by the island. VITTORIO VENETO and VALIANT elbow each other to get to the beached BB. VALIANT begins the fun with her stern gun. She then empties her broadside gun. VITTORIO VENETO waits her turn (not quietly) and finally gets her chance to return the stern gun volleys she had previously suffered. As a finale, VITTORIO VENETO and VALIANT sandwich the suffering SOUTH DAKOTA. Both World BBs run out of ammo before SOUTH DAKOTA strikes her ensign. It has been a brutal battle for capital ships!!



The World Fleet closed the scoring gap in Sortie 2. Damage for World Fleet ships was: VITTORIO VENETO, 250; VALIANT, 440; WARSPITE, 1085 (sunk); VON DER TANN (Leif), 525; "Bad" VON DER TANN (Frank), 0; "Good" POLA, 0 (one hit in 2 sorties?); LUTZOW, 45; BELFAST, 35. USA Fleet holes totaled; MORENO, 255; MASSACHUSETTS, 320; SOUTH DAKOTA, 960 (36 above, 6 on and 9 below the waterline); CALIFORNIA, 930 (sunk); MARYLAND, 885 (sunk); NORTHAMPTON, 80; HOUSTON, 300 (withdrawal). The World Fleet had roared back to take the Second Fleet battle by a score of 6430 to 5565. This battle produced 11,995 damage points -- the highest I've ever seen. (At Knoxville the highest battle damage score was 10,155 points.) The capital ships were just blasting away with their broadside guns, and giving little thought to their own damage.

Siege Baker. POLA



### Speed

Our ships speed has long been a hot topic of discussion in the club. Our present speed rule is based loosely on frued's scale speed formula. This is not true scale speed but the speed at which scale waves form to our scale hull shape. This was used in tank tests to design our real ships. Sounds complicated but its not.

The high end of the scale is a little fast due to our 2 second intervals and the low end way off due our need to keep slower speed ships somewhat competitive with the other newer ones.

Many people in our club feel that the speed rule while good still penalizes the older ships too much and has as a result made some ships such as HMS Rodney so uncompetitive as to not be built any more.

Listed below are some suggested speed rule variations to prevent this.

The number #1 variation has been around for a long time. It is very close to our present speed rule but gives one second intervals with 2.5 knots between each class. At first glance it looks deceptively simple and better. But on closer observation the older ships suffer even more coming off even slower than they do now. It also adds a great many classes that would make enforcement a contest directors nightmare. In addition to this it splits classes further such as the Heavy Cruisers making more ships undesirable to build causing a bad situation to get worse

### FLEET BATTLE 3

This battle was a one sortie affair that pitted the MAG(gots) from the Northeast against the rest of the universe. The Maggots thought they would be an easy winner. The rest of us would never turn down the chance to hole their ugly ships -- Allied and Axis alike. On the whole, their fleet is one of the ugliest on any body of water. The sides were eight MAG(gots) against seven Universe ships. Frank Pittelli switched back to his "Bad" POLA to further confuse ship identification and scoring.

This melee started at 1:18 with a general battle in the middle of the pond. I had great difficulty identifying the ships on the video for this battle, so the writeup will be somewhat sketchy. BELFAST battles SOUTH DAKOTA and MARYLAND. VITTORIO VENETO cruises through the fleets and fires upon SOUTH DAKOTA. TIGER chases CALIFORNIA and the ships mill around in the distance. MASSACHUSETTS balsts MARYLAND after fighting on her side for the previous three battles. VON DER TANN, BELFAST, TIGER, MARYLAND, MASSACHUSETTS, WARSPITE and "Good" POLA are on the screen -- I think. TIGER pursues MARYLAND into the channel and VITTORIO VENETO joins the fun. MARYLAND is being harrassed by MASSACHUSETTS and TIGER and NORTHAMPTON joins to defend the MAG BB. The battling seems slow and disjointed compared to the previous battles -- I think ship identification played a part in this situation. TIGER overtakes CALIFORNIA and pounds her. MASSACHUSETTS and VITTORIO VENETO join in but SOUTH DAKOTA elbows her way into the melee. SOUTH DAKOTA pushes VALIANT from the fray while WARSPITE takes TIGER on to help CALIFORNIA. This battle ends at 1:38 as the capital ships (WARSPITE, TIGER, VALIANT, MORENO, VITTORIO VENETO and SOUTH DAKOTA) fire their bbs at each other as the cruisers seek the safety of the far side of the pond.

Damage to the Maggots was: WARSPITE, 380; SOUTH DAKOTA, 100; MORENO, 145; CALIFORNIA, 150; MARYLAND, 200; LUTZOW, 655; "Bad" POLA, 195; NORTHAMPTON, 165. The Universe Fleet suffered as follows: VITTORIO VENETO, 280; MASSACHUSETTS, 90;

something we wanted to improve upon not worsen. The Number #2 Variation is very simple and slows the top end down for more realism and helps the older ships a lot maybe just a little too much while it really hurts small ships such as Destroyers. Little ships need all the help a good speed rule can give them too.

