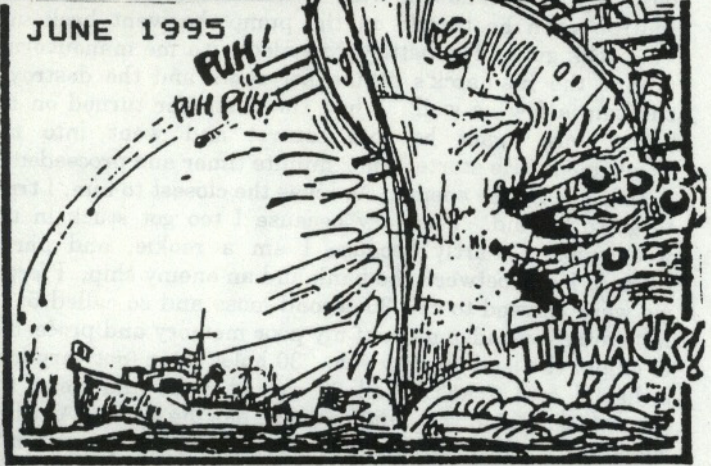


# HULLBUSTERS

JUNE 1995



## Dissention in the Allied Ranks? Or Are the Axis to Blame?

AP NEWS

The rumor mill has been running full tilt this winter. The biggest news revolves around the possible defection of much of the Allied fleet, and what this could mean at Nationals this summer. Also, why is this happening?

Up in the North East region at least 2 major Allied players should be battling Axis this year. Marty Hayes, the anchor of the "Over-the-Hill Squadron" appears to be looking closely at the Japanese fleet. (The lend-lease program I believe.) Will the rest of his squadron blindly follow him? Or with their vision problems, they may still think he is battling with his Warspite (to them, anything moving on the water looks pretty much like a Warspite). The Allied admiral better make sure they get the word of Marty's new status.

Paul "Doc" Broring seems to be leaning toward the German fleet. It could be that his Axis heritage is finally showing through. Or maybe he just wants to find out what it is

like to battle with Will Montgomery instead of against him. The thought of those two teaming up ought to worry at least a few Allied captains.

Will there be any other turn-coats up there? It is possible. Will the entire Maryland Attack Group turn Axis? Or maybe even try to form their own fleet and take on the rest of the world again? I do not know. But we do hear that Mike Deskin may also have himself an Axis ship at Nationals.

So this "virus" is not just localized in Maryland. Did we also hear that Andrew Kricke from Georgia will have an Axis ship this year? (I believe he bought a battle cruiser from the Md. group.) Perhaps this is a virus (a very virulent strain at that), and the Md. group is spreading it in their older ships that they are selling to trusting Allied captains. Didn't Francis Rogowski buy an Axis ship from them a little while back? Maybe that was just a test for this years ambitious expansion "project".

Have there been other sightings of new Axis construction? Has any one checked out the dockyards in Missouri lately? Steve Millholand and James Foster are known to change their allegiance frequently. Now with the likely Axis victory this summer, maybe they will come along for the ride also.

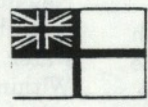
Add it all up and one begins to wonder if anyone will be left for admiral Pate to lead. At last check he was frantically trying to search out the cause of this upheaval. Only then can he work on a cure. He believes that certain unsavory elements within the Maryland branch of the Axis fleet are behind this situation. Perhaps he will himself succumb to the stresses of this problem and those of being the Allied commander for several years. Would he consider building an Axis ship himself? We do not know the answer to this one, but if the rumors are accurate, someone big in Texas may also be flying an Axis flag this July. Possibly it will be Chris Pearce. He has been chasing that elusive Von Fluegel Trophy for many years and just cannot seem to catch it as an Allied. So maybe his chances would be better as an Axis.

I suppose we will just have to wait until Nationals begin to see just how successful this Axis expansion project has been. But do not expect another lopsided Allied victory in Springfield this year.

## Action at the '95 Texas

### Triple Crown

By Chris Pearce



Well, it's June, now, and for the first time ever, all three battles in the Texas Triple Crown have been completed before Nats. This year's battling saw the same old faces, and a few new ones, locked in deadly combat with the elements, if not with each other.

#### First Stop: Houston

Our story begins in Houston, where the weather first began to play us foul. We arrived at the lake Saturday to discover that the strong wind was blowing from the opposite end of the very large lake, resulting in considerable surf at the shallow end we were going to battle in. After brief speed tests, we gathered our courage and set our ships out to sea for what was to

be a rather interesting battle.

The participants in the first battle were David Haynes with the Mutsu, and Paul Fluegel with the Lutzow representing the Axis, and Jim Pate with the Washington, Brian Craven with the South Dakota, and myself with the Queen Elizabeth rounding out the Allied fleet. Wade did not to participate due to an unfinished refit, and Fluegel sat on the sidelines due to reliability (rudder) problems with his Bismark.

The battle began with the Allied battleships trying to round up one of the Axis warships for some punishment. The Axis tried to play a run and gun game, but it was difficult amidst the crashing waves. Shots were fired, and some crashed into the hull of the Lutzow, whereupon David closed in to help the little cruiser. Much to his chagrin, the Mutsu then lost rudder control and proceeded to go in circles while the Allied captains attempted to get shots on it. The sortie ended with everyone still afloat, but with both Axis ships in rather serious trouble. (Sorry, but the scores are in the care of Mr. Craven...) *Cont. P-1071*

The second sortie began with the Allies going all out to chase down the Lutzow. Paul played a good Axis and ran in a beeline down the shore, staying ahead of the slower Allied

## Reflections of a Rookie

By Joe Kutz, email [joeKutz@aol.com](mailto:joeKutz@aol.com)

The April issue of Hullbusters had many 'rookie' articles. It was great. My wife asked me when is a battler not a rookie. I told her some say it depends on skill, but generally I think if you survive a 'Nats' you aren't a rookie anymore.

Hint for the month. You want a faster firing gun but don't want the hassle of electrical solenoids. Try a 'High Speed Coreless Servo'. I use Futaba's medium size one with a star arm with the extra arms cut off. It is mounted with only a 1/16" space to the poppet button. I don't use cam-followers, as the medium has enough torque. I run the receiver at 6 volts instead of 4.8. It is very sensitive. You barely have to move the stick to get it to fire. In fact the little quiver you get from servo's when you turn on the receiver on (even with the radio on) usually fires the gun (I may need a little more space than 1/16"). Very fast firing.

### Texas Triple Crown #2, Fredricksburg

I took my circa 1907 Invincible. The superstructure was almost non-existent, but I wanted to test my 4 prop drivetrain under fire and to see how my bilge pump would do. In case you missed the last issue, I made what I call a 'drivetrain' that uses a single small Swampworks motor to turn 4 1.5" props (I mistakenly said 1.75" props last issue). I did this because I wanted all 4 props powered, but didn't want 4 drive motors. Current draw is less...and it looks neat. I must admit it is rather heavy, coming in at 22 ounces with motor, drivetrain, 4 stuffing tubes and 4 1.5" brass Swampworks props. The stuffing tubes mount into the drive making a self contained unit. It takes awhile to build, but installs in a few minutes.

I must commend the 'old timers' for not laughing when they saw the boat. They reserved judgment until I put the boat in the water. It did indeed move fast enough and can stop in 1/2 a boat length. Turning is good, though probably not as good as a 2 prop Invincible. I have never seen the other Invincibles in action so I don't know.

One concern I had was noise, as it was a little noisy on the test bench. Turns out with decks on and the boat out in the water, the noise level is low (for a gear drive). I usually couldn't hear it above the other boats.

So what about the battles you ask? Well, I am not good with 'play by play' as I am too busy worrying about myself. The Allies/Axis were pretty evenly matched at 4 boats apiece, with the Allies 13 guns to the Axis's 17 guns. The Axis had 2 Bismarck's, a Nagato class (it was named different), and a Lutzow. We had a North Carolina, a class 5 British ship (a Queen Elizabeth I think), my Invincible, and a destroyer.

Due to problems in the axis fleet, it seemed the first sortie got over before it started. I was trying to get a feel for the boat and the range on the stern guns (servo control) and before I new it, it was over. One Axis battle ship ran into trouble but instead of letting us blast him full of holes, he 'declared' it sunk and took it off the water. I was disappointed. Isn't that what we live for, sending any boat with mechanical or radio problems to Davey Jones locker? Our destroyer lost control when he turned on the pump and

went into the weeds. The pump stayed on and he was able to stay afloat for his 2 minutes. The destroyer also was slow (more on that later) and couldn't outrun a Bismarck, but fortunately our battleships protected him.

