



Oct 91

HULL BUSTERS

President's Column

The end of the battling season approaches for all but some of the luckier and hardier people in the southern climes. As I write this, the Axis from MAG are preparing to go south the the Southeastern Fall Regionals in Fla. My apologies for not attending - but I would have had to spend the entire trip (~20 hrs.) crammed in the back of an Axis van with four Axis - surely no one could expect me to go through that. Truthfully, I did not make the trip this year due to other commitments, perhaps in the Spring.

Our own Fall regionals went well (although the Axis won at slightly better than two to one in the scoring). Everyone seemed to enjoy themselves, even those of us on the losing end. We did have one battle which was slightly mixed rather than Axis/Allied and the results, although not scored, had two Axis ship run aground and be declared sunk (strange, couldn't happen in the Axis/Allied battles) and the Allied ships on that side fared pretty well. 12 or 13 battlers were present at the

regionals including two from Penn.

As our minds and pocketbooks turn toward the shipyards for the winter building and testing sessions, let us consider sharing our enjoyment with the others in the hobby through the publishing of more "how to" articles in Hullbusters. We are noted for our helpfulness in the field to new combatants when they come to our events - lets extend that to others who are farther afield from the major combat centers of Maryland, Texas, Fla. etc.

Several members have mentioned to me that the fun has at times flown from the hobby. (No, not all of these were Allied.) I know that each of us tend to have highs and lows within our own cycles, and come back to the hobby renewed. But the coments seem to indicate a feeling above the rules disputes, or losing, or personalities. We need to work on this more than anything else to continue to provide the formost target for our hobby - FUN. Anyone with comments or suggestions about this, please contact me.

The membership present at Nationals asked the new board to look over and rewrite the campaign rules to make the rules easier to read, understand, and the game easier to play. The first step has been taken as Ron Thibault has now typed them into an IBM format. They will shortly go out to each of the board members for review and red line, after each board member has reviewed the rules for accuracy and added comments or suggestions, they should send them back to Ron for a new publication of the rules to the board. If you have suggestions on this process, please contact a board member. This process will continue until we have a beautified copy to show to the membership or try at Nats. or a regional.

So until next time, keep your pumps on and your bb's charged - never know who is on the lake with you.

Marty Hayes, Commander of the H.M.S. Warspite

TO BB OR NOT TO BB THIS IS THE QUESTION!

08/20/91

If your friends threaten to throw you in the pond because your guns spurt, or laugh at you for coming off the water because your guns don't fire this article may help. This article is my method for dialing in the piston in the spring and piston type of interrupter mechanism.

First you need to be able to test fire the gun and then disassemble it to make adjustments. If your final gun arrangement allows the interrupter to be entirely removed from the rest, then go ahead and build the other pieces. If you solder either the magazine or the breach to the interrupter make temporary removable pieces to substitute for them and don't assemble the permanent pieces yet. These temporary pieces are a good thing to have around to test interrupters before assembling the final guns anyway. Once you know that there are no problems with these pieces or the interrupters, any nonfiring problems can be isolated to kinks, misalignment of joints, solder inside the joints, etc. in the final gun assembly.

The requirements for a properly operating interrupter mechanism are:

1. The piston must sit even with or just below the bottom of the "FEED" inlet when at rest.
2. The piston must extend into the "FEED" opening at least 1/2 and preferably 3/4 of the way when pushed from the bottom, with the spring installed.
3. The piston and the inside of the interrupter "T" must not have any burrs or groves that the piston can catch on.

4. The spring must not be so strong that it prevents the piston from moving fully under when pressure, or so weak that it can not return the piston to the retracted position.

5. The spring must exert pressure on the piston for its entire range of movement.

The symptoms that occur if the above conditions are not met are:

1. If the piston is too long when retracted it can block the feeding of BBs entirely, or you may have to shake the gun to get it to work.
2. If the piston does not have enough throw to reach far enough into the "FEED" area you will get spurts with varying degrees of frequency.
3. If burrs exist, the piston can hang up when either extending or retracting.
4. If the spring is the wrong strength you will get symptoms similar to 1 & 2.
5. If the spring does not exert pressure on the piston for its entire throw the piston may not always retract entirely, creating symptoms similar to 1.

