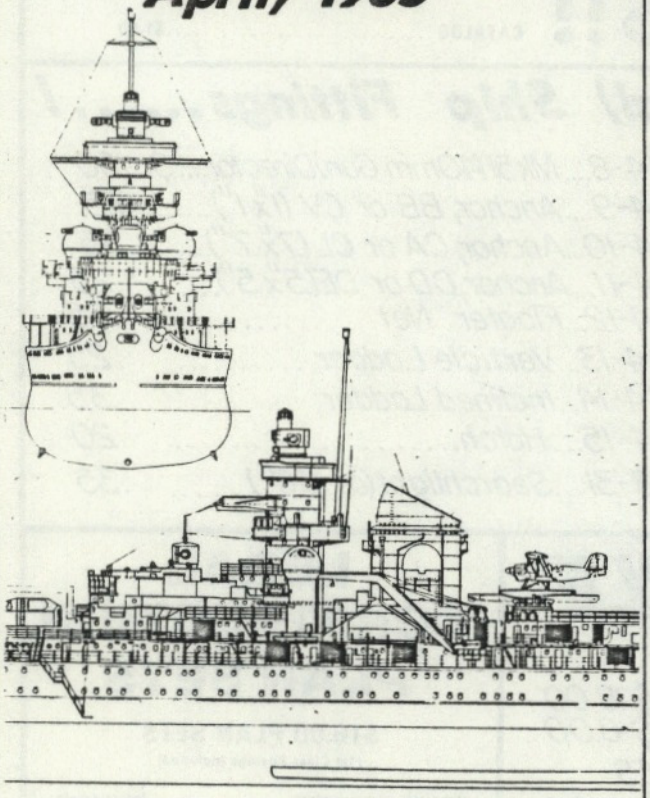
HULL BUSTERS

April, 1985



The Only Strictly R/C Warship Combat publication

Club Finances 1985

Balance	$138.25
Undeposited checks	40.00
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Internation R/C WCC patches.60.@ $2.	120.00
Cards for members owing dues..45....	360.00
Assets	$658.25

We have 28 paid members as of April 30,1985
JLP

TANK WASH ?

IT HAS BEEN RULED BY THE MAJORITY (NOT ME) OF THE EXECUTIVE BOARD THAT WATER FILLED COMPARTMENTS FOR WARMING FREON TANKS ARE LEGAL. IF YOU WANT TO BE COMPETITIVE YOU SHOULD USE ONE TOO! OTHERWISE YOU WILL BE AT AN UNFAIR DISADVANTAGE!

SORRY FOR PRINTING BUT TYPEWRITER AT COPY STORE NO LONGER EXISTS. Jeff Poindexter

" Built to order Combat Lake"
By Jeff Poindexter

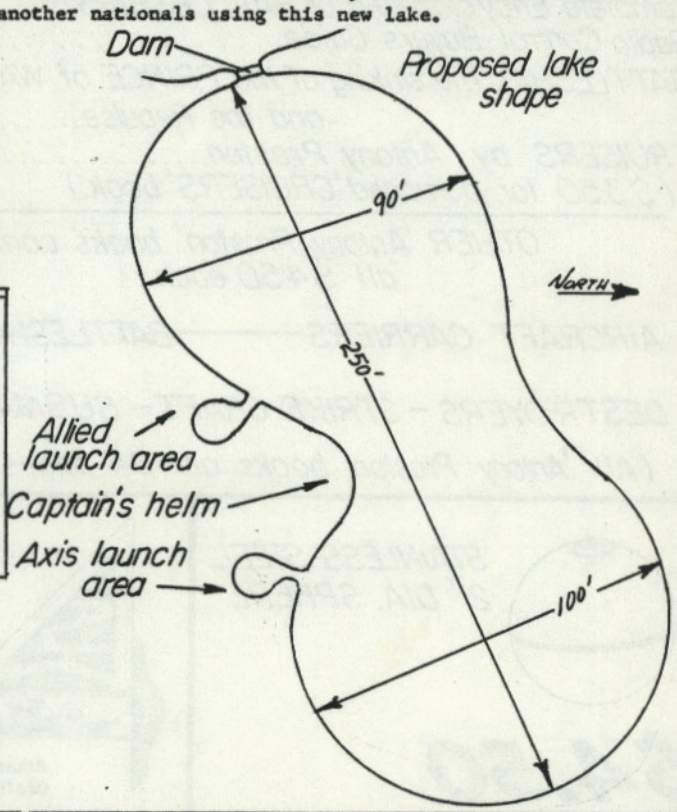
In Nov. of 1984, Kay & I were invited (by mail) to terk to Lubbock, Texas (about 120 miles due south of Amarillo) to view a 'vacation time share promotion.' We were told that we would receive a 'gift for sitting thru a sells presentation. This 'gift' turned out to be a small am/fm stereo radio with detachable speakers. This was given to our oldest daughter, LaDonna, for Christmas. We did not buy a 'vacation share' but we did win a 5" portable B&W T.V. Because we won the small T.V. our names were put in another drawing for an automobile so we were told.

On Friday, March the first, Kay and I put a $100.oo bill down as earnest money on 10 acres about 5 miles north of Amarillo. We liked this place because theres a great view, a good site for a house and marvelous place for a combat lake.

Two days later on the third we recieved a certified letter stating that we had won second place in the drawing we were placed in back in Nov. of 1984. This, as it turned out, was a 45" RCA wide screen stereo color T.V. We called and indeed we had won it. The firm that would have sent the T.V. asked if we would prefer getting cash instead. We talked it over and took the cash. In about 10 days we received a check for $2000.oo. This was enough to pay tithes on the prize and the down payment on the land.

I went out and staked out an outline of the lake a few days ago as shown in the drawing below. The first stage of lake construction is a lake 250' long , 90' wide at one end and 100' wide at the other. I am hoping to be able to start work on the lake Friday, April 7th.

On March the 28th. we planted 40 of the 130 we bought from the U.S. Dept. of Conservation. We will finish the windbreak on the 29th. Some day we would like to host another nationals using this new lake.



Insurance

Well, I tried and tried to get different insurance but failed again. I did manage to get the same company to agree to give us the same accident insurance if we want it. However, that same company could not get us the liability. This means we're still N.A.M.B.A. The agent is going to still try for us with other avenues. JLP

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OBSERVATIONS OF THE FOUNDING FATHER

GREETINGS COMBATANTS!! There are a number of topics that need to be discussed in the column this issue. 1.) Weight of Small Ships. This has not really been a problem up until now. In a destroyer the full load displacement as required by the rules is typically less than 3000 tons this is only 2.01 pounds in 1/144 scale. Each pound is a scale 1493 tons. This is not so significant with battleships but is critical with the small ships! Batteries is the area where the weight becomes critical. With the single shot gun the sorties will last about 30 minutes. This is marginal for a small ship with one 4 cell (sub C) nicad pack. One pack weighs about 210 grams. Each gram is a scale 3.289 tons so the pack weighs a scale 690.7 tons! So if I wanted more running time I could add an extra set of sub C nicads and go out overweight. The ship would only sink alittle deeper but I would be able to still be running pretty well after my "legal" oponent had lost his battery power. I would get to sink a dead ship because I had cheated "just alittle".

The point is the "scale weight" limits in the rules need more enforcement with the small ships because it will make the "win or lose" difference consistantly. This has been discussed with the Executive Board some and they realize that it is difficult to build a radio controlled combat model ship that weighs less than two pounds. They are therefore clarifing the rule by allowing a 5% overweight allowance. Every little bit helps. I intend to put my oponents ships on baby scales to make sure that they aren't cheating any worse than I am. So be aware that your ship will probably be checked for scale full load displacement before it battles.

2.) Gun safety, Single shot.

There have been many comments about the increased power of the single shot gun. This is now common knowledge with most people who have fired single shot guns. Actually each gun magazine now has about 5 times as many powerful shots as the old MkIX. There are now 5 times greater odds of hitting someones eye. Since this knowledge is now common then we have to assume the duty that goes with this knowledge.

We have developed "tactical rules" for single shot battle conduct. We ignored the need for increased safety conduct rules! Things that should recieve special additional attention in single shot are: A.) Crowd Control, B.) People recovering sunken ships during a battle, C.) Stability of ships with side mounted guns, D). Enhanced eye protection, E.)Tighten control of transmitters, F.) Stricter enforcement of the pinned barrel requirement, and if possible,.consideration of paths of glanc ing BBs. I'm sure there are more areas that need to have improvements in safety considerations for sigle shot guns.
Another area that should be mandated as soon as possible is a reduction in muzzle velocity this has always been needed but the single shot "high power" gives a great increase to the urgency of the incorporation of the measurement and control of velocity.

I believe that the Executive Board should discuss the need for improved safety control to help prevent the likely damaging of someones eyes at the 85 Championships. It's not an easy task. If we do not control our safety ourselves some one else will have to step in and do it for us or they will simply outlaw our hobby. That would solve all of our problems neatly.

I think single shot combat will revolutionize our hobby and make it much better but it will require a lot of rethinking in many areas. One of the other areas that has been mentioned is the long sortie. I believe that the Executive Board made an error when they did not change a battle definition from 2 to 1 sortie. Since the sorties now are lasting about 30 minutes each I believe that 2 sorties on one set of batteries will cause almost instantly, serious problems for any ship smaller than a battleship.

Is it too late for the E. B. to modify this decision so the cruiser can play with the battleship beyond their first battle. I hope the board is mature enough to admit this error and correct it before it is grafically illustrated by the wimpering cruiser captians once again refusing to go out in the water with those mean old Battleships. My flag will fly from a Battleship just in case.
Yes it will be a learnig experience but the northeast guys can provide a great deal of insight into these new problems since they have already played this game. We should get a new board member from their group at least temporarily to help our megakill board members understand the ramifications that single shot has that they might not have been aware of.
Well now that I've thoroughly insulted our E.B. I guess I should conclude my column. Seriously the E. B. has done a fine job an this whole new situation will have some "bugs" for a while. Please be patient with our leadership.

3.) Rules Enforcement. There is now a belief by our President that a stricter enforcement of the rules will lead to their improvement. This is a good assumption. We should be careful in our transition from loose to tight enforcement. Perhaps initially we need a "citation" system whereby the "cheater" is warned in writing of the offense to the rules that he has commited. A written copy would be given to him and kept on record. If it is not too bad he may be allowed to battle the rest of that event, contest, or day. At the next battle after this extension of battle rights has expired, the citation would be checked against his ship to see if he had brought his ship into compliance. If he has not he would not be allowed to battle. In this way he would have in writing exactly what his "offense was" and would know what had to be corrected by when. No misunderstanding because of verbal instructions. Using these citations, I believe we can make the transition to strict rules compliance without as many hard feelings.