The second sortie of the battle went better. Even though the destroyer captain new he was slow, and feared he would lose control when he turned on the pump, he went back out. That took guts. The battle proceeded with me maneuvering around the Bismarck's taking pot shots and the destroyer shooting a few as well. When the destroyer turned on his pump once again he lost control and went into the weeds/moss. He started his 2 minute timer and proceeded to get blasted by the enemy. As I was the closest to him, I tried to go to his aid. I say try because I too got stuck in the weeds/moss. Partly because I am a rookie, and partly because I was between the bank and an enemy ship. I forgot we were allowed to call 30 second moss and so called 5. A Bismarck took advantage of my poor memory and proceeded to empty the lead into my side. 30 holes later (not very long either) I said, "can't I call 30 second moss and clean the props." They said yes, I did and was moving again. As I had called '5' I continued it. The destroyer's pump kept him afloat with 9 below the water line holes, and 1 on, and so he survived. The battle soon wound down with no sinks this sortie but the allies way ahead on points (I didn't get the numbers though). As the weather was cold and rainy, we called it a day and agreed to meet back in the morning.

Sunday the clouds cleared but it was cold and windy in the morning. We agreed on just one sortie, to meet for lunch, and go home. One of the Bismarck's stayed out, as did the destroyer. For me it was my best sortie...sort of...till I sunk. I was really mixing it up. I was also making more of my shots count (one thing I noticed that separates the rookies from the old-timers is we tend to waste bb's and they make their shots count). I heard some say "Lutzow in trouble" and headed for some easy shots. Unfortunately the Bismarck and the Nagato class ship headed the same direction and pounced on me. Even though I was slower, I felt I was giving as good as I got, as I could maneuver better and get shots in. So they started the 'squeeze' on me so I couldn't turn and fire (with the stern). So I decided that when their side mounts got into range I would put it in full reverse and back past them as I can stop much quicker than them. Again lady luck wasn't with me and my side mount hung up on the Bismarck's deck. We came to a stop and he started to unload his sidemounts. I gave it the gas (I can get to speed in 1/2 a boat length also) and went hard a port and fired. The Nagato Class boat (I don't remember the name) turned to help the Lutzow. I then noticed I was getting lower in the water. I tried to turn on the pump and nothing happened. Within 30 seconds I was in Davey Jones Locker. It doesn't take long to sink without a pump. On shore I discovered the servo that actuates the pump wasn't working. I took off the top of the radio box and there was no water inside. I have since found out the servo is bad, nothing I could do about that (sort of). In the future I will have a float switch and a servo, so either one can turn the pump on.

While I was trying to figure out the pump servo not working, the whole receiver shut down and blew the fuse. Fluegal told me I shouldn't use fuses. I thought about that. Do I want to go down in flames fighting, or if I have electrical problems, do I want to blow a fuse and go down (disabled)? I was thinking about agreeing with Fluegal, after all how many boats catch fire? But when I got home I read the April

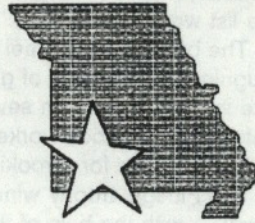
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newsletter and there was 2 references to boats with electrical problems. I decided it is better to blow a fuse and save the receiver. My logic is this. If I have a problem bad enough to blow a fuse, I am probably going down anyway, so might as well save the electrical equipment. Someone mentioned reliability of using fuses. I use 'WaterProof Marine fuse holders with Marine Fuses. Marine fuses don't rust or corrode if they get wet. I put a little dielectric grease on the fuse ends before I insert it.

I also made the drivetrain for a destroyer and it turned out to be too slow. It hadn't been speed tested yet, and I guess I geared it down too much. I believe he is going to pull it out in favor of direct-drive with smaller props (instead of re-gearing it). It would be a little lighter.

I have learned one thing, drivetrains aren't for all boats. There is no one way of doing things. But I like them. All my boats will have them. I get less current draw and more torque.

# MO Notes: on Nats



by Steve Milholland

June is here and NATS is approaching at warp speed. Do you know where you will be July 10th thru 14th? If you are like me, you intend to be right here in Springfield, MO for the biggest R/C warship event of 1995. It looks like it will be a bad one to miss. After talking to Rick Whitsell and keeping up with the rumor mill around the country, it looks as if attendance at this NATS could be 30 plus captains and who knows how many ships. I can hardly wait.

## SHIP LAUNCHING & RECOVERY

One little thing that all who come to NATS need to be aware of is the circumstances surrounding the launch and recovery of ships in Sequiota Lake. Now that the lake has been completely rebuilt, there are no longer any broken down rock ledges that can be used to step down on for launch & recovery. The entire perimeter of the lake is just like a swimming pool with two differences. Instead of smooth concrete for a ledge, the lake has rough cut limestone. Instead of only a couple of inches from the ledge to the surface of the water there is a drop of approx. 15 to 18 inches. This means that launching a heavy ship by kneeling or by laying across the ledge and setting it into the water will be very difficult if not totally impossible. Recovery by this method can be done only by Arnold Schwarzenegger. Forget it.

For anyone with a ship that cannot be launched or recovered with one hand, a launch & recovery cradle or sling IS ESSENTIAL.

A launching sling can be made from a 1 inch dowel about 2-3 feet long

(depending on ship length) with two or more loops of lawn chair webbing suspended from it. The loops will probably have to be weighted so that on recovery, they will sink far enough to allow the ship to be steered into them.

Another method is to use a piece of old carpet suspended from the dowel by ropes. The carpet will tend to pad and protect a hull as it wraps around it on recovery and while carrying from the pits to water.

## SHADE, TABLE SPACE, & ELECTRICITY

While we will have exclusive use of the pavilion at Sequiota Park, we will not have all the amenities which spoiled us so in Houston the last couple of years.

The pavilion here is very small and will most likely not hold all of us. This means that those of you who have work tables to bring should do so. If we can get the city park people to move in some picnic tables and place them under the shade trees, that will be great, you can then leave your table in the motel, but DON'T FORGET TO BRING IT.

There will of course be shade under the pavilion and Sequiota also has quite a few large shade trees which will make for a good pit area if needed. I think there is enough shade for everyone who will not be able to get into the pavilion, but if you have man-made shade, you may want to consider bringing it also. Again, it may not be needed, but better to have & not need, etc.

One of the nicer things about Houston was the electric outlets at every table. Sorry, there will be none of that here. There is only ONE electrical outlet in the pavilion. If we try to plug several battery chargers into that one circuit we will most likely trip a breaker and then we will have no electricity at all. The single available outlet will probably be reserved for low drain use like radio chargers or VCR battery chargers. If you will need to charge ship batteries at lakeside, bring a storage battery or plan to charge from your vehicles battery in the parking lot.

That's all for now. If you have any questions about the conditions at the lake or workshop facilities in Springfield, give me a call anytime at (417) 831-2309.

## OFFICIAL

The Ten Rule Proposals



Rule Proposal #1:

Add to Article IV. D. :  
The Annual Championship cannot be held in the same state more than two years in a row.

Explanation: This will prevent a state that has a large number of voting battlers from monopolizing NATS.

Rule Proposal #2:

Add to Section II.H.9. :  
Any offensive units carried on board a ship in excess of the selected offensive/defensive ratio must be empty and pinned.

Explanation: There have been accusations of captains using their excess offensive units. This would help prevent that from happening. If you are concerned with fooling other captains about your offensive unit positioning, use fake barrels and/or small gun pins.

Rule Proposal #3:



Add to Section II.B. :  
7. Prop shafts may be angled.

Explanation: Our E-Board "ruled" on a rule that does not exist. Fine. The benefit of angling your shafts is marginal at best, but let's not take away the option.

Rule Proposal #4:

Add to Section II.H.5. :  
b. Magazines may be constructed to hold more than their legal capacity. Anyone who takes more than the legal magazine capacity into battle is a dirty scumsucking dog and picks his nose in public.

Explanation: This allows the newer magazine types like hoppers and pancake magazines to continue to be used, but it makes it pretty clear what we think about cheaters. There is no practical/efficient/quick way to enforce any magazine rule anyway.