I am assuming that you are starting out with new pieces, if your gun is assembled and spurts it may already be too late to save the piston.

You need to start with a bored out interrupter brass "T" fitting, the proper spring, a bottom piece to retain the piston, and a "T" shaped piston that is longer than needed. If you do not have or know how to make or assemble these pieces contact another member of the club for help.

The spring I recommend is a stainless steel spring (no rust problems) part # CC-14 from CENTURY SPRING CO. INC. 1-800-237-5225 (outside CA) or (213) 749-1466 (inside CA). The minimum order from this company is \$25.

so you may not want to order just for your self. I have ordered the springs and will sell them for \$1 ea. plus shipping. Please contact me at (301) 768-3095 (410) after Nov. 1 - they are changing my Area Code) to order. This spring is way to long as it comes, but will make two springs when modified.

To modify the spring cut off an end 4 (four) coils from the end, counting the end coil which comes back and touches the next coil (see Figure #1). Do the same for the other end. These to ends are the two springs you will use, one for each interrupter you make. Discard the center section. You could make more springs from the center section but the performance of these has been spotty in use.

Next take the last coil, were you just cut and bend it out so that it is bigger around than the rest (see Figure #2). This will keep it from getting caught between the piston and the brass "T" during movement. Now stretch the whole spring just a little to increase its at rest length. This allows it to exert pressure on the piston at all times.

CUT SPRING HERE

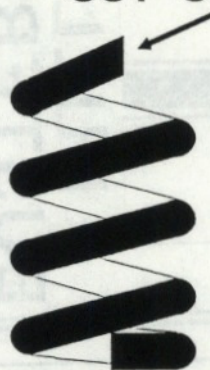


FIGURE #1

Place the spring on your piston with the newly bent end away from the piston base (the original "flat" end on toward the base). Insert the piston into the

OBSERVATIONS OF THE FOUNDING FATHER

By Stan Watkins, 9/16/91

Greetings Combatants! Preparations are proceeding toward the USS Detroit's 1991 debut at the SE Regionals in Florida. I have temporarily interrupted work on the new book about the early history of R/C Warship Combat to work on the Detroit. A little pump work is needed and the processing of many boxes of superstructure. There is not much time to get the work done but it may be enough. The essentials of propulsion have been tested and work well. Guns and pressure tank are mounted and servos in place. She has undergone a good shakedown cruise and performed well. I guess she should also get a new "aero-fat" rudder like the rest of the ships at nats. This will be my first battle this year. We will get to see if another light cruiser can survive in the in the world of Giants. I understand that Jeff Lides now holds the unique honor(?) of being the only person in the hobby to have been sunk while captaining a Yamato Class BB and to also have sunk a Yamato Class BB. Congratulations Jeff. That's the way it goes Gerald. Fluegel did not say who was the overall winner of the Texas Triple Crown.

My USS Detroit is named that because of an old friend that I used to work with. He had some good old sea stories to tell. He related of one occasion that the Captain game steaming into San Francisco Bay too fast and when he brought the Detroit to a halt the stern wake caught up with the ship and washed over the stern flooding the after turret (his station). He was really upset with the Captain because he lost his shore leave and had to clean up the mess in his turret. On another occasion he mentioned how his gun crew got confused as to which target they were supposed to be shooting at and they very precisely bull's eyed the wrong one! Such fun times in the peace time Navy ended abruptly fifty years ago this year. He was on the Detroit in Pearl Harbor when the Japanese attacked. The Detroit was tied up next to the Utah and Raleigh (both of which were hit). The Detroit was one of the few ships that charged out of the harbor to hunt down the Japanese Fleet after the attack. The US Navy ships (Detroit included) were very lucky that they did not find the Japs! So in Florida this trip I hope to get a chance to avenge the US Navy and do something the Real Detroit was not able to do. Sounds like Fluegel's Bismarck is having her share of problems (like the real one) during her 50th anniversary. Hang in there Fluegel. I still want my chance to battle the Bismarck again. Maybe I can bring the Detroit to Dallas (another Allied invasion) this Christmas and have another micro-mini-Nats. I hope so! God Bless you all and turn to Jesus and you will always be a true winner!