Well, get your ball piston guns going and

Let's Battle! Stan Watkins

Battle Announcement

Anchors aweigh prepare for the 3rd. annual south eastern Regionals to be held May fourth and Fifth in Decatur Alabama. Anyone wanna try and take the traveling trophy away from Steve Milholland. The entry fee is $10.00. Payment must be made by mon-day April 29th. to enter. For more information write of call Dan or Mary Hamilton at Route#3 box 558 Decatur Alabama area and # 205-355-1563. The event will be Namba sactioned so get your Namba dues to Jeff. A information packet is available so contact us. The fleet battles will be single shot and two sorties with two planned for each day. The individuals challenges will be two sorties with what ever kind of gun that a opponent will battle you with. We have'nt had any battle scores reported for issue so its time for war. See you in the Spring

Dan & mary Hamilton

BATTLIN' N BAMA!

by James Foster

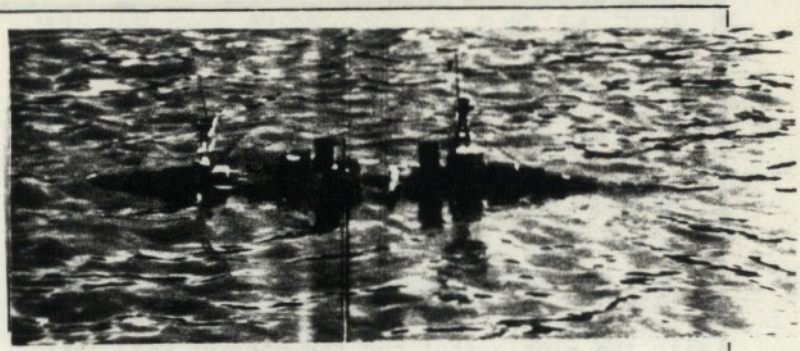
I was going to write an in depth article about the battle in Decatur, but discovered my advancing senility has erradicated my memory of the events (cackle, cackle!). Instead you will just get some impressions I had of the whole mess.

The most memorable thing was the high winds that plauged us during the weekend. The wind contributed significantly to the sinking of several ships by creating waves that poured through holes that normally would not have been serious. The wind was also directly resposible for the sinking of one ship, Jim Lisher's SALT LAKE CITY. Jim had allowed an upcomming rookie, Chris Pearce to con his ship and see what it was like. A sudden wind gust hit her port side, rolling her over with her bow completely submerged. She sank about three seconds later! I doubt I will see anything like that again!

Unknown ship, John Jass' Rodney, Foster's Chicago Pumping.

Another factor which bothered the battling was extremely heavy radio interference on Sunday which led to the EXETER being sunk due to control loss. Dan never had a chance to turn on his pumps, not to mention the fact his rudder and one prop were broken off when the EXETER ran aground stern first. Sunday also saw yours truly making a gallant rescue of the out of control RODNEY only to almost fall on top of her when a hidden hole trapped my foot! All the other ships also experienced control difficulties, in some cases near fatal but not quite.

The Decatur battle saw a first, I was finally sunk in combat! This happened during the second fleet battle on Saturday. The first sortie saw Steve Milholland and Jeff West sunk, Jim Lisher badly rammed, and the CHICAGO well ventilated but afloat. The second sortie started with the CHICAGO making a suicide run into the British fleet (1 BB, 4 CA), while I recited a modified version of the Charge of the Light Brigade: half a knot, half a knot, half a knot onward, sailed the two cruisers; Stromed at with BB and shell, into the mouth of hell, sailed the two cruisers. Well, you get the idea. After a few moments the CHICAGO went dead in the water from a loose arm on the throttle, with the EXETER on the starboard side, and the MYOKO and PORTLAND covering the port. These three ships added to the already ample holes in the CHICAGO's sides, but her doom wasn't sealed untill all the little itty bits of balsa that used to be a hull clogged the pump intake screens and down she went. The sink was pretty with the CHICAGO comming to rest with the tips of her masts sporting an American flag sticking above the water. Rather indicative of the whole U.S. effort, actually.



Foster's Chicago dies.

Photo's Courtesy of Chris Pearce

Another interesting sink was accomplished by dirty Dave Hayne's MYOKO during a battle with the ALABAMA. The cause of the sink was five very large below the waterline holes from a side shooting gun (the wind again!) of the Alabama. Anyway, the Myoko came to rest just off shore with the forward 25% of the ship protruding from the water at a steep angle. It reminded me of pictures from the Guadalcanal battles, specifically a Japanese transport sunk on a reef with it's bow sticking out of the water just offshore.

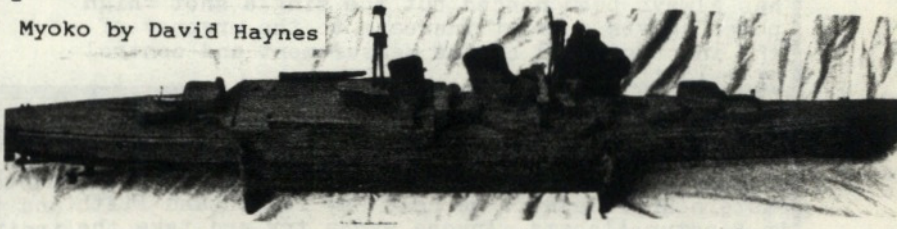
The slaughter of the battle came on Sunday during the first sortie. Loy Rassmussen had shown up with his Z boat and made the mistake of joining the U.S. team. The battle started with the EXETER quickly putting two holes in the Z boats bow, one on the water line. The RODNEY then blew a large hole in her stern, just above the waterline. Now these two fatal shots didn't satisfy John, so he pulled the RODNEY around and emptied both bow guns into the port bow just below the bridge of the Z-33. The impact of the BBs rolled the Z-33 over onto her starboard side, not to mention completely vaporizing a 3X3 inch section on the hull (it was gone, not just splintered!). Needless to say, the Z-33 was on the bottom about two seconds later. Total points on this one ship amounted to 2,220! Nuclear battle with a vengence.

The U.S. side had installed a secret weapon on the ALABAMA prior to the battling, a 600 BB capacity, hopper feed gun. It worked fairly well, but not enough to make any difference in the battling. The story may have been different if the water had been calm, though, as many of the shots Captain's made were intercepted by the waves. There was an unusually high proportion of superstructure hits compared to the hull hits. The most effective guns per BB fired were the side guns on the two BBs, again thanks to the fact the wind heeled the ships over so these guns had a down angle. The MYOKO is a case in point.

The number of rams was extremely high, Which I attribute primarily to the fact most of our battling was done in a rather confined area of the lake in an attempt to escape the wind. All in all, the conning of the ships was rather mediocre, and not up to the standards one would expect of such experienced fighters. I know I myself could never really get in contact with the action on the water. Still, the weekend was fun, as all battles are. I only regret purple sinkers are only awarded at the National Championship!

JF

Myoko by David Haynes



HOW TO Build a Ball Bearing Single Shot

Bob Amend

While reading the FEB 85 issue of Hull Busters, I noticed alot of interest in my Ball Bearing Interrupter Gun. I think there were 3 articles that mentioned the gun. Before getting into my "How To," let me say a few things. First of all, thanks for the interest in the gun. I hope it does help the hobby. The reason for the gun is plain and simple. I like my boat to be in the water battling, not sitting on shore with problems. To me, holes the size of a silver dollar are just as big a problem as a bad speed control or a gun that won't fire. Come on, to me patching holes isn't the most enjoyable part of a battle. Enough of that!

In designing this gun, I wanted it to be a gun that anyone can make. Kind of like the old Volkswagon Hitler had put in production. Germany was in bad times and Hitler was trying to get the economy going. So he ordered the production of a car that all people could afford. So here it is, a cheap dependable gun anyone can build, even the Italians!

What you'll need for 1 gun:

1 - 1/4" compression tee
1 - 12" section of 1/4" brake line
2 - 1/4" steel ball bearings (Purchase at a bicycle shop.)
Scrap brass sheet
Breech material can vary depending on which one you use, "Foster" or "Geek"
1 - 1/4" flare
1 - 1/4" plug

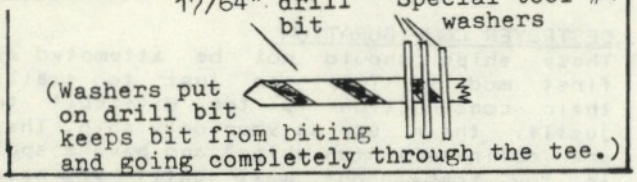
Tools needed:

Safety glasses	Sand paper
17/64" drill bit	Solder
5/32" drill bit	Tin snips
Lathe, drill press or drill	File
Special tool #1	
Soldering iron	

Step #1: Drilling the tee.

Using a 17/64" drill bit, drill 1 end of the tee till the outside bevel of the drill bit is just below half way when looking through the magazine port of the tee. See Fig. 1 for help. Drop one bearing in tee. Idealy the top of the 1/4" bearing should be at the top of the magazine port.

FIGURE #1

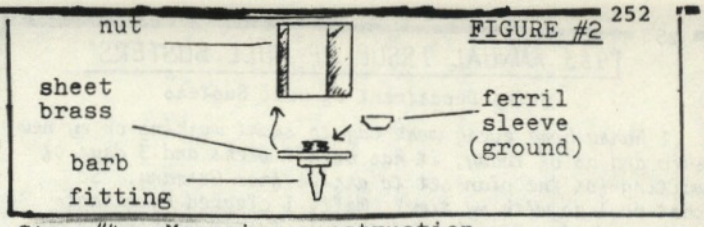


Step #2: Testing bearing movement.

After all drilling is done place both bearings in drilled passage. Place thumb over drilled passage and shake tee. Bearings should move freely.

Step #3: Freon delivery tube.