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# Rule Opposal *John*

A proposal in the April Hull Buster asked us to throw away our scale freeboard in exchange for a generic freeboard-by-class which would allow 1-, 2- and 3-class ships to battle with a CO2 system.

The first problem with this proposal is: it is designed to help the smaller ships, yet it includes the bigger ships as well. Why? Can't a North Carolina make its weight? Is the Queen Elizabeth using plastic barrels to make weight? I think not. I suspect that the three Allied captains who proposed this rule are tired of the high-freeboard British ships and want to drop down to generic hulls.

The second problem is: Swamp Works™ now offers a lightweight regulator, making the weight argument less valid! Battery swapping between sorties helps, too!

The third problem is: uniform freeboard is in direct opposition to one of the hobbies main goals — scale battles! Rather than pass another inept, unscale rule like speed-by-length, let's nip this thing in the bud. What's next? Units by the number of letters in the ship's name, or number of bbs by the year the ship was commissioned?

Keep the hobby scale — vote against this rule proposal!

## Stroll Down Memory Lane

by Mercury Peabody

***Some people may be considering using their hotel rooms as a dockyard at NATS '95. That's been the trend for the past few years, but that was not always the case. As Curly prepares for NATS '95, I've been asked to regale you with the story of the Ray Kelley Craft Center — Springfield's community dockyard for the '86, '87 and '95 NATS.***

*Happy Days'* Fonzie, when asked about his leather jacket, said, "It's not the jacket, it's who's in the jacket!" The Ray Kelley Craft Center is much the same. The center is a rather humble building; brick, one-story high, a front and back door, lots of outlets, many tables, and windows high enough that even Fluegel can't shoot them out. But, like Fonzie's jacket, it's not the building — it's the people inside that make it special!

And the people in the building are some of the best friends a guy could ask for! I remember a young, Japanese sailor who was working on a boat behind me. Gerald Roberts was his name. He was always ready to offer advice, share tools, swap



jokes or just work diligently — side-by-side — toward the common cause. I still remember his horrified face, lit up in the blue glow of the fireball that engulfed his ship (and face) as he sprayed WD-40 into his ship. Try that in your hotel room!

Another memorable character was Dan Dees, whose presence in the center was documented by the scorch marks on the ceiling and the pile of spent fire extinguishers in the corner. His wiring had more shorts than a Fruit-Of-The-Loom warehouse. But a friendlier guy could not be found, and Dan was always available to help the inept rookies—like Curly.

Legendary battlers were at every table: Fluegel, Milholland, Roberts, Pearce, Foster, Poindexter, Jass, Jass, Darby, Dees ... the list went on and on ... and so did the work!

The buzzing of Dremel tools, the whirring of motors and the laughing and chatting of great friends filled the room until very late into the night. On several occasions, the sun came up before the last dock worker went down.

The benefits for a rookie working side-by-side with a roomful of Von Fluegel trophy winners is immeasurable, but I know that Curly — with the help of the veterans — was able to have his ship ready at all times, never missing a sortie.

There were some very memorable fun times! For instance, when Curly took the hull skin off of his Lutzow and wrapped it



around the hull of Fluegel's Lutzow. Fluegel's jaw hit the floor. His heart sank faster than a British cruiser.

There was the raccoon's tail that kept showing up on the transom of Stan's ship, or the armor-piercing shells that hit an unsheltered cruiser, or those hooligans who superglued Curly's Lutzow to the bottom of its boat box. Some of the best jokes were disguised as Allied battleships. These were good times!

The answers to a fleetful of questions were harbored within those doors, and every sailor (whose wife would allow him) was anchored in the craft center after hours. There was one sailor who didn't stay in the craft center — my dear friend, Dan Hamilton — and to this day, I (and a few other old salts) harbor a hidden grudge against him for secluding himself from the gang, rather than being one of them.

Since the '87 NATS, site hosts have not been successful in finding great dockyard sites, and battlers have had to forego the camaraderie and sequester themselves in their hotel rooms, sleeping in fumes one notch down from the gas chamber. The hobby has not had the close-knit unity and love of the 80s, and people just don't get to know each other as well.

Now I hear that some of the guys attending NATS '95 are thinking of skipping the craft center — big mistake! The hobby needs the exchange of info, the enhanced friendships and the unification of the group.

Here's a great chance to debate rule proposals, upgrade your technology and boast about the days exploits — but only if you participate in that great naval tradition known as the Ray Kelley Craft Center. Ask a veteran who's been there what they thought of it ... and save me a table, I wouldn't miss it for anything!

battleships. Unfortunately, it was to no avail as just when he was getting around a geographical obstruction that might have saved him, the Lutzow settled beneath the waves. The rest of us all agreed to head to more sheltered waters, but along the way, a brief skirmish between the Mutsu and Washington resulted in the Mutsu getting broadside to the waves, and rolling side to side. The water poured in through the damaged hull of the Mutsu, and she quickly settled to the bottom. The Washington, meanwhile, was not much more lucky, likewise getting broadside to the waves, and having something strange happen to the pump, resulting in the first Allied sink of the year. The remaining two Allied battleships were content to point their bows into the wind and wait out their five. This battle resulted in an Allied victory, primarily due to the sinking of the Lutzow, and the excess damage sustained by the Axis ships.

That ended the battling Saturday, with wet Axis radios, and weather that looked like it wasn't going to get any better. Sunday looked slightly better, but was still rather windy. Fluegel's Bismark was still suffering from rudder problems, so the elder Fluegel opted to sail the Lutzow while Paul cooled his heels ashore.

The first sortie of this battle started with the Allied warships trying to chase the Lutzow around, mostly to no avail. D.W. is a far wiler captain than his son, and with a cruiser, it's hard to get a shot on him. However, the Mutsu got in a corner once again, and lost rudder control. Brian was chasing Fluegel with the South Dakota, but Jim and I were around to put the finish on the Mutsu. As we were just about lined up, a loud pop was heard, along with the venting of CO<sub>2</sub>, and David quickly declared his ship sunk, figuring that there was no point getting his ship shot to pieces if he couldn't at least shoot back. The rest of us then tried to pursue Fluegel, but he simply set course for distant shores and didn't come back until he was off his five.

Sunday's second sortie featured the three Allied battleships chasing the Lutzow. We suggested having a new battle, but Fluegel had something to prove, and so began a rather lengthy sortie; lengthy in terms of distance covered, that is. Fluegel first headed down one side of the lake, and when he ran out of room on that side, headed across the lake to the other side (about 80 yards). Brian ran around the lakeshore in hot pursuit, but Jim and I really didn't care for all that exercise. I stayed on the opposite shore, and sailed the Q.E. over, figuring that if

nothing else, I could be a nuisance. Fluegel was busy playing stern games with the South Dakota, so I simply cruised up with the Q.E., pointed my stern in the general direction, and let fly. Much to my surprise, some of the shots hit. And then even more surprising, I managed to get alongside, and put some sidemounts into the Lutzow's hull. Fluegel decided this was too much, though, and started yet another long distance trek down the lakeshore, and this time, none of us bothered to follow him too far. With the battle's outcome beyond doubt, the Allied battleships decided to have some fun, and with new battler Jarret Durha at the controls of the South Dakota, it became a brief slugfest with both US battleships pounding on the Queen Elizabeth. Seems that someone has gathered a reputation for shooting his teammates on occasion. After paybacks were finished, we packed up and headed home, to prepare for the next of the Triple Crown battles.

## Second Stop: Fredericksburg

The Fredericksburg battle began with kinder, gentler seas, and a few more ships. The Axis fleet consisted of David Haynes with the IJN Mutsu, D.W. Fluegel with the DKM Bismark, Paul Fluegel with the DKM Lutzow, and Wade Koehn, who had just finished refitting his DKM Bismark. The Allies were represented by Jim Pate with the USS Washington, Chris Pearce, with the HMS Queen Elizabeth, and two new battlers: Joe Kutz with the HMS Invincible, and Brian Rigney, with a French destroyer, Le Triomphant.