The Number #3 Variation is basically our present speed rule with one second intervals. This has several advantages to it. First it helps the older ships but not too much (the newer ships are still faster). Second the top end of the speed rule slows down, this not only gives more scale realism at the top end of the scale but gives the ships more battery and motor life. This is something that is growing in importance. It will help all light weight fast ships in the amount of battery power needed for a battle, while still keeping the fast ships faster the slower ones.

The Number #4 Variation is very close to speed rule Variation 3 but with one very important difference. The Speed groups are a little larger. This can be very significant as it further assists some ships to be build while maintaining the jest and flavor of our speed rule. Such as now the Bismarck is included in the 30 knot group.

#### Present Speed Rule.

1 - 5 knots	= 36 seconds
5 - 9 knots	= 34 seconds
10 - 10 knots	= 32 seconds
15 - 19 knots	= 30 seconds
20 - 24 knots	= 28 seconds
25 - 29 knots	= 26 seconds
30 - 34 knots	= 24 seconds
35 - 39 knots	= 22 seconds

VALIANT, 895; TIGER, 500; BELFAST, 80; "Good" POLA, 20; VON DER TANN (Leif), 230. TIGER and VITTORIO VENETO each were penalized 200 ram points. The Maggots were the winners by a 2095 to 1590 score. Their ships are ugly -- but they can battle.

Danny Schultz.

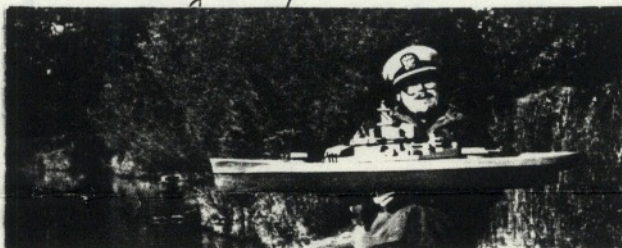


FLEET BATTLE "SMEAR"

The Springfield crowd and Buddy Friend had to make tracks back to culture, but most of the remaining captains wanted to get it on once more in 1989. We picked new sides and went out one last time. This one sortie battle pitted WARSPITE, TIGER, "Good" POLA and VON DER TANN (Goodson) against MORENO, "Bad" POLA, SOUTH DAKOTA, NORTHAMPTON and BELFAST. When the fighting begins "Bad" POLA and MORENO hunt out "Good" POLA to break her unsunken record. "Good" POLA flees behind SOUTH DAKOTA to get cover. MORENO runs hard aground right in front of the video camera. TIGER and VON DER TANN elbow in to blast MORENO with side guns. SOUTH DAKOTA rams her way into the fray and holes VON DER TANN.

NORTHAMPTON pushes TIGER away from MORENO and the CH gets hung up on the port side of the BC. TIGER blasts several salvos of bbs completely through NORTHAMPTON's forward hull before the CH frees herself. BELFAST finally gets through the massed ships and rams MORENO and frees the grounded BB. VON DER TANN becomes grounded in the attempt to blast MORENO and SOUTH DAKOTA returns the attention. TIGER finds the last submerged baggie in the pond, fouls her props and grinds to a halt. TIGER goes on "five out of control". MORENO attempts to repay bbs to TIGER, but "Good" POLA defends TIGER with her hull (not very Italian). MORENO finally gets through and she and TIGER exchange broadsides. Meanwhile, VON DER TANN has worked her way free and rejoins the battle. "Good" POLA was seriously damaged defending TIGER and "Good" POLA slowly fills with water in the channel; she sinks on her side and finally plunges. "Bad" POLA is still firing at "Good" POLA even as "Good" POLA's superstructure sinks from sight. TIGER comes off of 5, but all hands tell John to remove the baggie and return to the fray. When TIGER later runs aground MORENO and "Bad" POLA attempt to add to her damage. NORTHAMPTON is dangerously low in the water in the channel. An argument develops as French claims she is still afloat; John Jass points out that her midships decking is awash, and she is resting on the bottom. French turns off the pump and NORTHAMPTON does not settle further -- she is sunk!! Steve Andrews sums it up: "French... Nice Sink."

Will Montgomery. S. DAKOTA.



The battle winds down and all hands remove their ships from the water for another year. The "Smear" was lots of fun and "Good" POLA was finally sunk.