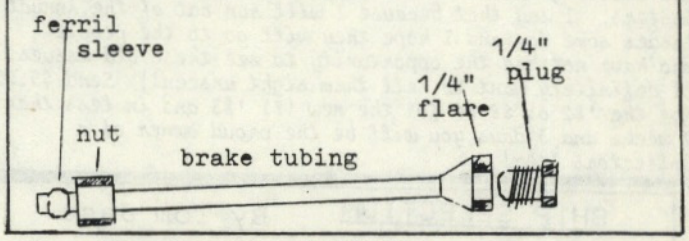
Take one of the nuts from the compression tee and place it on a scrap piece of sheet brass. Trace the nut onto the sheet brass. Now using the 5/32" drill bit, drill a hole for the barb fitting to be soldered into. Clean the hole with a file. Cut this assembly out and solder the barb fitting on the brass sheet and the brass sheet onto the nut. This puts the upper bearing at the bottom of the magazine port, thus letting 1 BB and 1 BB only to rest in the firing position. See Fig. 2.



Step #4: Magazine construction.

See Fig. 3. Take the 12" piece of 1/4" brake line tubing and cut 1 flare off. Remove the nuts that came on the brake line. Place one 1/4" flare nut one the brake line and seat it on the manufactures flare. Solder this together. Turn 1/4" plug into flare nut. To help decrease freon leaks, place an oring in the flare nut.

FIGURE #3



Step #5: Mounting hardware.

The following can be changed depending on room available, magazine placement, etc. Solder scrap brass in various places for mounting screws. Mount magazine at an angle to help BB flow. See Fig. 4.

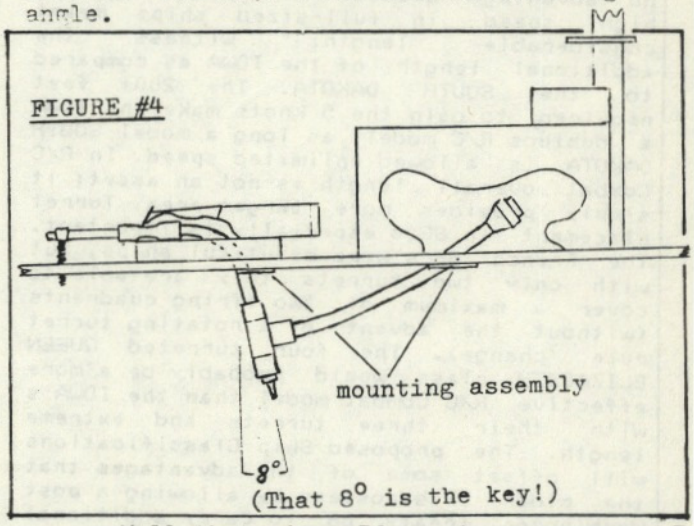
Step #6: Putting the whole mess together.

Place tee nut and ferril sleeve on magazine. Put a small amount of silicone rubber on the male threads of the compression tee. Tighten nut down with wrench. Use these steps for breech assembly and freon delivery tube. Now test fire the gun. Check and repair any leaks.

Step #7: Mounting.

Mount gun in ship using small wood screws. See Fig. 4 for correct mounting angle.

FIGURE #4



Well thats it. If you have any questik or comments, feel free to send me a tape, write or call (717) 235-4558. Send it to R. D. #2, Box 297A, Glen Rock, PA. 17327. Thats where my wife is. As many of you know I'm in the Coast Guard. My family is in PA. and I'm in Yorktown, VA., for another month. My wife will make sure I get your tape, letter or your call.

I get out of school the end of April. It's no telling where my next duty station will be. One thing for sure, it's going to be a ship of some sort. Hopefully it won't interfere with my family life and the hobby to much. Hope to show you's how they work at nats.

Bob Amend

1983 ANNUAL ISSUE OF HULL BUSTERS

Sales Department of Hull Busters

I hurry home every work day to start working on my new ship and as of today, it has been 9 weeks and 3 days of waiting for the plan set to arrive from Germany. So what do I do with my time? Well, I cleaned my garage-dock-yards for 3 weeks and then I started working on my old, old projects. Though it took too long, I'm happy to say that the 1983 Annual Issue of Hull Buster is for sale! The cost is $8.00 and if your normal, you will realize that its only worth $2.17. But as you're reading this trash, I think, you will love your '83 Annual Issue and will feel that it was easily worth $9.84.

The $5.00, 1982 Annual Issue is still available and the 1984 Annual Issue will hopefully be available by late 1985. These old issues are valuable to the new comers and possibly wasted on the long term subscribers to Hull Busters. I say that because I will run out of the Annual Issues some day and I hope they will go to the people who have not had the opportunity to see these old issues. (I definitely want to sell them sight unseen!) Send $5.00 for the '82 or $8.00 for the new (?) '83 and in less than 9 weeks and 3 days you will be the proud owner of a Collectors Item!

LITTLE SHIPS AT THE 85 CHAMPIONSHIPS

By Stan

From the input that I have recieved it now appears that there will be from 5 to 10 Destroyers at the championships. These are rumored to be:

AXIS
1. Jap DD (Dirty Dave Haynes)
2. Jap DD (Terry Darby) apple pie is Jap?
3. Italian DD (Carl super geek)!
4. German Z (James West) maybe 2 or 0
5. German Z (Martin Schneider)!!

Allied (Help)!!
1. USS O'Bannon DD450 (Stan) For Sure!
2. English "J" (Tom Jass)
3. US WWI 4 stacker (Chris Lawson)

If there are anymore Destroyers that will be at the Champion ships I'd like to know.

It is possible that the Scale Displacement requirement could give some of these ships problems.

SHIP SELECTION

By Tom Jass

One of the most important decisions that you make in R/C Combat is the selection of what ship to model. There is such a variety of ships to build that you should devote some time to thinking about the advantages and disadvantages that a particular ship possesses. Always keep in mind the rules that we battle under when selecting your model. In many cases the rules should dictate the particular ship you construct.

BATTLESHIP CONFIGURATION

Lets's look at some of the pertinent rules and their bearing on BB selection. Until a speed rule is passed a full-sized ship has no advantage because of speed. Usually high speed in full-sized ships meant considerable length; witness the additional length of the IOWA as compared to the SOUTH DAKOTA. The 200+ feet required to gain the 5 knots make the IOWA a dubiuos R/C model, as long a model SOUTH DAKOTA is allowed unlimited speed. In R/C Combat overall length is not an asset; it simply provides more target area. Turret placement in BB's especially is important. The French BB's were beautiful ships, but with only two turrets they are able to cover a maximum of two firing quadrants (without the advent of a rotating turret rule change). The four turreted QUEEN ELIZABETH class would probably be a more effective R/C Combat model than the IOWA's with their three turrets and extreme length. The proposed Ship Classifications will offset some of the advantages that the older BB's possess by allowing a post Washington Treaty BB to carry additional units. However, in my opinion, the advantage still lies with choosing a BB that is minimum in length and has a maximum number of individual turrets. Dual rudders are an advantage, but are not of overriding concern. The number of screws is not very critical as two screwed models can be made as fast as four screwed models by using good motor selection.

CRUISER CONFIGURATION

Cruisers are much more homogenious in design than BB's, but there are still some design characteristics that should be weighed. Here again overall length is not an asset. This makes the later American cruisers not so desireable; in addition their pronounced deck sheer makes them somewhat more difficult to build. The Germain cruisers are large in displacement and can consequently carry a heavy payload, but their length is a disadvantage. The Japanese cruisers are very narrow beamed; this complicates their construction, but they are swift and accelerate quickly. Cruisers with low freeboard in the stern area can cause deck sealing problems, but they can be solved as shown by Foster and Darby. I believe that the EXETER is the best overall compromise design for a first cruiser. It is short in length, and yet has sufficient interior room to allow the installation of the required systems. The German cruisers are also good ships to begin with; their additional length is not good, but there is plenty of interior space. I think that the Japanese and American ships are better left as second attempt models. If a rotating turret rule is passed for cruisers the cruisers with greater interior hull space become more attractive because the turret rotation equipment will require additional space. You have to weigh the disadvantage of the extra target area against the possibility of greater offensive power due to the rotating turrets.

DESTROYER CONFIGURATION

These ships should not be attempted as first models. They are just too small; their construction is too difficult to justify their use as your only ship. They are definitely "fun ships" and have a spot in the hobby, but wait until you have mastered the construction and battling of a cruiser before you attempt one. Selection of a DD means looking for a ship with high displacement. Don't attempt to build a 1800 ton DD unless you are willing (and able) to custom build many of the systems. If you total up the weight of the required systems (servos, motors, batteries, gun, magazine, freon tank, etc.) you will be in the vicinity of one pound at a minimum -- and you still have the ship to build. A reasonable minimum tonnage for a full-sized DD to model would be in the 2600 - 3000 ton range. This class is one that is wide open to innovation, with the only disadvantage that the plan sets have to be developed by the builder.

CONCLUSIONS

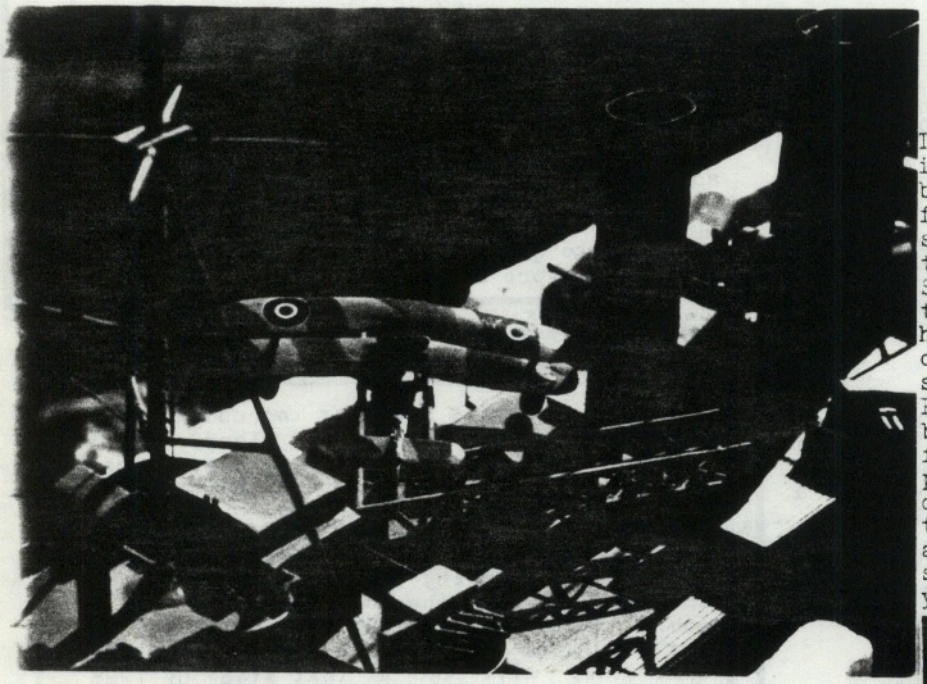
If you are selecting a ship to model as

your first R/C Combat ship, choose a heavy cruiser that has sufficient interior room but is not excessively long overall. Use Jeff Poindexter's plan sets unless you really like to scale up (or down) plans. Good English and German plan sets in 1/16" scale can be purchased from Repla Tech in Vida, Oregon if you prefer to model a ship that is unusual. But I strongly advise you to use one of Jeff's plans for your first model. Resist the urge to build a BB or DD as a first model unless you're an experienced modeler. Choose a heavy cruiser and get a ship in the water that you can learn with; that super BB will not be useful if it takes 3 years to build and is too complex to learn on.