Battling began on Saturday after a rather long delay for breakfast, and to help some captains get their ships together. Soon, however, everybody was ready to sail, and battle began. The Allied battle strategy was to stay close to the new ships, and provide some cover for them, while the Axis strategy was to try and get around the Allied heavy units and try to sink the newer ships. As battle started, the Axis attempted to attack both the Invincible, and Le Triomphant, while the Queen Elizabeth and Washington attempted to fend off the attackers, and the two targeted ships tried to shoot back and survive. After firing a few shots, the pump in the Le Triomphant kicked on, which due to its lack of capacitors caused enough radio interference to put the little ship out of control. It ended up running into a clump of weeds close to shore, with the Mutsu in hot pursuit. However,

### Rule Proposal #5:

## OFFICIAL

Add to Section I. . .

### I. Pit Areas

1. Each event must have a clearly defined and designated pit area.
2. Non-NAMBA members shall not be allowed in the pit area during an event.

Explanation: Check out the back of your NAMBA card. Membership in their club implies that we are going to follow their rules. Safety is a pretty big concern for our club, as is our insurance. A verbal waiver from following some of the NAMBA rules is just not good enough to ensure that we are covered. Nothing prevents us from setting up our tables at the edge of the pit area so we can be close to non-NAMBA people.

### Rule Proposal #6:

Add to Article III.C.4 The Treasurer  
The treasurer is responsible for providing adequate numbers of safety glasses/goggles for spectators at sanctioned events.

Explanation: An ounce of prevention....

Change Heading of Article V to: EVENTS

Change Article V.B. to:

B. All battlers at an event must have proof of NAMBA and IR/CWCC membership.

Explanation: If you don't have insurance, we don't want to play with you, even at unsanctioned events.

Add to Article V. :

C. The contest director or his representative shall obtain from the Treasurer adequate numbers of safety glasses/goggles for spectators at sanctioned events.

Explanation: ...is less chance of injury. We only battle at a few lakes around the country. Whats the problem with supplying safety glasses? It is up to the CD and Treasurer to try to reuse old glasses. But if they are not available for some reason, supply new ones. We don't want somebody getting hurt

before the Mutsu could fire a shot, its radio also went dead, due to a faulty voltage regulator circuit. Just as the Washington and Queen Elizabeth were lined up and getting ready to open fire on the Mutsu, David declared his ship sunk, to spare it the damage it would doubtless have received. The Allied battleships then headed back out to sea to harass the two Bismarks, which were trying to line up shots on the grounded destroyer. Soon, the destroyer was off its "two minute rule", and Brian recovered his remarkably lightly damaged ship. The Invincible, meanwhile, had acquitted herself rather well against her pursuers, and went on "five" with relatively little damage. The three Allied ships cruised together until the Invincible was off its "five minute rule", at which point, all the remaining Axis seemed to disappear and the sortie wound down.

The second sortie began with the same lineup, including the Mutsu. We decided, for fun's sake, to allow the Mutsu into the second sortie since his radio was fixed and the weather was starting to look like we weren't going to get a second battle in that day. Battling began much like before, with the new Allied captains feeling a little more confident and aggressive. Le Triomphant was seen to place several stern gun shots into the bow of the Mutsu, and the Invincible was busily sparring with the two Bismarks, as the Washington and Queen Elizabeth tried to lend a hand where possible.

Fortune struck again, however, as Le Triomphant once again ran out of control, into the same clump of weeds. This time, however, Brian was not so lucky, as the Mutsu retained control and placed several good shots below the waterline of the little destroyer. The other Allied battleships arrived shortly and chased the big battleship away from its intended prey, but not before grievous damage had been done. Luckily, the pump in the destroyer was quite effective and kept it afloat for two minutes, while the other Allies circled the wagons to help protect it, and drive away the two Bismarks and Mutsu, which kept trying to edge in and get some shots.

The Axis ships, in their eagerness to attack the helpless ship ended up running afoul of her protectors and absorbed many hits from the Allied battleships. They then attempted to concentrate their attention on the Invincible, and managed to inflict some moderate damage, but again, once the Invincible had survived its "five minutes", the Axis quit the battlefield for greener pastures. The battle ended, and the counting began, with the following damage:

**Axis Damage:**

Ship	Damage	Total
Mutsu	53-22-4 + 1500 (Declared)	2780
Bismark (F)	30-2-12	950
Bismark (K)	52-2-3	720
Lutzow	6-1-1	135
Total		4585

**Allied Damage**

Ship	Damage	Total
Washington	15-0-0	150
Queen Elizabeth	14-2-1	240
Le Triomphant	3-2-9	530
Invincible	30-2-1	400
Total		1320

Damage is presented with above the waterline hits coming first, followed by on the waterline hits, and then below the waterline hits. Bonus points, such as sink points are denoted with a '+'. As can be seen, Allied strategy and firepower was triumphant in the face of the wiles of the Axis, with a better than three to one victory margin.

A storm front moved in shortly after that, and we were forced to retire (eagerly) to the Admiral Nimitz museum - one of the great things about battling in Fredericksburg is that when things turn nasty, you can head indoors and glory in the tremendous history of one of America's greatest Admirals. After a brief tour and dinner, the captains retired to the dockyards to prepare for the following day's carnage.

Sunday dawned breezy and very chilly, with temperatures in the upper 40's. Undaunted, the battlers headed back out the lake for one more sortie. We had decided on only one sortie so that we could prepare the ships before arriving at the lake and get it over with as quickly as possible, and then get back into someplace warm. Wade Koehn was absent due to tickets to the Rockets game, and Brian Rigney decided to sit this one out as the waves looked a little tall for his DD so this battle featured the Bismark and Lutzow of Fluegel and Son, along with David's Mutsu against the trio of Jim's Washington, Chris's Queen Elizabeth, and Joe's Invincible.

Battle began with a general melee' as the Axis attempted to close in with the Invincible and sink the pesky battlecruiser. Joe held his own, firing back with sidemount and stern cannons,

If it becomes too much of a financial burden for the club, the rule can always be changed later.

**Rule Proposal #7:**

Change the name of the club to:  
the International Warship Combat Club. (IWCC)

Explanation: Its easier to remember now and aspects of naval warfare anyway, not just our radio control models.

**Rule Proposal #8:**

Change Section II.A.1.b. to:  
b. Hull skin must penetrate in two out of three locations on first drop in each of the three following areas: above the waterline, on the waterline, and below the waterline.

Explanation: Its a more valid test of hull penetrability. We checked our ships and found that what Lief said was right: The automotive

9 times out of 10. That isn't cool. The hull where it did pass penetrated at less than 12 inches of drop. Why worry about putting a couple of holes in your ship testing it? Its SUPPOSED to get holes put in it. This wording of the rule would make sure that all areas of the hull that receive different paint are penetrable.

**Rule Proposal #9:**

Add to Section II.E.2.:  
a. The use of Freon as a propellant is prohibited.

Explanation: Hey guys, CO2 is here. Any advantage you think R22 could give you is offset by the fact that the pressure goes down as it cools off. Your MAXIMUM pressure for any propellant is 200psi by the rules. Plus we were told recently by a little bird that venting R22 into the atmosphere knowingly is against the law, and will get you fined.

OFFICIAL

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while the other Allies tried to keep the fight somewhat even. Then, Paul brought the Lutzow through the thickest part of the battle, and in short order ran his ship up alongside the guns of both the Washington and the Queen Elizabeth. Chris, sensing that the Lutzow might be heavily damaged, set out to pursue the pocket battleship and see what might happen. The two ships headed in one direction down the lake, as the rest of the battle seemed to drift in the other. The Lutzow was pumping, and slowing down, and it seemed that if it kept running, it would soon be on the bottom, so Paul deliberately ran it into a rather thick cluster of weeds near shore, in hopes that the cannons of the Queen Elizabeth wouldn't be able to penetrate the shrubbery and still retain enough velocity to go through the Lutzow's hull skin.

The Queen Elizabeth pulled up outside the weeds and began to shoot into the mess, but without success. The weeds were indeed too thick, and it looked as though the Lutzow might yet survive. However, in the same British tradition that brought the Warspite into Narvik's fjords to do battle with German destroyers, the Queen Elizabeth got up a good head of steam and pushed herself into the small area between the weeds and shore. Shots rang out in rapid succession, as the battleship's sidemount cannon tore into the tender below the waterline area of the Lutzow. Paul was on the edge of declaring his ship sunk, but decided to take his chances with the firepower of the battleship.