18 July 1991

Following a tactical setback suffered at the hands of the Allied navy on the previous night, the Axis fleet was again ready to do battle on this day in hopes of avenging the minor set back. Damage received in the night engagement had been repaired and ships re-armed with the single purpose of sending as many of the enemy ships as possible to the bottom of the sea.

The Axis Gross Adm. would have available to him the following ship/captains;

Musashi/Roberts	BB
Bismark/Fluegel	BB
Roma/Villar	BB
Lutzow/Blattau M.	CB
Derfflinger/Blattau N.	CB
Von Der Tann/Goodson	CB
Kongo/Haynes	CB
Gneisenau/Kelly	CB
Hiel/Montgomery	CB
Lutzow/Koehn	CA
Hindenberg/Pittelli	CB

The Allied Admiral would be relying on the following ship/captains;

Massachusetts/Andrews	BB
Warspite/Hayes	BB
Indiana/Pate	BB
Queen E./Pearce	BB
Tiger/Broring	CB
Tiger/Jass	CB
Gangut/Rogowski	CB
Chicago/Au	CA
Belfast/Jass	CA
Savanah/Purvis	CL
Louisville/Thibault	CA
Houston/Whitsell	CA
Voikov/Henshaw	DD

Although the total number of ships was in the Allied favor, the total number of units was in the Axis favor, 55.5 to the Allies 52.5.

interrupter and install the base piece. The piston should now be fully retracted and not move any further into the Feed opening when the interrupter is turned upside down (base piece on top). If it does stretch the spring a little more.

Now mark the piston where it meets the bottom of the Feed opening. If you can not push on the piston to move the piston further into the opening with the base on then remove it. Push on the piston, with the spring in and make sure that the mark moves so that it is past 1/2 or 3/4 mark (I recommend at least 3/4) in the opening. If the piston does not move at least this much the parts are not properly made.

There are three things that will reduce the throw of the piston, correcting any or all of these will fix the problem.

BEND END OUT AS SHOWN

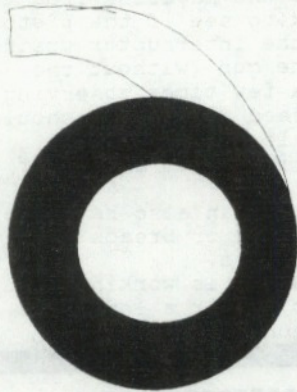


FIGURE #2

The first is that the base fitting pushes the piston to far into the "T" limiting its total throw. There are two ways to fix this: Back off the base piece or grind away the ridge inside the base piece if it is of that type. I prefer to modify the base piece rather than back it off. If the base piece can be screwed down all the way you do not have to disassemble the gun to readjust the pistons retracted position if you need to remove the base for any maintenance. This is really important if you will be soldering the final magazine to the breach.

The second cause is that the base of the piston is too thick. This can be corrected by thinning the base with sand paper or a file. Do not thin the base down so much that it is weakened!

The third cause could be that the "T" fitting was not bored deep enough. If you decide that this is the case do not deepen it so much that the hole punches thru the side of the fitting.

Unless any of the fittings look to be badly out of tolerance and you have more than one guns worth of pieces, try mixing and matching until you get a good combination for all. If you can not fix them this way, only then start modifying them. It is generally a good idea to have enough pieces for at least one extra gun in case of a really bad piece or a mistake on your part.

Before continuing check the inside bore of the "T". Some times the "T" will shift during manufacturing scoring the walls. Brass has a tendency to "grab" when being worked. This scoring of the inside is fine as far as the manufacturer is concerned as the "T" is designed for transporting fluids

Not too many minutes into the first sortie the Tiger/Jass went out of control and was barely moving about. She was being defended by some of her own ships but was still taking a pounding. The Gangut was also being hounded by the Axis battlecruisers and starting to pump steadily. In the Axis fleet there were two ships who were settling lower in the water as the minutes went by. The Lutzow/Koehn had started to list dangerously, while the VonDer Tan was also settling and still being holed by the attacking Allies.

As the action continued, the ships broke up into two and three ship skirmishes all around the lake. The first ship to go down was the Gangut, with the Hiei still trying to add holes to her hull. Shortly after that sinking the Axis lost the Von Der Tann, and in too quick succession, the Lutzow of Captain Koehn. Things did not look good for the Axis to this point. There was continued action on the lake as the Queen E. Indiana and Warspite attacked the Musashi in an attempt to drive the behemoth beneath the waves. As these ships ran out of ammo and disengaged, the first encounter (sortie) came to a close.