If you want to venture into the BB, CL, or DD arena as a second ship, then carefully study our rules and use them to your advantage. In general, the shorter the ship the more effective it can be. All the above advice is subject to change if the rules change.

Smooth Sailing

Tom Jass

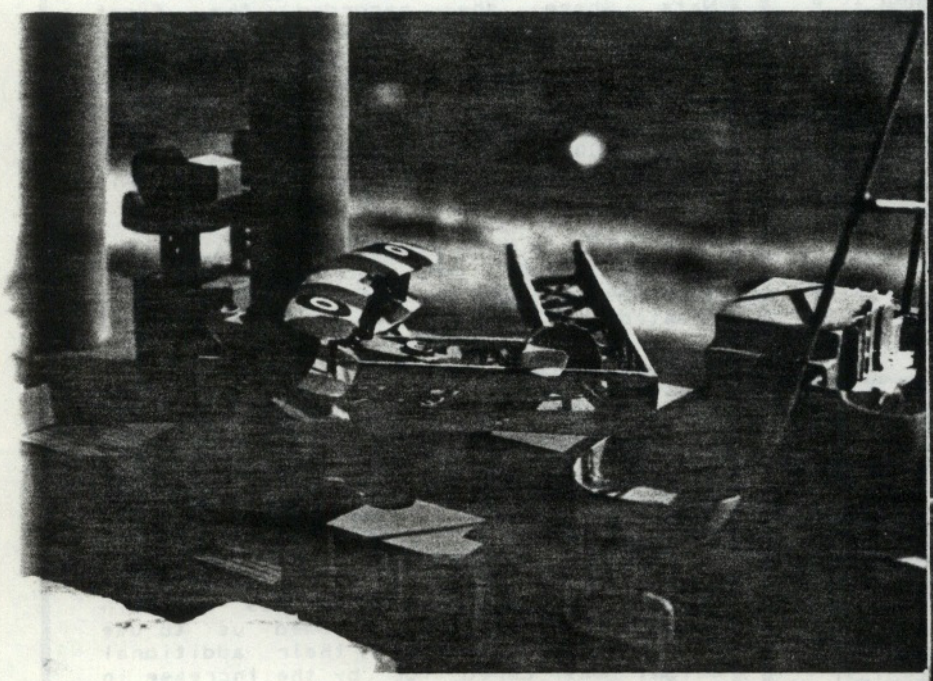


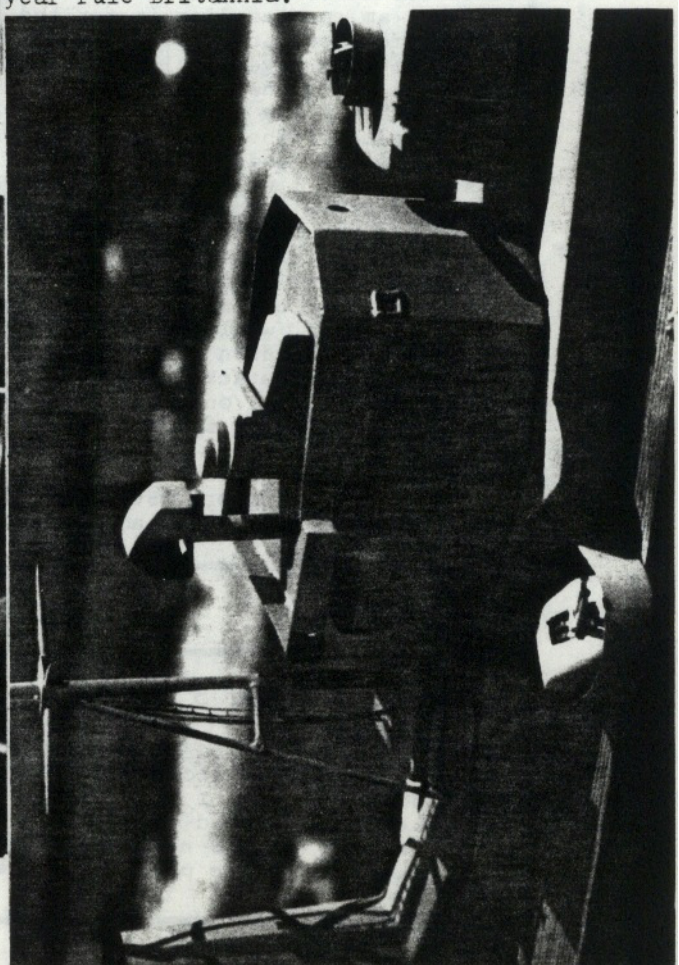
PLAYTHING OF THE YEAR

(The 1984 Best-of-Scale Winner)

by Dan Hamilton

This is the Heavy Cruiser H.M.S. Exeter. She is 47.9 inches long and 5.75 inches on the beam. Actual size is 575 feet lenght and 57 feet on the beam. Exeter displaces 8,500 tons standard and carries six - eight inch guns in three twin mountings and six torpedo tubes. She has a armored belt and a armored deck. For the benifit of all you rookies and axis spies her R.C. combat armament is two R.C. mini guns one foward and one aft. For armor protection she carries one pump. She is powered by Poly Pak motors 6 volts and uses four amp hour nicad batteries for fuel. She has two nationals and five regionals under her battling belt. This past year at nationals she witnessed the first defeat of the Axis in a long while. For her trouble she was given 82 superstructure hits and 58 hull hits but like many of the Allied ships this year she did'nt sink. Until next year rule Britannia.





Rule Recommendation #1

Ship Classes

The following ship classes were agreed to and are backed by the executive board as a rule proposal. I have greatly enjoyed working on this executive board with these members. As usual the people make this hobby. Anyway it was recognized by the group at nationals that our present system was inadequate and in need of revision. We were asked by the club to classify Predreadnoughts and Air--craft carriers which we did. when we finished we all felt that more could be done and after many phone calls, tapes, and letters we arrived at this system. The system was helped along by our date decision of 1905 to 1946, by the ship list research, and by past experience.

Class - 1 = 6 units
Battleships 33,000 tons and over

Class - 2 = 5 units
Battleships 25,000 tons to 32,999 tons, and
Battlecruisers 30,000 and over

Class - 3 = 4 units
Battleships 24,999 tons and under
Battlecruisers 29,999 tons and under

Class - 4 = 3 units
Heavy Cruisers built after 1922, Predreadnoughts, Light Cruisers 9,000 tons and over built after 1922

Class - 5 = 2 units
Light Cruisers 8,999 tons and under built after 1922, Armored Cruisers or Heavy Cruisers built before or in 1922, C.V.'s Lexington, Saratoga, Kaga, and Akagi

Class - 6 = 1 full gun unit
Protected Cruisers or Light Cruisers 8,999 tons and below built before 1922

Class - 7 = 1 gun unit below standard magazine
Destroyers, Subs, C.V.A.'s, C.V.'s

Class - 8 = 1 gun unit below standard magazine
Gunboats, C.V.E.'s, C.V.L.'s and all other ships not listed

The tonnage above is standard as built. All guns in classes 1-6 will have a standard magazines of 30 to 50 BB's to be decieded by experience at nationals. Classes 7 and 8 will have below stan--dard magazines of perhaps 10 to 20 BB's for Destroyers and 5 to 10 BB's for Gunboats. I'm sorry I was unable to contact all of the excut--ives due to problems in distance before sending in this proposal but I'm sure they'll agree on the need to get this before the group as soon as possible before nationals.

By Dan Hamilton

BABY BATTLERS

By Fluegel

I'm proud to announce that the first video tape of a two part series entitled "How I built the Lutzow" is completed. This tape is for you, the rookie and the experienced builder. It is not the recommended way for a rookie to build a ship and may have a staggering, baffling and possibly harmful effect for the rookie who uses this tape as a model for their construction techniques. Still, I am recommending it for the rookies (with some reservations).

The first tape covers hull construction, planking, motor installation and rudder installation. The second tape will cover construction of the throttle, gun system, superstructure, and finally pump construction. I will let you know when it's ready. There will be a $3.00 user fee and a $25.00 deposit required to "check out" this "see and say". You are encouraged to make copies and share them with your friends, (like the other two see and say programs). That reminds me, will the two people who have the pump construction programs return them, other people are stacked up waiting to use them. Well, I will once again say that I am proud of the see and say programs and especially the video. I'm embarressed at how poorly I did the tape and I hope you realize I am a rookie producer. Still, it's a very special achievement and I hope the beginning of great things.

VISCIOUS RUMORS

By Farley Hop

It's just not fair and I will not tolerate the out and out lie about the Allies propulsion systems. I have heard from 3 or 4 people that the Allied ships are powered by rubber bands! That's not fair or even nice. Come on guys, they're powered by the wind!

SUBMARINE CONSTRUCTION By Tom Jass

The past year has seen the introduction of submarine into R/C Combat. They add an interesting dimension into the combat equation. Since they aren't submersible at the present time (due to rules, not technology), they operate as destroyers as far as armament and target size are concerned. However, submarine skippers are convinced that these ships (Jeff West would insist that they be called boats) can be made to submerge on command and that they will be at that stage by 1985 Nats time. In the winter of 1984 we built a submarine at the urging of John, my son. We built a model of the French submarine, the SURCOUF. John battled her at the 1984 Nats where she recorded the first submarine sink in the history of R/C Combat. She sank the USS TWEEDY (Stan Watkins' DE) with gunfire. James West also brought a submarine to the 1984 Nats; he had built the Japanese submarine I-400. The I-400 and the SURCOUF battled through two sorties, but neither side scored any hits.