Then, having heard the carnage from afar, the rest of the warships converged on the scene, Washington being first to line up with triple stern cannons to add injury to insult. That was enough for Paul, as he finally declared his ship sunk. Then, seconds later, it really did sink, as the flooding from huge holes below the waterline overcame the Lutzow's pump. The Queen Elizabeth carefully extricated herself from the weeds, and prepared to rejoin the battle with what little ammunition was left, only to find that the Invincible was slowly sinking due to a faulty pump switch. The game little battlecruiser slowly slipped beneath the waves, evening the losses for both fleets. Washington and Bismark were both very low on ammunition, and retired from the battle after a brief skirmish, while the Mutsu and Queen Elizabeth continued one-on-one for a brief while until they too were out of ammunition. After the battle was finished, the damage was counted, with the following results:

**Axis Damage:**

Ship	Damage	Total
Mutsu	33-2-6	680
Bismark (F)	47-2-0	520
<u>Lutzow</u>	<u>36-5-34 + 1050 (Declared)</u>	<u>3235</u>
<b>Total</b>		<b>4435</b>

And finally, Rule Proposal #10: **OFFICAL**

Change Section II.A.6.a. to:  
 a. No stringers shall be used unless the shape of the hull dictates. Hull features that dictate the use of a stringer are; bulges, casement guns, knuckles, or armor belts. The stringer may not extend more than one rib beyond where that hull feature is prominent.

Explanation: The present rule is being abused, and this wording clears up the meaning of "the hull shape dictates" and prevents the abuser from extending the stringer the whole length of the ship.

These rule proposals are brought to you before the rules meeting by:  
 Bart Purvis, Ronny Hunt, and Steve Baker.

**Allied Damage**

Ship	Damage	Total
Washington	25-0-3	400
Queen Elizabeth	12-2-2	270
<u>Invincible</u>	<u>13-3-2 + 800 (Sunk)</u>	<u>1105</u>
<b>Total</b>		<b>1775</b>

Once again, the Allied fleet had emerged triumphant, winning by better than two to one despite the sinking of one of their battlecruisers. At the end of the second Triple Crown battle, the Allies remained undefeated. Only time would tell whether the Axis could roar back in the third Triple Crown battle, in Abilene and put the Allied domination to an end.

**Third Stop: Abilene**

The battle in Abilene saw the introduction of yet another two new Allied captains, Bob Eakin with the Montcalm, and Jarrett Durha with the HMS Birmingham. With these two additions, the fleets for the weekend consisted of Fluegel and Son with the Bismark and Lutzow, David with the Mutsu, and Wade with his Bismark for the Axis against Jim with the Washington, Chris with the Queen Elizabeth, Brian with the South Dakota, Bob's Montcalm, and Jarrett's Birmingham for the Allies.

The first battle began rather tentatively with the Allies at full strength, and the Axis minus the services of the Lutzow, whose well manufactured regulator had developed the nasty habit of blowing 250 psi hoses. We discussed modifying it so that it would be safer, but decided that no, that would break the safety rules... Mustn't do anything that makes sense, you know.

Meanwhile, as Paul attempted to deal with his own problems, his teammates were having some problems of their own. The two Bismarks were busily cruising around in neutral waters, while the Mutsu was gamely attempting to break the Allied blockade and get to the cruisers. David called for help, but neither of the Bismarks' Captains wanted to commit to battle just yet. In the meantime, the three Allied battleships were jockeying for position, trying to get around any of the battleships and trap them. This left the Mutsu somewhat open, and David took advantage of the opportunity go get at the cruisers. And the cruisers were eager to shoot at a big Axis battleship. Jarrett took advantage of the opportunity to practice dancing on the bow of a battleship and annoying it with stern gun fire, while Bob concentrated on bow gun attacks with his light cruiser. Once the shooting started in earnest, things got a lot busier, as the Bismarks both came in to offer assistance, and try and get some easy shots.

As the battle continued, the Montcalm was on five and being chased by the Mutsu, which seemed to be giving the little cruiser a rather hard time. The Allies set course to intercept, and managed to trap the Mutsu close ashore. The Mutsu took some heavy damage from the Allied ships, but her fate was sealed when her pump screen clogged and she sank.. The Montcalm, meanwhile, managed to survive her five minutes. The two Bismarks had also seen their share of attention, as each had been trapped by the Allied battleships and taken a bit of punishment. As the sortie wound down, Fluegel's Bismark was in hot pursuit of the Q.E. while Chris was trying to keep the Q.E.'s stern pointed at the Bismark and was holding down the transmitter stick on a jammed cannon. The recalcitrant cannon finally cleared into the side of the Bismark, and was followed by a flurry of rapid fire shots, after which Fluegel quickly called five and headed out for open seas. The sortie ended with the following damage:

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**Axis Damage:**

Ship	Damage	Total
Mutsu	70-12-16 + 1000 (Sunk)	2800
Bismark (K)	58-8-8	1180
Bismark (F)	52-1-3	695
<b>Total</b>		<b>4675</b>

**Allied Damage**

Ship	Damage	Total
Montcalm	5-1-3	225
Queen Elizabeth	9-1-2	215
Washington	7-0-0	70
South Dakota	5-0-0	50
Birmingham	2-0-0	20
<b>Total</b>		<b>580</b>

As can be seen from the scores, the Allies were off to a roaring start. However, the Axis would be receiving reinforcements with the Lutzow, and the Allies had cause to be concerned with the damaged Montcalm.

The second sortie began with Wade being ordered to call five and head for the hither portions of the lake. This left the Fluegel dynasty to battle the combined might of the Allied fleet. They put up a good effort, running and gunning effectively, until Fluegel noticed that the Montcalm was sitting still next to shore, and pumping for its life. Both Axis ships headed in to punish the hapless cruiser. Unfortunately for them, the remaining Allies all converged on the same spot. Paul got off lucky, making a quick pass and escaping to seaward after collecting a below the waterline hit from the Washington. The Bismark, however, was not so lucky, at one point receiving triple stern guns from South Dakota and Washington in the bow, while taking sidemounts in the stern from the Queen Elizabeth. Fluegel turned his ship to seaward, and tried to escape the trap, but his damage was far too great, and the Bismark sank with both pumps blazing. The Montcalm, meanwhile, survived her five minutes without taking any further damage, thanks to a strong defense. Wade's Bismark, meanwhile, had survived its five minutes, likewise without taking further damage. The total damage after two sorties was:

**Axis Damage:**

Ship	Damage	Total
Bismark (F)	238-11-17 + 1000 (Sunk)	4505
Mutsu	70-12-16 + 1000 (Sunk)	2800
Bismark (K)	58-8-8	1180
Lutzow	0-0-1	50
<b>Total</b>		<b>8535</b>

**Allied Damage**

Ship	Damage	Total
Queen Elizabeth	16-1-5	435

Washington	13-1-0	155
South Dakota	13-0-0	130
Montcalm	5-1-3	225
Birmingham	2-0-0	20
<b>Total</b>		<b>965</b>

After this debacle, the Axis fell back to regroup and prepare for the second battle. Both Bob Eakin's Montcalm and Fluegel's Bismark had suffered from water in the radio box, and neither was too keen on participating in the second battle. (I think Fluegel just didn't want to patch...) Thus, the second battle began with the Mutsu, Wade's Bismark, and the Lutzow against the Washington, South Dakota, Queen Elizabeth, and Birmingham.

The first sortie began with Washington, Mutsu, Bismark, and Queen Elizabeth embroiled in two-on-two action, while Birmingham and South Dakota pursued the Lutzow down the long lakeshore. Jarrett was successful in getting the Lutzow turned around with accurate fire from the Birmingham's stern guns. Paul went from the frying pan to the fire, however, as she ran into the slower and meaner South Dakota. After being trapped close to shore and taking severe damage, Paul decided to declare his ship sunk rather than face further punishment. Meanwhile, on the other side of the lake, the Axis battleships were putting up a game fight with the two other Allied heavies, but were generally getting the worst of it. Soon, they were out of ammunition, and headed out to safer waters, where the Allies opted not to pursue them. The first sortie ended with the following damage:

**Axis Damage:**

Ship	Damage	Total
Mutsu	59-2-7	990
Bismark (K)	52-2-4	770
Lutzow	21-8-11 + 1050 (Declared)	2010
<b>Total</b>		<b>3770</b>

**Allied Damage**

Ship	Damage	Total
Washington	8-3-4	355
Queen Elizabeth	6-1-1	135
South Dakota	3-0-0	30
Birmingham	2-0-0	20
<b>Total</b>		<b>540</b>

As the second sortie began, the Washington and Queen Elizabeth set course to finish off the Bismark, while the South Dakota and Birmingham set off to do the same to the Mutsu. Wade's Bismark was maneuvered into a smaller area of the lake where she was pounded by the Allied battleships until she slipped beneath the waves. In the meantime, David was keeping the

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1" x 3/16" stainless steel clevis pins make ideal bb cannon pistons after being cut to proper length. They require no further cutting or grinding to fit inside most brass tee fittings, have an extremely smooth, machined finish, do not corrode and are not deformed by use.