The damage reports indicated that the Allies had won the first sortie by a score of 5,020 to 4,930.

Axis morale was just a bit lower as the second sortie got under way. The Axis fleet would be less two ships, while the Allies would enter the sortie less one ship. The strategy of the Axis was to attack and try to sink the Queen E., and the Tiger/Jass which had both been heavily hit during the first sortie. The Tiger was again having controll problems, but she continued to fight bravely as she settled beneath the surface. If there was to be a Axis victory in the battle there would have to be another Allied ship go down to make up for the two Axis ships lost in



the first sortie. By this time in the battle there were many ships pumping and a great deal of action taking place around the shallows of the sand bar. The Savannah, while playing a cat and mouse game with the Bismark, strayed astern of the big ship and took several multi-shot salvos in her hull. With the damage controll parties still hard at work she succumbed to the damage and disappeared beneath the waves. Things were looking up for the Axis cause as there had not yet been another loss of an Axis ship. Shortly after came word that the Queen E. had been sinking and cheers of joy could be heard around the lake from the Axis captains!

During the second sortie the Allies lost three ships while the Axis managed to make

and the scoring does not effect this. For our purposes it has a major effect. The only cure for this is to try to smooth the scoring. Failing this solution you have to replace the "T". I recommend you buy several more "T"s than needed before you bore them out. This will allow you to prescreen the parts. The "T"s are fairly cheap and this will prevent many frustrating problems later.

Now that you have a good set of pieces you can start the tweaking process. Reassemble the interrupter without the spring. Check your previous mark (for the piston feed opening point) and remark if necessary. Remove the piston and cut at the mark, being sure not to cut too much. Reassemble and check to see if the piston top is at or below the opening (hopefully it is at or just above). Remove the piston and file or sand the top a little if the piston was too long. Repeat as needed.

Next remove any burrs caused by the trimming and reassemble the interrupter with the spring installed. Push on the piston base to force the piston into the opening and check that it blocks the opening at least the amount recommended earlier.

Push the piston in and out repeatedly, checking that it moves smoothly without catching at any point in its travel. If it does check the piston for burrs

Holding the interrupter level push a BB into the feed opening and then tilt the interrupter just enough to start the BB rolling toward the piston. If the BB rolls

into the piston smoothly without hanging the piston is sitting properly. If not shorten the piston a little more. Also check for lack of scoring in this area of the "T".

Next is the "acid test". Install your magazine and breach assemblies (no O-ring in the breach). Now test fire the gun. It should give good consistent results. Fire 10 or 12 full loads thru the gun to be sure.

If the gun spurts, either the piston is too short, there is a burr, or the spring was stretched too long. Try a new spring, if this works throw out the old one. If it doesn't the piston is too short or there is a burr. Also make sure the spring is not caught between the piston and the "T". If it is bend it out some more.

If the gun does not feed properly, first try tipping it a bit more to help the BBs roll into the interrupter. If this fails, carefully disassemble the magazine from the interrupter and check to see if the piston is retracted. Turn the interrupter upside down and test fire the gun (without the magazine installed) a few times observing the piston thru the feed inlet. It should retract every time. If it fails these tests, either the spring is too short, or there are burrs.

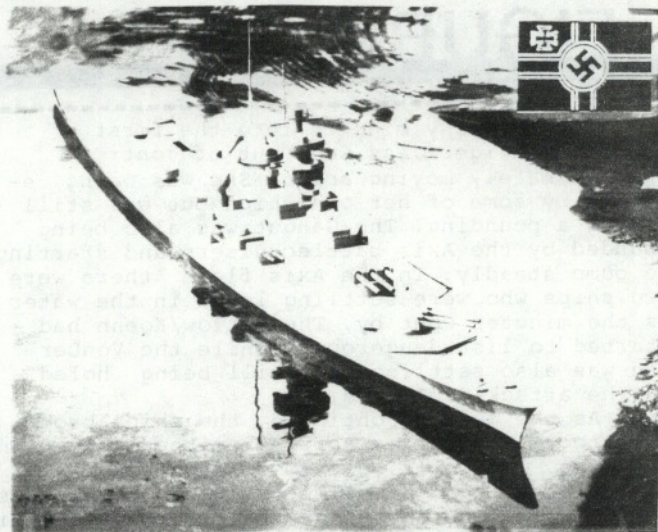
A no feed condition can also be caused by a kink in the magazine or breach assemblies, so check these.