This article will discuss the construction of the SURCOUF and address the peculiar problems that building a submarine created.

SHIP SELECTION

Obviously the submarine you select to model should be as great in displacement as possible. The "small" US Fleet boats and the German U Boats are relatively light and would be difficult to construct within the weight limitations. Although, the waterline of any submarine is difficult (impossible?) to determine fairly. For example, we ballasted the SURCOUF so that her deck was awash in normal running. This allowed us to use X-cells as batteries; their additional weight was cared for by the increase in displacement that the high waterline provided. The upshot of this is that

perhaps a U-Boat would be easier than I thought to battle if she was ballasted low in the water. However, it is best to choose a large submarine such as ths SURCOUF, the I-400, the USS NAUTILUS (old version), or the British submarine that carried 12"guns as a first submarine model. It is much safer to be able to add ballast after the test phase than to have to rebuild the boat when you determine that its too heavy. Check the rules before you decide to build a TRIDENT class submarine because of its great displacement. We have rules which limit the building of post-WWII ships.

SPECIAL CONSIDERATIONS

The most serious problem that must be solved when building a submarine is the deck sealing arrangement. If this problem isn't solved the submarine will always sink (like the BISMARK). I gave much thought to the sealing method and finally settled on the use of tape to provide the seal. I discarded the idea of using screws or fasteners because I felt that too many would be needed; the weight would be excessive and the hull unbuttoning time too great if 55 screws must be loostened. The SURCOUF hull cross section shown in Figure 1 shows the location of the sealing tape. Note that it is directly over the 1/8" square hardwood gunwales. I reasoned that the tape would not hinder BB penetration at this location since the gunwales would deflect the BBs without the sealing tape anyway. The hull of the SURCOUF is split into two halves at the gunwale line during constrution; this also provides for easy access to the R/C and mechanical systems. This feature worked well. If you attempt to provide hull access through an opening only as wide as the typical submarine deck, there just isn't sufficient room to work on the innards.

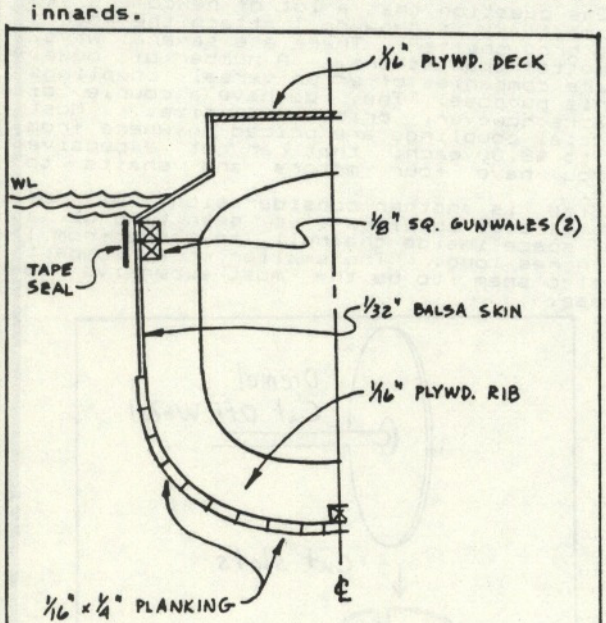


FIGURE 1: HULL CROSS-SECTION

Another potential problem I wanted to address was to eliminate any deck penetration by the gun/magazine system. My solution was to construct a watertight trough that was recessed into the top of the deck to permit the magazine to penetrate the deck line but not the deck itself. See Figure 2 for details. This approach worked well at Nats. The freon supply from the tank to the magazine was run through a Clippard female hex fitting that pierced the deck but was sealed with Zap on top and bottom. This trough design also provides easy removal of the entire gun/magazine for servicing.

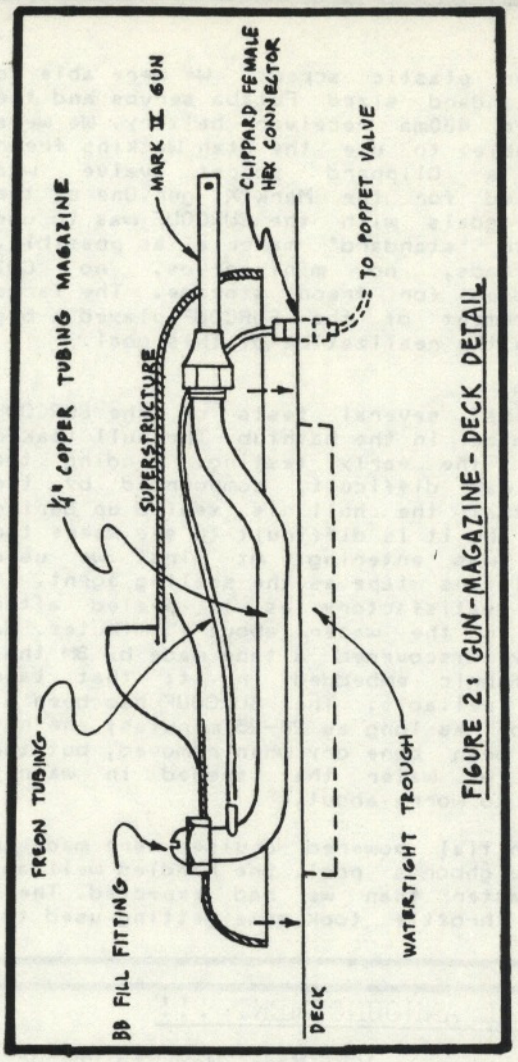


FIGURE 2: GUN-MAGAZINE-DECK DETAIL

CONSTRUCTION

The SURCOUF was built in my standard upside down method using a pine jig. The ribs were made fron 1/16" plywood. The two hulls (upper and lower) were built on this jig. Care must be exercised to insure that the two hulls are built without warp so that the hull sealing problems are minimized. The bottom hull was planked with strips of 1/16" X 1/4" balsa to 1" below the waterline; planking was used because of the complex curves that the SURCOUF hull has. Thge sides of the upper hull and the top 1" of the bottom hull were sheeted with 1/32" balsa. The deck and the gun trough were 1/16" plywood. The superstructure ribs were made of 1/16" plywood; the superstructure was also sheeted with 1/32" balsa.

The powerplant is 2 Mabuchi RE-260 motors (at about $2.00 each) driven by 2 Gates X-cells supplying 4 volts. I originally tested the SURCOUF with only 1 battery, but when I discovered that the additional weight of the second X-cell could be supported it was installed. THe speed increase due to the second cell was significant. The throttle is a 2 pole, double throw, center off switch from Radio Shack. It provides forward, stop and reverse. The props are Dumas 1 1/4"

diameter plastic screws. We were able to use standard sized Futaba servos and the standard 400ma receiver battery. We were also able to use the Stan Watkins freon tank; a Clippard poppet valve was installed for the MarkIX gun.One of the design goals with the SURCOUF was to use as much "standard" material as possible. No nicads, no mini-servos, no CO2 cartridges for freon storage. The large displacement of the SURCOUF played a big role in the realization of this goal.

TESTING

The first several tests of the SURCOUF were made in the bathtub. The hull leaked during the early testing. Finding the leaks was difficult, compounded by the fact that the hull is sealed up during test, and it is difficult to see where the water was entering. At first we used electricians tape as the sealing agent. It wasn't satisfactory as it peeled after being in the water about 15 minutes. We finally discovered a tape made by 3M that has fabric embedded in it; that tape proved reliable. The SURCOUF has been at sea for as long as 20-25 minutes; she has never been bone dry when removed, but the amount of water that seeped in wasn't enough to worry about.

The initial powered cruises were made in our neighbor's pool. She handled well and was faster than we had expected. The 3 speed throttle took some getting used to. During these tests her waterline was right at deck level. This condition brings her gun down to about 1" above the waterline -- a condition that bodes no good for any DD or DE she may engage.

FUTURE OF SUBMARINES

We plan to modify th SURCOUF this winter by adding a servo to control her diving planes. This will make her a true submarine. Jeff West also plans to have a diving submarine at 1985 Nats. Perhaps there will be battles between ships (boats) that possess the ability to dive upon command!! If those battles are exciting and realistc, a movement may develop to change our rules to allow such craft. John was the driving force behind the building of the SURCOUF because I thought that a submarine was just a toy (a typical aircraft carrier sailor's opinion) and not worthy of modeling effort. However, even configured as a surface battler the submarine is effective and possesses some advantages over a DD or DE. Submarines provide a minimum target and their guns are located right at the waterline of opposing ships. If the submarine can be allowed to submerge at will, perhaps they will become as deadly in R/C Combat as their fullsized counterparts were in the real world.

The Allies will jive in '85

Tom Jass

SPECIAL ANNOUNCEMENT !!!

As of January 1, 1985 Model Warship Products no longer sells Guns, Gun Parts, Pressure tanks, or Plan sets.

Model Warship Products sels only Video Tapes of R/C Warship Combat. I offer 82,83, and 84 Nats Tapes for $20.00 which includes postage. Thanks for the free add Fluegel!

You may get gun barrels from Carl Camurati.
You can get a piston gun BB metering system from Carl also. He plans to produce a complete gun kit soon.
You can get Clippard parts from Tom Jass.
Jeff Poindexter plans to provide the stainless steel pressure tanks.
Of course Jeff also sell the plan sets.

The purpose of providing the gun when there was no source of one has been completed. I have grown tired of the problems associated with the production of the approximately 500 MkIX guns that I sold. This production did however serve its purpose of allowing the hobby to become established. I was never really able to serve my customers in the manner that I would have liked to do. This of course lessened the reward of supplying your needs because I never completely supplied all of your needs the way I wanted to. I hope that there aren't too many hard feelings. I will continue to enjoy tremendously my fellowship with you, my fellow founders of this intreging hobby.

Let's Keep Battling! Stan

JUST THINKING

It seems to me a good idea to glue an alkaselzor to the bottom of your deck. It would help you locate your sunken ship.

HOW TO Build a Universal

Steven D. Milholland

One question that a lot of newcomers to R/C Combat ask is "How do I attach the motors to the prop shafts?" There are several ways, some better than others. A number of model hardware companies offer universal couplings for this purpose. They do have a couple of drawbacks however, price and size. Most commercial couplings are priced anywhere from $2.00 to $8.00 each, that can get expensive when you have four motors and shafts to couple.