A source is Jamestown Distributors, P.O. Box 348, Jamestown, RI 02835; Tel 1-800-423-0030. Part number is CLVCP332 and the cost is \$1.00 each plus shipping. They also have a free catalog showing a multitude of marine fasteners and supplies.

**INT'L vs WEST COAST**

by Steve Milholland



Well sports fans, it has finally happened.

I finally got to see the "big gun" ships of the West coast rules in action against "small gun" ships of IR/CWCC rules. I not only got to see it, I was a part of it.

On May 27 & 28 James "Scourge" Foster & I travelled from Springfield, MO to Ft. Wayne, IN to be a part of a battling get together for the two groups. James had his French cruiser FS Georges Leygues (class 2) as well as the Swedish battleship Sverige (class 3), I had my French sister to the Georges, the FS Marseillaise. In addition to James & I, other INT'L

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Mutsu on more open waters where she had more maneuvering room. Unfortunately, as the other two Allies were descending to the attack, the Mutsu's rudder jammed and she began sailing in large, lazy circles. The feeding frenzy began as the Allied battleships hoped they could successfully empty their magazines into the big battleship before she sank. The Mutsu's damage control was not up to the task, though, and she succumbed to her massive damage before the shooting was finished. The Allied battleship captains then spent a brief while chasing around Jarret's Birmingham, more for grins than anything else. Once the carnage was tallied up, and every hole counted, or at least attempted to be counted, the totals were as follows:

**Axis Damage:**

Ship	Damage	Total
Mutsu	224-14-16 + 1000 (Sunk)	4390
Bismark (K)	114-3-18 + 1000 (Sunk)	3115
Lutzow	21-8-11 + 1050 (Declared)	2010
Total		9515

**Allied Damage**

Ship	Damage	Total
Washington	16-7-8	735
Queen Elizabeth	21-3-5	535
South Dakota	9-1-0	115
Birmingham	2-0-0	20
Total		1405

For the second time this season, the Allies had succeeded in sweeping the seas clean of Axis warships. That evening, a severe storm rolled in, giving the Axis perhaps their best hope for Sunday - a rain out. Fluegel began to re-sheet the Bismark, perhaps as a gesture of resignation. The rest of us, however, prepared our ships for the morrow, in hopes that the skies would be clear enough, to battle.

Well, our hopes were rewarded, sort of, on Sunday as we awoke to clear skies, nice temperatures, and a brisk wind.

We discovered when we got to the lake that this brisk wind was blowing directly towards shore, and causing waves that made Houston's seem like mere ripples. Those of sane disposition (Bob, Fluegel, and Jim) decided not to even bother putting their ships on the water. Wade and David were game, though, as were Brian, Jarret and I, so we set sail in the fierce seas and prepared to do battle. The result was one of the strangest battles yet.

The first sortie began with the Q.E. and South Dakota concentrating on the Bismark, and trying to trap Wade in close to shore. This was only moderately successful, as all of us had enough difficulty merely piloting our ships in any direction, much less battling. However, shots were exchanged, hits were given and received, and then, suddenly, a wave caught the Bismark broadside and hurled it over on its side. The Bismark didn't recover from this abuse, and slipped beneath the waves shortly after. Meanwhile, Jarret's cruiser was bobbing around on the waves like a porpoise as he tried to line his stern guns up on anything. The two battleships set out in pursuit of the Mutsu, which was on five, but that came to a quick end when the South Dakota became stuck in reverse and proceeded to back across the lake, the long way. Fortunately, Brian's pump was running, and finally, the ship stopped dead in the water and drifted in on the wind, victim of a dead receiver. Damage totals after the first sortie were:

**Axis Damage:**

Ship	Damage	Total
Bismark (K)	20-2-1 + 1000 (Sunk)	1300
Mutsu	8-1-2	205
Total		1505

**Allied Damage**

Ship	Damage	Total
Queen Elizabeth	4-0-1	90
South Dakota	5-0-0	50
Birmingham	0-0-0	0
Total		140

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**THE 1995 NATIONALS**

I HOPE THAT YOU ARE READY FOR THE BATTLE OF THE YEAR- NATS! I ALSO HOPE I HAVE RECEIVED YOUR ENTRY. AN ENTRY FORM IS SOMEWHERE IN HULLBUSTERS IF YOU HAVEN'T SENT IT YET. MY PIRATE SPIES HAVE TOLD ME THAT A LOT OF TRICKERY AND TREACHERY ARE AFOOT... JUST LIKE ALWAYS! AIN'T IT GREAT? ANYWAY, TO REPEAT THE CRITICAL INFORMATION YOU NEED READ BELOW:

DATE: 9-14 JULY 1995  
 BATTLE SITE: SEQUIOTA PARK, SPRINGFIELD, MO.  
 SANCTIONING: BOTH NAMBA AND IR/CWCC CURRENT YEAR MEMBERSHIP IS REQUIRED.  
 QUARTERS: MOUNT VERNON MOTOR LODGE  
 2006 SOUTH GLENSTONE  
 SPRINGFIELD, MO.  
 1-800-782-2833 OR  
 417-881-2833

YOU SHOULD HAVE A FREQUENCY ASSIGNMENT LETTER AND PACKET FROM ME IF YOU HAVE REGISTERED. IF NOT, LET ME KNOW. I WILL CUT OFF TEE SHIRT ORDERS TWO WEEKS PRIOR TO NATS SO I CAN GET THEM MADE. IF YOU ORDERED AFTER THEN, I'LL GIVE YOU A REFUND. SO FAR, SPRINGFIELD HAS BEEN SPARED THE FLOODING THAT THE MIDWEST HAS HAD THIS YEAR. THE LAKE HAS GOOD LAKE LEVEL CONTROLS SO I DON'T EXPECT ANY PROBLEMS.

RICK "LONG JOHN" WHITSELL

(INT'L R/C WARSHIP COMBAT CLUB) battlers made the event. The brothers Au, Chris & Dave, along with Soren Barr came down from the U.P. of Michigan. Chris Au had his KGV class battleship, HMS Howe (class 6), Dave Au had the HMS Lion (class 4), & Soren had the USS Northampton (class 3).

The local Ft. Wayne group is comprised of battlers using both West coast ships and INTERNATIONAL style ships. The West coast style "big gun" ships were represented by Phil Sensibaugh and his FS Reicheleu, and his USS Houston, battled by Mark Zimmermann, and by Frank Eraca and his DKM Graf Spee. Area battlers with INT'L "small gun" ships were Jeff Sharpe with a DKM Lutzow (class 3) and Eric Helsel (a brand new rookie in his first taste of battle) with a USS Phoenix (class 3).

Several other Ft. Wayne battlers were in attendance but whose ships were not ready to battle. Some were ready to battle but were, unfortunately, unable to attend.

Actual battling at the event was a bastard compromise between the two sets of rules involved. West coast & INT'L ships were to be divided between the two fleets, this would not be a showdown between the two differing groups. West coast ships would battle like they battle, to their rules, INT'L ships would do likewise. Over the two day period we had eight, single sortie battles, reloading and patching between. No accurate scores were tallied as this was a very informal event.

Damage done to all ships was about what I would expect at a typical INT'L meet where there are class 2,3,4, & 6 ships with captains of differing experience. The great majority of all hits & holes were caused by BBs fired from INT'L ships. All ships suffered, the West coasters the most. West coast ships were just unable to bring their cannons to bear effectively against the faster, more maneuverable, and faster firing INT'L ships.