AWARDS & THANK YOUS

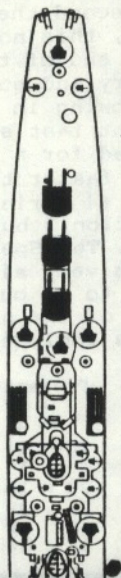
The USA had triumphed in one of two fleet battles and the Campaign. MAG won the other fleet battle and consequently they swept most of the high point awards for the weekend. The winners were:

- High Point Overall James Foster  
USS MASSACHUSETTS
- High Point Class 1 Will Montgomery  
USS SOUTH DAKOTA
- High Point Class 2 Nathan Blattau  
MORENO
- Danny Schultz  
USS MARYLAND
- High Point Class 3 Leif Goodson  
DKM VON DER TANN
- High Point Class 4 John French  
USS NORTHAMPTON
- Best of Scale John Jass  
HMS TIGER
- Effective Convoy Danny Schultz

Total Weekend points for all ships involved are tallied below; these totals include Campaign points. ↗

Suggested Speed Rule Variations

- Number #1
- 1 - 2.4 knots = 37 seconds
  - 2.5 - 4.9 knots = 36 seconds
  - 5 - 7.4 knots = 35 seconds
  - 7.5 - 9.9 knots = 34 seconds
  - 10 - 12.4 knots = 33 seconds
  - 12.5 - 14.9 knots = 32 seconds
  - 15 - 17.4 knots = 31 seconds
  - 17.5 - 19.9 knots = 30 seconds
  - 20 - 22.4 knots = 29 seconds
  - 22.5 - 24.9 knots = 28 seconds
  - 25 - 27.4 knots = 27 seconds
  - 27.5 - 29.9 knots = 26 seconds
  - 30 - 32.4 knots = 25 seconds
  - 32.5 - 34.9 knots = 24 seconds
  - 35 - 37.4 knots = 23 seconds
  - 37.5 - 39.9 knots = 22 seconds
- Number #2
- 1 - 9 knots = 27 seconds
  - 10 - 19 knots = 26 seconds
  - 20 - 29 knots = 25 seconds
  - 30 - 39 knots = 24 seconds
- Number #3
- 1 - 4 knots = 31 seconds
  - 5 - 9 knots = 30 seconds
  - 10 - 14 knots = 29 seconds
  - 15 - 19 knots = 28 seconds
  - 20 - 24 knots = 27 seconds
  - 25 - 29 knots = 26 seconds
  - 30 - 34 knots = 25 seconds
  - 35 - 39 knots = 24 seconds
- Number #4
- 1 - 7 knots = 29 seconds
  - 8 - 14 knots = 28 seconds
  - 15 - 21 knots = 27 seconds
  - 22 - 28 knots = 26 seconds
  - 29 - 34 knots = 25 seconds
  - 35 - 39 knots = 24 seconds



Jan

James Foster	2482
Will Montgomery	2457
Danny Schultz	2171
Nathan Blattau	2171
Steve Andrews	1971
Dan Hamilton	1793
Marty Hayes	1771
Jay Edwards	1645
John French	1598
Lief Goodson	1542
Tom Jass	1289
Frank Pittelli	1200
Steve Baker	1189
Buddy Friend	1104
Chris Pearce	1087
John Jass	884



There were thirteen sinks during the weekend. Seven capital ships and three cruisers were sunk during the fleet battles (including "Smear"). Three convoy ship sinks were recorded during campaign battling.

Thanks to Mary and Dan for another great regionals!! Brutal battling and prefect weather. Thanks to all the battlers (especially the Rookies) who drove from Maryland, Florida, Georgia, Missouri and Illinois to Alabama to test their ships and share the comradeship. We had a ball and that's why we keep returning to Alabama twice each year.

## FILL'ER UP!!! THE EASY WAY!

Kwik fill your freon tanks without going through the poppet valve, needle valve or burning your fingers! This simple to use fitting allows you to do just that; and here's how; part A attaches to the hose from the freon drum, part B screws onto the ship freon tank which is fitted with a schrader valve. It can be left there or moved to any other ship you have that has a schrader equipped freon tank.

To fill; simply press the lever on part A down (it locks if you don't hold it) and insert A into B with the freon drum in the upside down position. You will hear the liquid rush in and as the sound stops, pull A out of B, no muss no fuss no frozen fingers!

This jewel can be found at most refrigerator supply stores. The schrader fittings that solder to the shipboard freon tank can also be purchased at the same store. For the price of about \$15.00 you can have the Kwik coupler and enough schrader fittings to do five or six freon tanks.

My cruiser and battlecruiser are both fitted in this way so that all I do is move part B to the one I want to fill and do it to it!

Build Axis Ships!!!  
"Dirty" Dave Haynes

**IMPERIAL EASTMAN**

**kwik coupler**

16-G

## President's Column



By Tom Jass

I hope all of you had a blessed and joyous Christmas and that you got servos, balsa wood and freon, not neckties, socks and family bills as your presents. The weather in Illinois was lousy (what else) over the holidays -- but I guess it was even worse for those of you in the southern USA. We still had a great Christmas as our entire family was together for the holiday.