Size is another consideration. All of the commercial couplers I've seen take up a lot of space inside the hull, anywhere from 1 to 2 inches long. The smaller more compact ones also seem to be the most expensive to purchase.

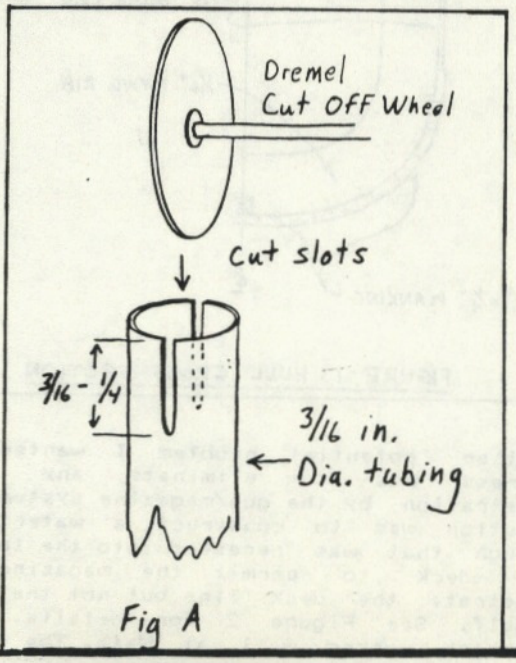


Fig A

Being the tightwad that I am, I will usually try to build an item if the job can be done as well for less cash than the purchased item.

A lot of modelers in R/C Combat have their version of a homebuilt universal coupling and seem satisfied. If you have your own system in mind or have seen someone elses that appeals to you, then by all means, go ahead and use it.

For those who may be unsatisfied with their present coupling system or have just not found a homebuilt coupling that strikes their fancy, then listen up. Here is one more option to look over.

My own system is cheap, easy to build, and is very reliable. It runs very smoothly and can compensate for considerable motor/prop shaft misalignment, both paralell and angular.

It works as follows. The coupling itself is a short brass tube that is somewhat larger in diameter than either motor or prop shaft. The tube has a length of small music wire soldered across the diameter of both ends. The wires are oriented at 90 degree angles to one another. If you hold the coupling up and look through the end, the two wires appear crossed like the crosshairs in a rifle scope. The ends of the motor and prop shafts are slotted. The wires fit into the slots in the shafts to provide transfer of power from motor to water. The larger diameter of the coupling tube allows the flexing that compensates for shaft misalignment during rotation.

To build these couplings you will need the following:

MATERIALS

3/16 in. O.D. brass tubing
7/32 in. O.D. brass tubing
.019 or .025 dia. music wire
1/8 in. I.D. locking collars
Solder and paste flux

TOOLS

Small vise
Dremel tool with cut off wheels
Propane torch or soldering gun
Needle nose pliers
X-Acto knife

Note: The brass tubing sizes given above are good for the Dumas 4.8 volt motor and 1/8 in. dia. prop shafts.

Space requirements: The motor shaft must extend a minimum of 3/8 inch past the motor casing. The prop shaft must reach to within 1/8 or 3/16 inch of the end of the motor shaft and have at least 5/8 inch exposed end coming out of the shaft housing. Minimum distance, motor casing to prop shaft housing, 1-1/8 inch.

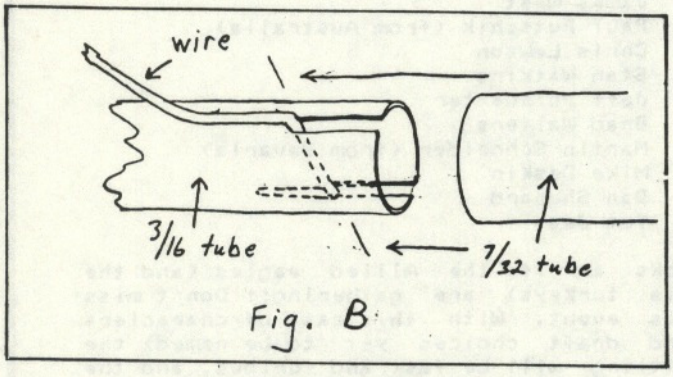


Fig. B

BUILDING THE COUPLING

The first step is to slot the ends of the motor and prop shafts with the Dremel cut off wheel. I have found that a slot about 3/16 in. deep works the best. This is deep enough to stay in contact with the coupling, shallow enough to allow flexing inside the tube.

Next, make slots across the end of the piece of 3/16 tubing with a cutoff wheel approx 1/4 in. long. The depth is not critical at this point as the tube end will be trimmed later. (see Fig. A)

Using the needle nose pliers, grab the music wire where the pliers jaws are 3/16 in. wide with about 1/4 inch of wire sticking out on one side. Bend the 1/4 inch end 90 degrees, forming a square "U" with the paralell legs having a 3/16 in. gap between them.

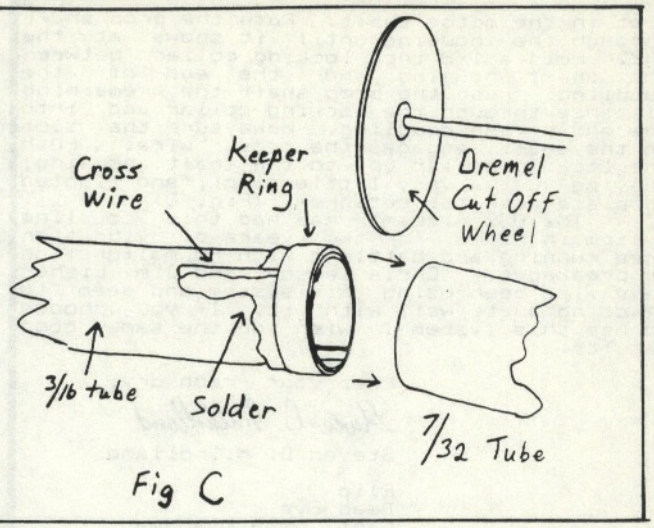


Fig C

Put the 3/16 tubing in the vise with the slotted end out in the open where you can work on it. Place the bent music wire into the slots with the paralell legs of the "U" lying along either side of the tube. Be sure to bottom out the cross bar of the "U" in the slot.

Smear a small bit of paste flux around the outside of the tube end where the wire touches it for 1/4 inch down the tube length (not inside).

Take the 7/32 in. tube and slip it over the slotted end of the 3/16 tube and push until it butts up against the music wire. Heat the joint where the wire and two tubes come together and solder liberally. (see Fig. B)

Using a Dremel cut off wheel, cut the long end of the music wire about 1/4 inch from where it bends and goes through the tube. Be careful to cut only the wire and not the tube.

Now, reverse the soldered tubes in the vise so that the 7/32 is clamped and the 3/16 inch tube is free. With a pencil or scribe, mark the 3/16 tube at 7/16 and 5/8 inch from the point that the music wire goes through. With a Dremel cut off wheel, cut the 3/16 tube at the 5/8 inch mark. It does not have to be square or neat, it will be trimmed later.

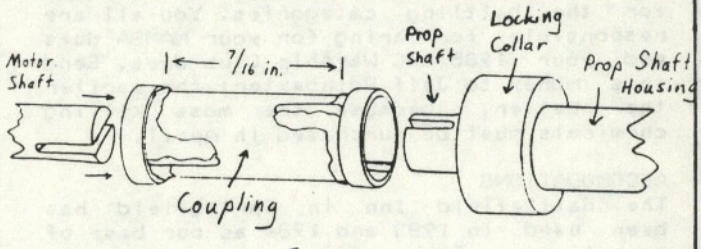


Fig. D.

Slot the end of the 3/16 tube down to the mark made at the 7/16 mark. Be sure to make these slots at a 90 degree angle to the wire already in place.

With a Dremel cut off wheel, cut through the 7/32 inch tubing about 1/16 or 3/32 inch behind the joint where it butts against the wire. Try to cut it square as this is now the finished end of the coupling. The 1/16 inch ring of 7/32 tubing still soldered to the end of the coupling acts as a keeper for the cross wire. Deburr the inside of the end with an X-Acto knife. (Fig. C)

Make another square "U" of music wire just like the first one. Clamp the coupling in the vise with the slotted end free. Place the music wire "U" in the slot. Put the 7/32 tube over the end and butt against the wire legs. Smear with paste flux and solder. Remove from vise and clamp the 7/32 tube end. Cut off with Dremel about 1/16 or 3/32 inch from the joint and deburr the end with an X-Acto knife.

You now have a completed coupling. Before making the next one you will have to trim the ends of the remaining 7/32 inch tubing as both ends will probably have a small piece of 3/16 tubing soldered inside.

To install the coupling, first smear a bit of grease into each end for lubrication. Place one end over the motor shaft making sure that the cross wire bottoms into the

slot in the motor shaft. Push the prop shaft through the housing until it shows at the end. Hold a 1/8 inch locking collar between the shaft housing and the end of the coupling. Push the prop shaft the remaining distance through the locking collar and into the end of the coupling. Make sure the slot in the shaft engages the cross wire. Push the locking collar up to the shaft housing, leaving just a very little slack, and tighten in place with the setscrew. (Fig. D)

The USS Alabama has had this coupling system in place for two years of vibration free running and battling with no malfunction or breakages. Chris Lawson and Jim Lisher have also been using this system and seem to be doing quite well with it. If you choose to use this system I wish you the same good results.

Keep your freon dry.

Steven D. Milholland

Steven D. Milholland

Flip
Dead Eye
Capt., USS Alabama

STANDARD MIXED FLEET

When the battles become one sortie I'd like to see a new kind of Fleet Battle. It could even specifically be required to last only one sortie. It would have a "balanced number" of the same type ships on each fleet. For example there could be 1 battleship, 1 heavy cruiser, 1 light cruiser and 3 destroyers on each fleet. This would more closely represent a real fleet battle and might be a new kind of fun. Does anyone else like the idea. If so we might try it at the 85 Championships.

By Stan Let's Battle, Mixed Fleet!

CLASSIFIED

Wanted: a contagious Axis to cough on Allied Hull Buster Newsletters just prior to mail out.