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Thus, the second sortie began with the withdrawal of the South Dakota, due to its radio problems. The Birmingham and Queen Elizabeth set out in pursuit of the Mutsu, but this was cut rather short when the Birmingham sank due to the heavy seas and forgetting to turn the pump on. Jarrett had no damage, so it was an unseaworthy sink. Meanwhile, the Mutsu and Q.E. got alongside and began to trade broadsides, like it was meant to be. Unfortunately, it wasn't too long before a hose blew on the Mutsu, and the sound of escaping CO2 was heard as David called five and headed out to sea. The Q.E. set off in pursuit, but it was clear after a short while that while the extra length of the Japanese battleship helped it ride the waves a little smoother, the short and dumpy Q.E. was shipping green water all the way up to the bridge. Her captain wisely decided to heave to, rig for heavy weather, and just sit and pump. So, without much further ado, the sortie ended without any further mishaps, and the following damage:

#### Axis Damage:

Ship	Damage	Total
Bismark (K)	20-2-1 + 1000 (Sunk)	1300
Mutsu	13-3-5	455
Total		1755

#### Allied Damage

Ship	Damage	Total
Queen Elizabeth	16-0-2	260
South Dakota	5-0-0 + 500 (Withdrawal)	550
Birmingham	0-0-0 + 350 (Unseaworthy)	350
Total		1160

With this battle, the Texas Triple Crown battling ended, much as it began, with a battle against the elements. Once again, it appears as though in the end, the elements won. Meanwhile, the Texas Axis are licking their wounds and preparing for Nats, while the Texas Allies are also busy re-sheeting and making sure their ships are in optimum form for the coming conflagration. Who will be the best prepared? We will find out on July 10, when the big battle starts. The fight for Missouri will be a long and tough one, and until then, I'll look forward to seeing you there.

In the two days, my cruiser suffered a total of approx. 40-50 holes, only 3 of which were caused by ball bearings from West coast ships. James' Fosters FS Georges Leygues and Sverige picked up slightly more hits (60ish?) with only 13 caused by ball bearings. Other INT'L captains had similar results, most damage received was caused by BBs from other INT'L ships.

The INT'L ship which acquired the most damage from ball bearings was the HMS Howe, which was always on opposing fleets from the Reicheleu. When using stern cannon tactics that are so effective in INT'L battling, the Howe was practically immune from ball bearing damage. When using broadside firing cannons, the Howe was more open to reciprocal damage but was also able to deal out devastating hammer slams from side cannons. The damage trade was always pretty one sided in favor of the Howe.

In two days there were only three sinks. On Saturday the Graf Spee (West coast) and the Phoenix (INT'L) both went down with minimal damage due to faulty pumps. Both ships were in their maiden battle with rookie captains, no surprises. The only experienced ship to sink was the HMS Lion on Sunday afternoon. His damage was also minimal but in a slugging match with his brothers HMS Howe a BB found its way through the armor and tripped his receiver switch to the OFF position, killing his radio. His pump just happened to be off at the time. The ship ran out of control, beached itself, and sank.

While no definitive evaluations of West coast vs INT'L can be made from this two day event, enough information was gleaned from the experience to put forth some good, solid impressions. These are as follows:

## DEFINITION

WARSHIP COMBAT; A hobby that one uses to create stress and irritation when not at work.

1 Speed: INT'L ships definitely move faster. Average speeds are 24 to 28 seconds through a 100 ft course. West coast ships move at around 35 to 39 seconds or so through 100 ft. This speed difference gives the INT'L ships a big advantage in the ability to initiate an attack and break away at will. The faster speed also enhances maneuverability tremendously. INT'L ships were literally running circles around the West coasters.

2 Rate of fire: INT'L ships have fewer firing barrels, but fire at a MUCH faster rate. In a single firing pass, an INT'L ship may get off 10 to 20 rounds, a West coast ship would only get one salvo from however many firing barrels it could train on the target.

3 Hull skin thickness: West coast ships have differing thicknesses of balsa to simulate differing "armor", while INT'L ships are all restricted to very thin (1/32 or 1/16) balsa sheeting that MUST meet a penetrability "drop test" standard in order to be legal for competition. West coast ships have no standard of penetrability, only thickness of the balsa skin. It has been the experience of most of the INT'L battlers that it is very easy to obtain 1/32 or 1/16 inch balsa sheet that is too hard and will not meet "drop test" requirements. My personal impression of some of the West coast ships, even those with the thinnest sheeting, was that the balsa selected was way too hard to be used on an INT'L ship and would fail a drop test.

In light of this, it was found that INT'L ships were almost always penetrated when hit (90-95 percent estimated), either by a BB from another INT'L ship, or from a 7/32 or 1/4 inch ball bearing fired from a West coast ship. West coast ships, on the other hand, while hit by a tremendous amount of BBs from INT'L ships, only penetrated about 40-45 percent of the time, leaving mostly surface dents. In spite of the low penetration rate, the West coast ships received far and away the most number of holes. Some West coast captains stated that their ships received more damage in one day of battling with the INT'L ships than in all of last year battling with other West coast ships combined. They spent a considerable amount of time in patching between the battles.

4 Pumping capacity: In comparison, West coast ships pump less water from their bilge pumps than do INT'L ships. Even with more capacity though, it sounds as if INT'L ships experience more combat sinks than do West coasters. This is undoubtedly due to receiving more BB holes from high fire rate cannons. Also a factor is the higher speed through the water, generating more wave form and water pressure against the side of the hull, thereby increasing internal flooding.

West coast captains stated that in all of last years battling by the local group, they only experienced five combat sinks. There will typically be that many (sometimes more) in a single two day event in INT'L (with comparable numbers of ships).

5 Waiting period: When they wish to remove a ship from the water FOR ANY REASON, whether they are out of ammunition, batteries are running low, or if they feel they are in danger of sinking, INT'L captains must first call their "Five Minutes", start a timer, and cannot touch or recover their ship until the period has expired. During this time their ship is fair game for opponents who may still have ammo. They are allowed to run and evade enemy fire but they are not allowed to return fire even if they still have the ability to do so.

West coast ships have no such restriction. Any time a captain wishes to remove his ship from the water, he may do so immediately. This may also account for the lower number of combat sinks in the West coast battling format. At least once during the weekend, I witnessed a West coast ship removed from the water to save it from an impending sink. An INT'L ship in this situation would not have lasted five minutes.

6 Technology: Both groups have cannon technology that has evolved to a reliable point and meets the needs of the game being played. At that point the similarity ends.

Cannons for INT'L style ships are not only commercially available but

reliable ones can be scratch built with minimal skill and tools.

West coast cannons require more complex milling and machining tools, skill, and time to fabricate. They can be scratch built but even the West coast captains admit that getting acceptable results is hit or miss and generally not worth the effort put out. At this time, the only suppliers of West coast cannons (according to West coast captains) are private machinists who are contracted by the local clubs to produce a batch of parts that the club then sells to members for their ships.

The major difference between West coast & INT'L cannon technology is price.

An INT'L class 3 cruiser is allowed to carry a maximum of two firing cannons each with a 50 round BB magazine. A complete setup, including all valves, fittings, & tubing (but not including CO2 supply) can be purchased from a commercial source for \$90.00. The same system can be scratch built for somewhat less.

A West coast cruiser, to be competitive, would have to carry three, triple barrel cannon assemblies, which are priced at \$90.00 each. This does not include the price of the CO2 supply, firing valves, tubing, or fittings. Estimated armament cost: \$400.00+. This also does not include the price for any rotation mechanism, which West coast ships need in order to be competitive within their rules. Some West coast cruisers were also seen to carry "torpedo launchers" (1/4 inch ball bearing launchers) which also would up the price of armaments an unknown amount.

Between large battleships, the disparity in price of armament is even greater. A competitive class 6 INT'L battleship (like the HMS Howe) would carry 5 firing barrels. The approx. commercial price for these cannons would be \$200.00, including all hookup gear, scratch built for less.

The West coast battleship Reichleu that I saw had two, four barreled main turrets, rotating, along with all the secondary armament aft comprising 13 more firing barrels. This is a total of 21 firing barrels. Based on prices I was quoted by West coast battlers, it is estimated that the cost of armament systems alone on this one ship approached \$7 or \$800.00, maybe more, not including any hookup gear. Total system price, unknown.

NOTE: Another cost factor, ammunition. BBs are available at any Wal-Mart for \$1.75 for a box of 1500. Ball bearings must be ordered from industrial supplies at a cost of \$10.00 per 1000.

Conclusions? I refuse to draw any at this time. In a one to one showdown it would seem that INT'L ships have it all over the West coasters. Both sides, however, lacked top rated captains in top rated upper class ships at this meet (note: while James & I certainly don't bow down to anybody when it comes to savvy on the water, we have both hung up our big ships and are using small ships at present). A battle between the likes of Pate, Pearce, Baker, & Montgomery with their battleships against the best four the West coasters could muster would be a sight to see and would tell the story. The world may never know.