A new decade has started -- the 90s!! I never thought Fluegel's BISMARCK would still be afloat at this date (even if its only on the shelf in the garage). Mail keeps pouring into me (and others) as a result of Stan Watkins' and Karl Shafer's articles in national magazines. My article on the 1989 Nats at Knoxville was recently published the winter issue of US BOAT & SHIP MODELER. If you want an autographed version, sent me a copy of the issue and \$5 and I'll sign it and return it to you. Sriosuly, we may experience sizeable growth in our hobby in the future whether we want it or not. I hope the 90s is a decade of growth for us; I want others to experience the same comradeship, fun and sense of accomplishment that I've gotten from this hobby. Keep writing articles for these national magazines -- that's the quickest and most effective way to spread our story around and let others enjoy it also.

### Hull Busters The Form

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**FREQUENCY LIST**

Attached to this column (unless Fluegel has separated it) is a form for you to fill out and return to me concerning your radio frequency information. Please provide the requested data. Give me the frequency of your radio, not the channel number (for example, 75.630 not # 72). Also, include any extra crystals you may have for switching frequencies. I will then construct a frequency table of all club members. It will not be published in Hull Busters, but I will send anyone a copy if they send me a SASE (self addressed, stamped envelope). I expect to be finished with the early version about April 1, 1990.

**1990 MEMBERSHIPS**

Send in your \$ to Marty Hayes or Wade Koehn to cover your 1990 club dues. I have recently finished a complete Shiplist for all ships through DDs for all navies (with much help from Dan Hamilton). My wife is retying our club constitution (transferring it from an Apple computer to an IBM compatible) so your 1990 package will contain new, snazzy documents.

**HALF UNITS**

The December, 1989 Hull Busters issue had a proposal by Chris Pearce to allow 1/2 offensive/defensive units within the present ship categories, based on ship displacement. Worth some serious thought!! However, I have asked Chris to produce a complete list of all ships that will gain or lose a half unit under his proposal. The only way any of us can properly evaluate this sweeping proposal is to have it's author create such a list -- why should 80 separate club members have to search through the ship list to see what will happen to their ship(s)? I feel it is incumbent upon the person proposing the change to provide all of us with complete data so we can properly evaluate it. I feel we too often vote on proposals that we haven't sufficiently researched or understand.

**SENIOR CIRCUIT**

Marty Hayes, Scott Lide and I are proposing the formation of a Senior Circuit for our club. After all, if the golfers and baseball players can do it (and make big money) why can't we? We have just roughed out some ideas, but nothing is set in concrete yet (what's the hurry?). We were thinking of using only ships with no broadside guns (BBs would still be allowed), conducting only one fleet battle per day, starting this battle at 2PM, restricting all ships to speeds of 40 seconds per 100', etc. Membership would be limited to battlers over 40 years of age. We would steer our ships seated on shore in captain's chairs with footstools. Each captain would be allowed an assistant to put his ship into the water and remove it (good work for Beth, John and Jeff). A "bifocals, out of control" condition would care for our increasing vision problems. Anyone else interested? If so, contact Marty Hayes and contribute your ideas and comments.

**AREA CODE CHANGE**

My area code has changed from 312 to 708. So, my new telephone number is (708) 620-5835. Please use the new area code or you will not reach me. Don't mess with Ma Bell.

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**HULL BUSTERS**

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**Where Have All the X-Cells Gone?**

by Lief Goodson

Since I first received my introductory tape on warship combat from Dan Hamilton, I have searched unsuccessfully for surplus X-Cell batteries. Finally, last week I found some! I was so excited about my discovery, I decided to share my good fortune with the rest of the club. I am currently negotiating to purchase several hundred of these X-Cells to offer to any of you who have had as much trouble locating them as I have. These X-cells have never been used, but they are not new. About five years ago, they were packaged by Gates in sixty volt packs (30 cells) and sold to a local telephone system distributor for use as backup power supplies. They sat on a shelf until they were recently sold as surplus. The dealer I get them from reconditions them so they should have a capacity equal to 70-80% of a new X-Cell. I sent some of these X-Cells to Fluegel to test them. Hopefully, he will include his results with this article. I can provide the X-Cells for between \$2.00 and \$2.50 each plus shipping. The price depends on what kind of deal I can negotiate with the surplus dealer. Due to their weight, shipping (via UPS) is expensive - between \$.10 and \$.70 each depending on the number you order, and your location. If you want some of these batteries call or write:

Lief Goodson  
4419 Selkirk Lane East  
Lakeland, Florida 33813  
(813)646-8114