NATS TO YOU

Here it is April already (do you have your taxes done?), and the 1985 Nationals are fast approaching. Many of the early arrangements have been completed; I'll give you a status on where we stand. Steve Milholland has secured the use of the pond in Sequiota Park and the Ray Kelly Craft Center for ship repair. These facilities are first class and insure that we will have every chance to make the 1985 Nationals the best ever. The Springfield locals (Milholland, Foster, Lawson and Lisher) will care for killing the moss on the lake; the cost of materials to do this job will be about $400. Your memberships and 1985 Nationals entry fees will provide the money for this task. The locals will provide the manpower (and we all thank them for their efforts). David Haynes and John Jass are constructing the trophies for the battling categories. You all are responsible for caring for your NAMBA dues and your 1985 R/C Warship Club dues. Send this money to Jeff Poindexter; the earlier the better, because the moss killing chemicals must be purchased in April.

ACCOMODATIONS

The Battlefield Inn in Springfield has been used in 1983 and 1984 as our base of operations. The prices are reasonable (about $100 per week for a single room and $130 for two in a room); the motel has a swimming pool that is great after battling all day in the 95 degree heat, and it is located close to the battling site, shopping centers and eating establishments. Make your reservations now (417 883-1340) and reserve a room for the week.

If you plan to fly in to the Springfield airport, a car can be rented for your use. If you fly, contact Carl Camurati on how to construct a carrying case that will meet airline requirements. Dan Dees flew to the event in 1983 and sent his ship via Greyhound in a sturdy carrying case. There are ways to get your ship safely to Springfield. Contact these people if you are in need of information.

Fluegel has suggested that I also function as a clearing house to establish car pools for driving to 1985 Nationals. If there are any battlers out there who would like to attend nats but don't have transportation, contact me and I'll try to put you in contact with a battler in your area who is planning to drive. The drive is shorter (and cheaper) if the trip is shared.

CONTESTANTS

The following people have indicated in the December HULL BUSTERS that they plan to attend the 1985 Nationals. From this list, it looks as if this year's event will be exciting (will Fluegel sink daily...will Martin turn Allied...will the WISCONSIN battle...will there be a 22" battleship?)

Carl Camurati
D.W. Fluegel
James Foster
Bill Hahn
Steve Milholland
James Lisher
John Jass
Jeff West
Chris Pearce
Dan Hamilton
David Haynes
James West
Paul Futschik (from Australia)
Chris Lawson
Stan Watkins
Jeff Poindexter
Brad Walters
Martin Schneider (from Bavaria)
Mike Deskin
Dan Shepard
Tom Jass

Looks as if the Allied eagles (and the Axis turkeys) are gathering!! Don't miss this event. With this cast of characters (and draft choices yet to be named) the battling will be fast and furious, and the sea stories even faster. Most of the captains named above indicated that they were bringing ships to battle in both the singleshot and unlimited classes.

WEEK'S SCHEDULE

Listed below is the tentative daily battling schedule. (Doesn't it look familiar? Why should we change a good thing?)

Sunday	Open pond (testing)
Monday	Fleet Battles
Tuesday	Fleet Battles
Wednesday	Daylight: open
	Darkness: Night Battle

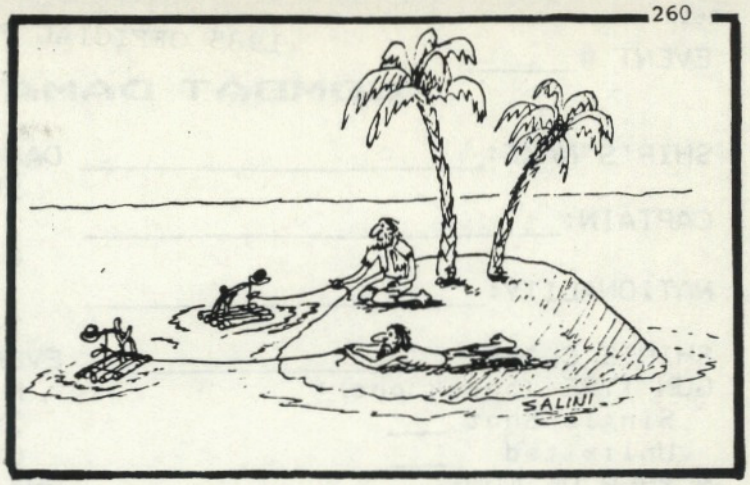
Thursday	Fleet Battles
Friday	Convoy
	Awards Banquet
Saturday	Open pond

Individual battles can be arranged at your convenience any day of the week. The Fleet Battles will be singleshot and unlimited, rookie and expert as the conditions warrant. REMEMBER THAT SINGLESHOT BATTLING TAKES PRECEDENCE OVER ALL OTHER TYPES.

The Allies will jive in '85

Tom Jass

Tom Jass



AXIES "CLUB - LOGO" PROPOSALS

1. Peace through world domination.
2. All I want is an unfair advantage.
3. What's mine is mine and what's yours is negotiable.

Water bathed freon tanks are not important except in the single shot class

Flueger

Rule Recommendation #2

By Dan Hamilton

Speed

The speed classes below as you will see are by five knot increments. As requested by the group at last years nationals a ship list was compiled listing every surface fighting ship in the world from 1905 to 1946 the accepted dates for R.C. combat. This list shows the class of the ship, the tonnage standard as built, the overalll size of the ship, (the speed), the armor, and the number and size of the guns in the main armament. This list will be held on computer and available to any club member. Every member can then check his ship speed and see in which class it falls.

class 1 35--39 knots, 22 seconds per hundred ft.
class 2 30--34 knots, 24 seconds per hundred ft.
class 3 25--29 knots, 26 seconds per hundred ft.
class 4 20--24 knots, 28 seconds per hundred ft.
class 5 15--19 knots, 30 seconds per hundred ft.
class 6 10--14 knots, 32 seconds per hundred ft.

speed trials would be run by challenge only it would be obivious if you have a 22 second ship and someone blows you away that that ship is too fast. The 2 second gap will give faster ships their advantage but not exclude older ships from combat and to prevent battlers from avoiding battle with superior speed. Speed trials should be done using a running start to prevent faster acceralation from having a different top end speed from ships that are beamier and take longer to reach their top speed.

Dan

Rule Recommendation #3

Rotational turrents

Battleships may rotate their guns to any degree their superstructures will allow.
Cruisers and smaller ships may rotate their guns 30 degrees to port or starboard.
No ship with a beam of less than seven inches may rotate its guns more than 30 degrees to port or starboard or have permanent side mounted guns

Don

Please send your Namba dues to Jeff as he is the money man for the club.

START YOUR OWN R/C COMBAT CLUB

Dear Prospective R/C warship Combatant,

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

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

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

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

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

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

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

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

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

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

1985 OFFICIAL FORM

EVENT #_____ DATE__/__/__

COMBAT DAMAGE REPORT

SHIP'S NAME:_____ DAMAGE CREDITED TO:
Ship/Fleet:_____

CAPTAIN:_____
Captain:_____

NATIONALITY:_____
Total Damage Points:_____

SHIP'S CLASS:_____ EVENT (check one):
GUN TYPE (check one): Fleet Battle ___
Single Shot ___ Individual Combat ___
Unlimited ___ Convoy ___

NUMBER OF GUNS: BBs PER GUN:
Bow ___ Stern ___ Bow ___ Stern ___
Starboard ___ Port ___ Starboard ___ Port ___

DAMAGE:	VALUE	SORTIE #1 # HITS	SORTIE #1 TOTAL	SORTIE #2 # HITS	SORTIE #2 TOTAL	SORTIE #3 # HITS	SORTIE #3 TOTAL
Hull Above W/L	20						
Hull On W/L	50						
Hull Below W/L	100						
Superstructure	5						
Turret (Optional)	75						
Sunk By Gunfire	By Class						
Withdrew Battle Damage	1/2 By Class						
Patched Damage	By Class						
TOTAL POINTS: Enemy Captain Initial Here							

PENALTIES:	VALUE	SORTIE #1 # HITS	SORTIE #1 TOTAL	SORTIE #2 # HITS	SORTIE #2 TOTAL	SORTIE #3 # HITS	SORTIE #3 TOTAL
Ram Damage Superstructure	50 Min.						
Ram Damage Hull	100 Min.						
Ram Sink	By Class						
Safety Pin (Per Gun)	Per C.D.						
Intentional Beach	2000						
Unseaworthy Sink	50						
Unseaworthy Withdrawl	100						
Withdraw Due To Batteries	250						
Withdraw Mechanical	0						
TOTAL POINTS: Enemy Captain Initial Here							

WONDERFUL PEOPLE

The following list is the Dec 1984 Hull Busters subscription list. If you are new to the Obsession and one of these people live close to you then by all means, get in touch with them!

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WAREHAM MA 02571

HARRY DEVEAU
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TOM DARBY
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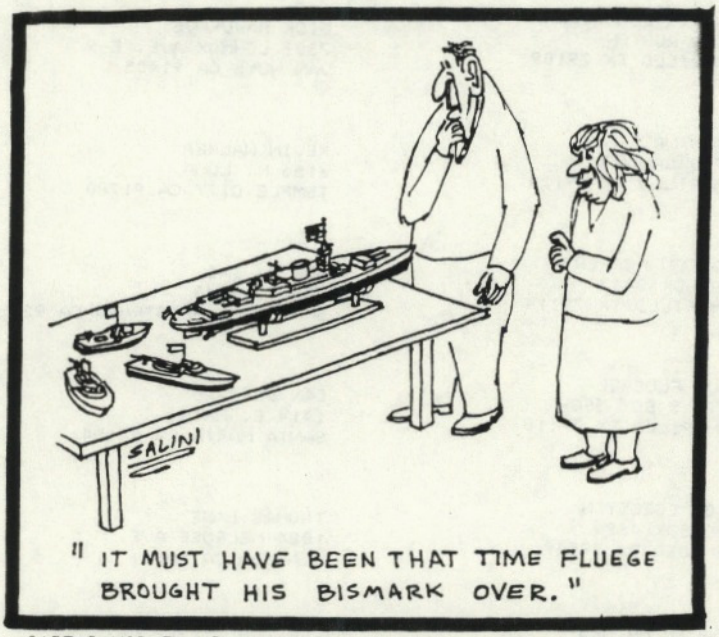

" IT MUST HAVE BEEN THAT TIME FLUEGE BROUGHT HIS BISMARK OVER."