Once your interrupter is working well it should continue to do so for a long time. Good luck, and good hunting!!

it through the sortie without sustaining any sinks. The counting of damage indicated the Axis to be the winners of the sortie by a score of 7,035 to 3,215. For the battle, the Axis won with a total of 11,965 to the Allied total of 8,235.

Ship	Individual Damage Reports	
	Pen.	SortieI
Lutzow Mike	100	230
Derflinger		700
Bismark		690
VonDerTann		1165 sunk
Kongo		110
Gneisenau		130
Lutzow Wade		765 sunk
Hiei		575
Hindenburg	600	180
Musashi		455
Roma		20
		<u>Allied</u>
Mass.		230
Chicago		315
Tiger Paul		385
Warspite		365
Voikov		0
Tiger John		425
Belfast		80
Indiana		390
Queen E.		1030
Savannah		230
Gangut		1910 sunk
Louisville		185
Houston		85
		<u>Sortie II</u>
		275
		375
		645
		110
		140
		455
		585
		295
		335
		765
		0
		530
		50
		0
		1975 sunk
		245
		690
		1880 sunk
		850 sunk
		0
		50

For the second fleet battle on Thursday, the Axis would have the same ships that took part in the first battle. The Allied fleet would be a little different. The Indiana would be missing due to malfunctioning prop shafts, and the Tiger of John Jass would miss because of continued radio difficulties (?). In place of these ships, the Arizona and the Maryland would



sail.

As soon as battle was declared, the Von Der Tann called five minutes and tried to steer out of harms way. On the screen the Gangut and one of the Tri-Pac go side to side while many ships pass by in the background. The Kongo uses her starboard stern mount on the port bow of the Belfast as close by the Q.E. sterns one of the Tri-Pac. The Voikov, having been chased by the Bismark, calls two and heads for safer waters. The Hiei, already pumping before the sortie began, is shot at by the stern mount of the Q.E. Von Der Tann has just finished waiting out her five, and heads for port. One of the Tri-Pac is seen using a side mount on the Nashville. The Hiei moves off after side mount action with the Tiger. The Musashi then appears to block the Tiger as the Kongo unloads a few rounds at the maneuvering battlecruiser. The Q.E. now ends up in the middle of the picture with the Musashi, Hiei and kongo surrounding her. She then uses her stern mount to effect on the port bow of the

Kongo before making her escape. As the Q.E. is pulling away one of the Tri-Pac pulls alongside and after exchanging several rounds the Warspite enters to help.

As the camera pulls back and then zooms in again, There seems to be a swarm of Axis ships around the Q.E. trying to overwhelm her. The Gangut cruises by but does not offer assistance, and just as quickly, the Chicago speeds through on its way to who knows where.

For an extended period the Kongo and Q.E. sit side to side in a battleship park and shoot tactic. Shortly after, the Hiei pulls along side for her turn at the only apparent Allied left. The cruiser Lutzow enters and takes a bow shot at the Q.E. and is quickly gone from the picture. The Hiei makes another run on the Q.E. then the Gneisenau and Q.E. trade side mount ammo. The Q.E. moves now into a Jap sandwich with the Kongo on one side and the Musashi on the other. The Hiei attempts to block her exit but is not successful. There's the Chicago moving through the picture again, this time being chased by the Lutzow. It now seems as though the only ships the Allies have on the water are the Q.E. and the Chicago. If there are others, they are far away in safer waters. The Q.E. calls ram and comes in to check for damage. She is undamaged, but as she gets about fifteen feet out, she is struck by the multiple bow shots from Musashi and must run the gauntlet of Axis ships in an attempt to get into open seas. In the background can be heard talk of a Axis ship aground but there are no Allies to take advantage of the moment.

The sortie winds down quickly from this point and amazingly, there have been no sinks!