The people I met in Indiana (INT'L and West coast) were all high class folks dedicated to their preferred hobby. I was glad to have met them and hope to keep in touch and even meet them muzzle to muzzle on the water again. It was a very enjoyable, educational weekend and I would do it again in a heartbeat.

Steve Milholland

## HOW TO MAKE A SPEED CONTROLLER FROM TWO ROLLER SWITCHES

Wade Von Koehn

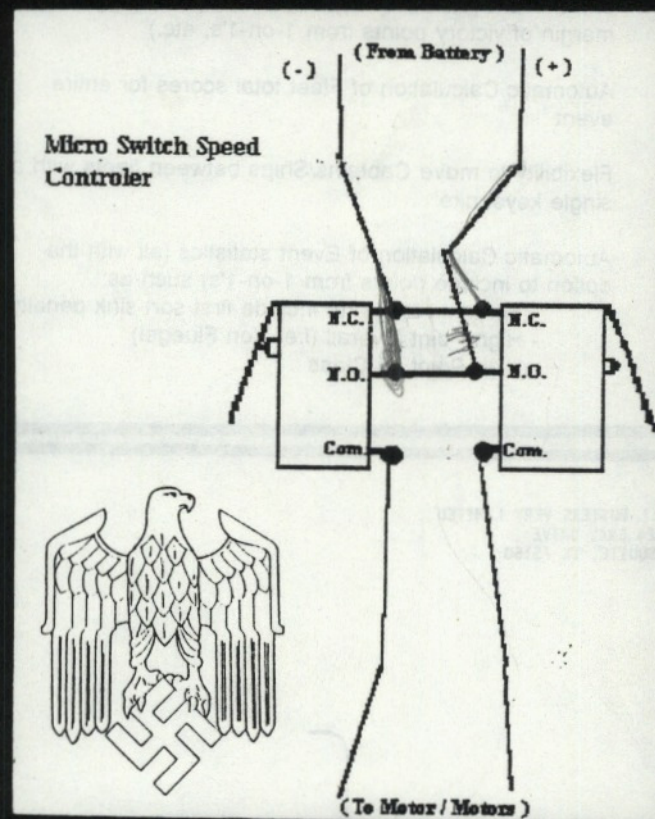
Recently I, with much help from Brian Craven, was rewiring the Bismarck from bow to stern. We put in a new wiring harness for the guns, pump, and motors. I decided to remove the old double throw center off toggle switch that I was using for my speed controller. I replaced it with two 20 amp roller switches.

The old toggle switch was reliable, and simple to set and use. The disadvantages of using it are that it takes up more room in my water tight box, and the points wear down and don't make contact.

When the points don't make contact no electricity flows and your ship goes nowhere. An advantage of the two roller switches is that when your stick on your radio returns to the neutral position your ship is in neutral. This isn't always true with toggle switches.

To install simply put a roller switch on either side of your servo so that the roller is depressed and clicks when the servo wheel goes across the top of it. Take care to get the servo wheel close, but not too close to the switch. If you get the wheel too close to the switch when you turn your radio on, or if you have radio glitches your motors will go off. If your wheel is too fair away it will take too much stick movement to get your motors to work. Usually a little more or less than 50% of the servo wheel is the correct radius. I've seen people build mounts to hold the switches out of wood and screws, or out of servo trays. A few people even just super glue the switches on either side of the servo. Whatever works for your situation, and is reliable, is what I suggest for you.

The following diagram will show you the set up, and the proper wiring:



As you can see the wiring is pretty straight forward. It took Brian and I awhile to figure out that the normally closed positions had to be set up a certain way. But he finally figured it out and we'd thought we would put it in print for two reasons. One to help out rookies and veterans who didn't know how to do it. And when he and I wire up another speed controller we could just look it up instead of trying to figure it all over again. I hope this was some help.



Der Kaptain DMK BISMARCK

*Wade Von Koehn*  
Wade Von Koehn

# PRESIDENT'S COLUMN

By Lief Goodson



Well it's almost Nat's time again and I am really excited! You Allies out there will be glad to here that none of my ships are ready (what a surprise). So I'll be in the standard panic mode for the next few (very few) weeks. Hopefully the whole club (not just the Allies) club can benefit from my ships not being ready. How? Because instead of working on my ships, I have been working on something that this club really needs - a comprehensive MS-DOS based scoring program. That's right - a custom RIC warship combat scoring program that will run on (most) any MS-DOS based computer. I've spent way too much time programming it and I have already identified a hundred ways to make the next version better, but the 1.0 Version is done. For those of you skeptics out there who are thinking "What's the big deal - MY spreadsheet does everything that I need", think again. This program offers the following features:

- Fast & easy Scoring of Fleet, Campaign, Campaign Lite and 1-on-1 Battles with minimal typing
- Automatic Tallying of Individual Award points for an entire event (including adjustments for awarding only the margin of victory points from 1-on-1's, etc.)
- Automatic Calculation of Fleet total scores for entire event
- Flexibility to move Captains/Ships between fleets with a single keystroke
- Automatic Calculation of Event statistics (all with the option to include points from 1-on-1's) such as:
  - Sortie Average (to include first sort sink penalty)
  - High Point Overall (i.e. Von Fluegel)
  - High Point by Class

- Sinks per Event (by fleet, by battle, by sortie)
- Points Scored per unit
- and much, much more.....

- Option to OMIT any battle(s) (night, campaign, 1-on-1) from individual or fleet scores and statistics for an event
- Displaying all reports on the screen
- Passive, soothing screen colors (especially selected by the British Admiralty)
- It even makes julienne fries! (just kidding)

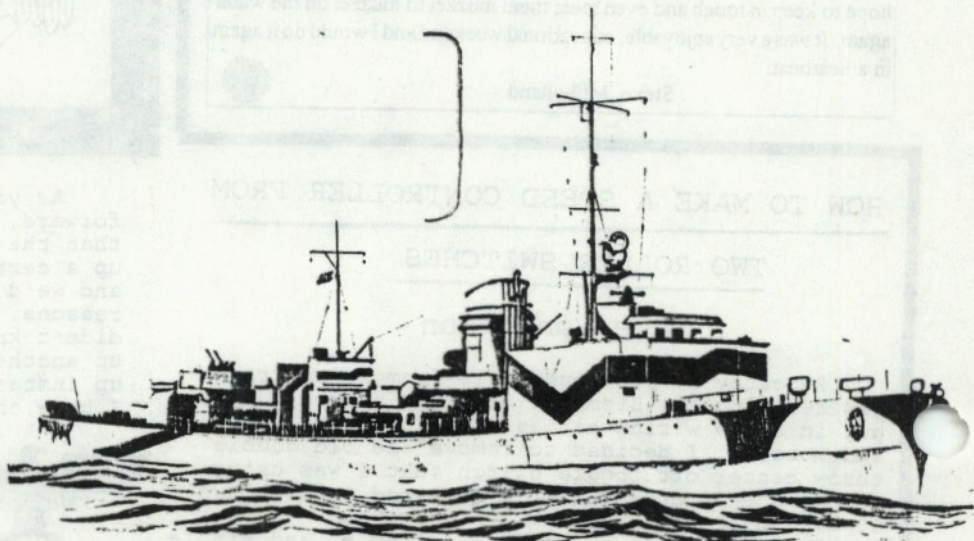
Currently, this program has been submitted to the Tri-pack Institute of Technology for exhaustive testing. I must say that it is relative easy to crash the program, BUT crashing will not effect the integrity of the data. Anyway, a few specifics about system requirements for running the COMBAT.EXE program:

- It needs about 2 Megabyte of Hard Disk space, but must have 4 Megabytes available for installation
- It needs about 500 Kilobytes of available RAM, but can be made to run with less using the "set dos16m:" command
- I run it on my 486DX33 computer, but it should work fine on 386's and even 286's

I will send this program to anyone interested (postage and handling costs about \$5) as I hope that the IR/CWCC can go to a standardized scoring program.

In closing, I have ordered a few hundred 2 ounce disposable CO<sub>2</sub> cartridges to have them available at Nat's for about \$1.25 each as a service to the club. I look forward to seeing all you old friends (and some new ones) in Springfield. Until then, God's Speed!

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