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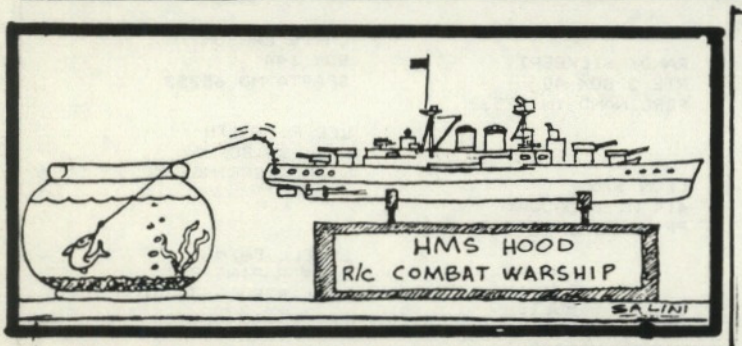


RADIO FREQUENCIES

by Fluegel

If you plan on battling in sanctioned battles then you should try to have an Allied frequency if your an Allie and an Axis frequency if your a good-guy. Hopefully you have a radio with plug in crystals. This feature should be one of your primary considerations when you buy a radio. If you have the wrong frequency then you may have to sit out some battles because freqency conflicts do occur. Still, don't feel unwelcome to participate, just be patient with whatever circumstances that may occur. You could always take notes of the battle for a Battle Report Article, or you could operate a video camera, but that's not why you came, so try to have the appropriate frequency.

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

PRESIDENT'S COLUMN

by James C. Foster

Hello sports fans! The great sado-masochistic event known as the R/C Warship Combat Club Nationals is rapidly approaching. I hope the rest of you are a bit more prepared than I am. The Chicago is being rebuilt but is still not water ready as of 3/25/85. My project for the Nationals, the Austro-Hungarian battleship Virbis Unitas has been laid out on wood and is only waiting on my Dremel jig saw to take shape. She will be at the Nats.

I have finally found a permanent home here in Springfield, so please send any correspondence to me at the following address:

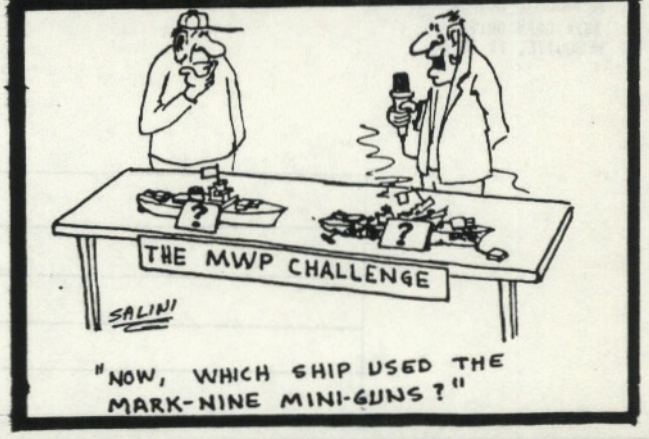
James C. Foster
Rt 1 Box 325C
Sparta, Missouri
65753
ph: (417) 278-4378

I hope to hear from you.

This month I would like to introduce you to a concept that we have been kicking around within the Executive Board. Basically, the club would be structured to encompass three different catagories of ships. The first catagory would be the Open Class. This class is composed of ships built and fought according to our current rules. The Open class would be further subdivided into the Limited and Unlimited sections. The Limited section would be mildly restricted as to ship capabilities, i.e. a maximum speed and single shot guns. The Unlimited class would still follow most of the current rules, but would not be restricted as to gun type, speed, and other technological areas. This Unlimited class will be for those builders who like the technological aspect of our hobby. A secondary benefit will be that developement of new ideas will not be stifled by restrictive rules in the Limited section, assuring continued improvement of the sport. The next class will be the Scale class. This will be a very restrictive class with many rules similar to the Open class, but with scale speed rules, BB loads based on gun size and numbers, rotating turrets, and any other special restrictions the Scale people wish. If the construction rules are kept the same between the Scale and Open classes, then cross over between classes will be easy and allowable. The last catagory is the Sport Class. This will also be a very rstrictive class, which will have as it's goal the demonstration of Captaining abilities. There will be only one legal ship in this class. We envision this ship as a heavy cruiser type with complete standardization of motors, props, batteries, guns, pumps, etc. The ship itself will not be based on a prototype but will be a fictitious design (neither Axis or Allied) developed to meet certain criteria as to length, beam, draft, above water exposure, and other areas. Obviously, there will be no cross over in the Sport Class. As you can see from this whole concept, there will be a niche avaliable for just about anyone. We not only see greater satisfaction within the presnet membership as a benefit of this system, but also a greater attractiveness to non-members looking into our hobby. Let me know what you think of this.

There have been some questions that have been tendered the Executive Board recently regarding certain aspects of ship construction for the Nationals. The first subject dealt with water baths for the freon tanks. You will be happy to know that they will be legal as long as they do not subdivide the ship into two non-connected sections or make an area that will negate any battle damage. Naturally, you cannot heat the water, but it must be direct from the lake. The second area dealt with the displacement of the models. We will be checking ship displacements at the Nationals with scales on a per challenge basis. There will be a +/- 10% deviation from the scale weight allowed. This is the Full Load displacement as specified in the rules. So pay attention to your weight, especially those with the small ships. Water lines will be determined by the actual waterline on the model if it has a legal weight. The painted waterline must be +/- 1/8" of the actual waterline on the model. Again, be sure to check this out on your model. Last but not least, there is the matter of ships built which are illegal by the dates we assigned and the restriction on ships that were launched and completed. Ships that were banned by this restriction can fight, but only if all participants in any particular battle the ships wishes to participate in say it can. If one Captain objects to this ship participating, it must forgo that battle. This will be done on a per battle basis, and not the whole Nats.

Well, I wish all of you the best in the upcoming battles, and look forward to seeing all of you this July.



Curt.

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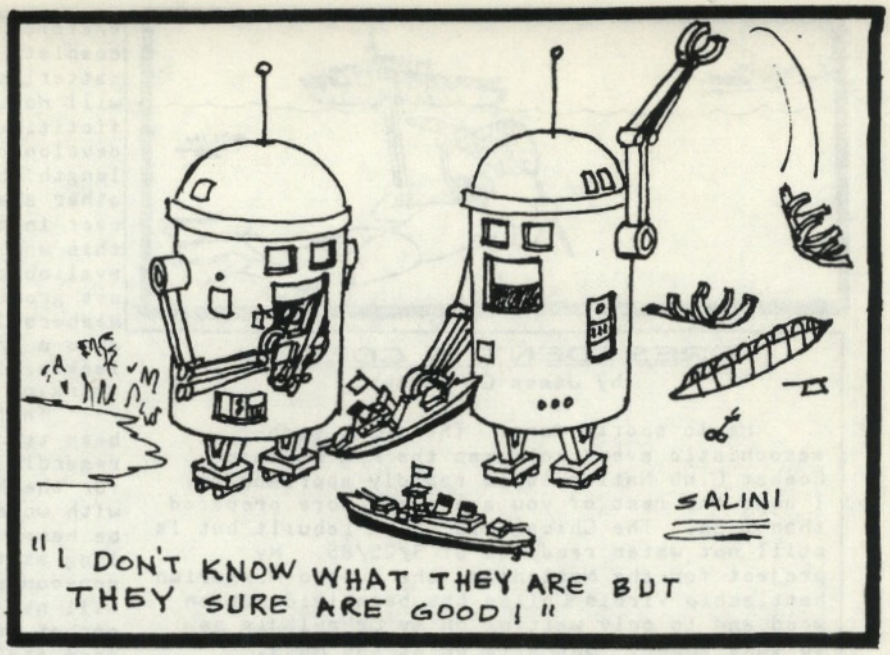
CONCLUSION

Thanks Jeff Poindexter. Due to advertising Hull Busters is 3 pages thicker this issue at no cost to you, and thanks to all the contributing authors that there was extra material to put on those 3 pages. I really need material for the next issue so let us hear from you. Why don't you rookies complain about the executive board changing the rules, and let's hear a little more bickering between the Axies and Allies, I mean come on guys, this is war! Let's also argue about the rules, I know for a fact that a clique decided to have my Bismarck legislated out of its number one rating and I'll be back with vengeance to sink those conniving Allied sea lawyer captains!



I've been hearing alot of excitement expressed about single-shot battles and it's contagious, I can't wait for the ChampionShips! It will be so fun to have long battles and not get blown to pieces. It will also be interesting to see what the new rule changes may be. I want all ships that start with the letter "B" to get an extra unit. By the way, I feel this executive board has really come up with some good rule proposals in this issue and let me be the first to say that the proposed speed rule is perfect! As far as the weighing of ships, well, that's good too. Who would have thought the executive board would have decided to enforce the rules, it's a novel idea...playing by the rules.... that's what we get for electing and Allied Executive Board!

By the way, let's all eat together (supper) at the ChampionShips. I really enjoy being with everybody except Steve Milholland and I'm sure you rookies would enjoy hearing Stan's old war stories.

Hugel

HULL BUSTERS VERY LIMITED
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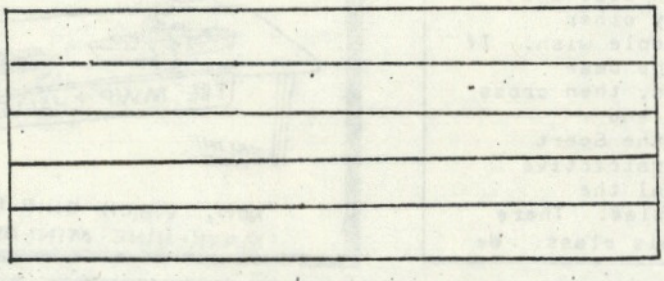
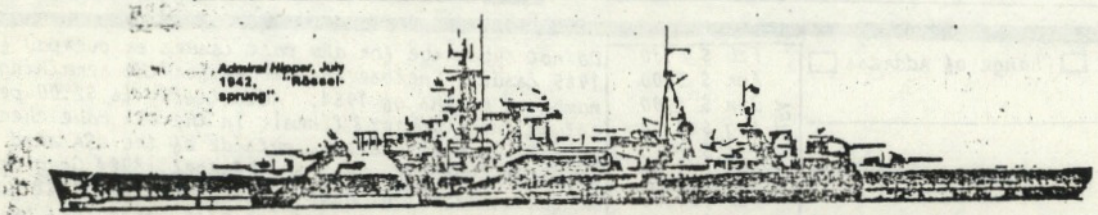
MESQUITE, TX 75150





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Type Articles with your lines this long! The deadline is May 25. This is the bottom line.