The second sortie of the second fleet battle saw the same ships for each navy go at it again. Lots of jockeying for position, some good side mount action and more damage, but as in the first sortie there were no sinks. There was some skirmishing around the beached Maryland but she was able to pull herself free and thus did not receive enough damage to sink. The Arizona got into it pretty good with

the Hiei and Von Der Tann while protecting the beached Maryland, plenty of good close in stuff in this forey. At one point in the sortie the Gangut went dead in the water in the passage between two islands. The Kongo backed in to use a stern gun on her but only had a few rounds left. The Musashi then used the same technique only with better results since she still had plenty of ammo left to unload.

Individual Damage Reports
Fleet Battle II

Ship	Pen.	Sortie I	II
Lutzow Mike		415	695
Derflinger		895	500
Bismark		140	285
Von Der Tann		0	555
Kongo		355	200
Gneisenau		30	230
Lutzow Wade		135	170
Hiei		190	80
Hindenberg	200	390	300
Musashi		310	220
Roma		50	10

Allied

Mass.		330	405
Chicago		170	90
Tiger Paul		695	285
Warspite		330	290
Voikov	200	0	-62
Belfast		105	235
Queen E.		1120	435
Nashville		350	70
Gangut		290	735
Maryland		770	700
Arizona		90	540
Houston		20	-20

Final score for Fleet Battle II

Axis	7875
Allies	5955



C'MON GUYS, GET ON THE WATER

By Ensign Bart Purvis

This first attempt at an article is for those of you who have not finished a ship or who have not started one because of some possible unfounded concerns about the results. Don't hesitate to build or finish a ship because of fears about being damaged or sunk. Don't be concerned about your craftsmanship or lack of experience. Don't worry about any of these things. Just get the ship finished, as best you can, and go to a meet. Until you actually get your ship on the water at a regionals or the Nats you will not even begin to enjoy the full potential of this fantastic hobby.

The cruiser that I took to last fall's SE Regionals was a joke rather than a functioning model warship. It had two geek guns, the magazines were closed with duct tape, there was no watertight box for radio gear, the freon tank leaked and the superstructure looked as if it was constructed from pine needles and leftover mouldy pizza crusts. You see, I live in the boonies.... I had never seen a combat warship up close and this was the best that I could do on my own. Via tape and telephone Steve Baker, without whose advice I could never have finished a ship, had been of immeasurable help during construction. But taping has limits. If the saying, "A picture is worth 1000 words" is true, then I contend that, "A look at a combat warship is worth 100 tapes." Go to a meet. Take your

camera, recorder, notebook and a receptive mind. But most importantly, TAKE YOUR SHIP! You will find that some of the nicest, most sincere and talented people in the world will do everything they can to help. Don't worry about looks, battling techniques, reliability or perfection. Take the ship to a meet and get on the water. I was afraid that my travesty of a model warship would have the pros rolling on the ground with laughter. Not so. I received comments like, "Nice job" or, "Hey, that's a pretty neat first ship." At these meets you will find a very effective and sympathetic support group for combat warship modeling.

Let me tell you what's going to happen in your first battles. The Von Der Tann will shoot you full of holes. You will cost your fleet 4000 points. The Musashi and the Kongo will make a cruiser sandwich out of you. The Derflingers will riddle your superstructure. You will sink. So what? You will survive. You will retrieve your ship. You will repair her and you will fight again. Some other things will happen in your first battles. You will put two clean salvos into the Lutzow's bow. You will evade a clever trap by the Tri-Pac veterans. You will blow one of the Roma's gun tubs 4 feet skyward. You will finish a sortie with empty guns, minimum damage and maximum pride. You will ever go up against the dreaded Bisquick and survive.

Believe me, until you get your ship into an actual combat situation you will never, ever fully achieve the primary objective of our hobby which is HAVING FUN.

So.... C'mon guys, get on the water.

battling that seemed to fly by before I knew it. My adrenaline was pumping just about every minute, boy did I have fun. If you haven't attended a Nats yet, you really don't know what IRCWCC combat is all about. I can hardly wait till next year. I'm already trying to sell my wife on the idea of Nats in Florida for next years family vacation (if you are "married with children" like myself, Disney World may also be your ticket to Nats next year!).

While I remember, I'd like to mention some of the highlights I observed during Nats week. The most inspirational was the sight of the German contingent of the Axis fleet forming a "V" formation and sailing straight into the center of the allied fleet (the German captains humming The Ride of the Valkerie while doing this). This looks great on the video, I kept rewinding and watching it for at least five minutes!

Another highlight was when Her Flugel's Bismark went down for the first time. I'm not saying that I enjoyed the fact that he sank, but the elation and joy in the Allied captains was something to behold. In a warped sense of way, that had to signify a high degree of respect for the feared (and hated) Gross Admiral.

The sight of Frank's Hindenburg rolling over during night battle with those dual halogen head lights illuminating the bottom of the pond was also something to behold. No trouble finding a sunken boat there!

Another awesome sight was when Gerald lined up the triple stern guns of the Musashi on the grounded Gangut during one of the fleet battles (this is also on video). Gerald blasted one of Frances's turrets clean off of the Gangut with his first salvo. Nothing will teach you to respect the aft end of a battleship like that!

Some of my personal highlights include catching Doc's Tiger sitting still with my long range bow gun at the end of one of the large fleet battles. I was able to pump 5 or 6 good hits into the high sides of the Tiger before Doc realized someone was shooting at him. This may not seem like much to you experienced battlers, but after being chased around all day while trying to effectively fire my guns, it gave this lowly rookie a significant amount of gratification.

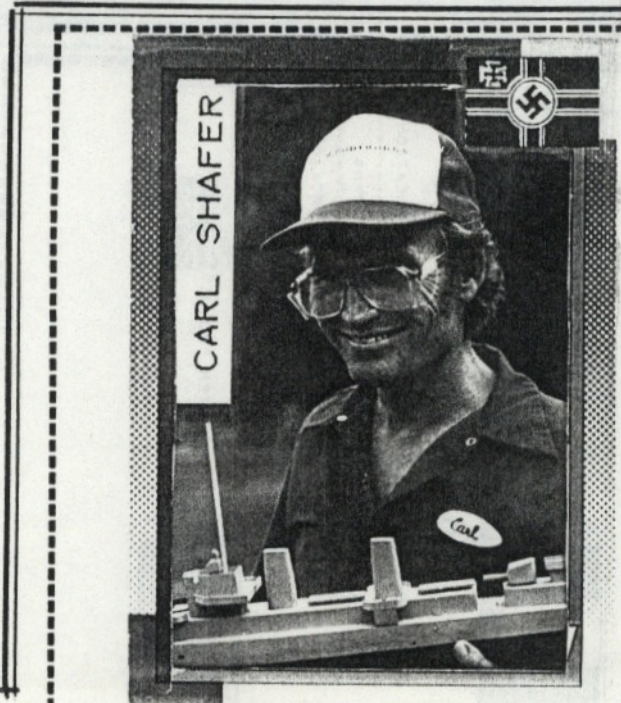
Another highlight was pounding Francis's Gangut during night battle. Before I had ever battled I thought; "What's the fun in shooting a poor stranded helpless ship?" Well, I found out! Something about this hobby brings out the blood-thirsty savage in all of us (maybe it's seeing three years of work being shot to pieces in front of you). Whatever, I found myself standing there in the dark, lining up the Gneisenau's guns on the Gangut, Will coaching me into firing position, jamming the transmitter gun joy stick as fast as possible, and listening to that satisfying hollow crunch of balsa. All the while hardly being able to see a thing (it's a good thing the Gangut is painted white!). It all seems like a blur now, but boy do I remember how much fun it was.

A final personal highlight occurred on Friday when the majority of the Axis fleet (Gneisenau included) chased Chris Au's Chicago around the lake. All week the Allied team of cruiser captains chased me around the lake (I guess the large size and slow turn/acceleration of the Gneisenau made me an irresistible target) and it felt real good to finally return the favor.



Lowlights? Well one would definitely have to be being caught in a turn inside of Vilar Bay with the Warspite sitting there firing it's stern guns on me the whole time. By the time I made it out of there I had about 10 evenly spaced holes in the side of my boat and absolutely no superstructure left aft of my funnel (a good bit of forward superstructure was also blown overboard). I left about a thirty foot trail of debris floating in the water (Thanks Ron for picking some of it up for me). Boy did my heart sink... In retrospect, I have to thank you Marty because after that I no longer cared about what my boat was going to look like and I started to really get into the thick of the battles and have fun (no reason to stay out on the fringes of the battles anymore!).

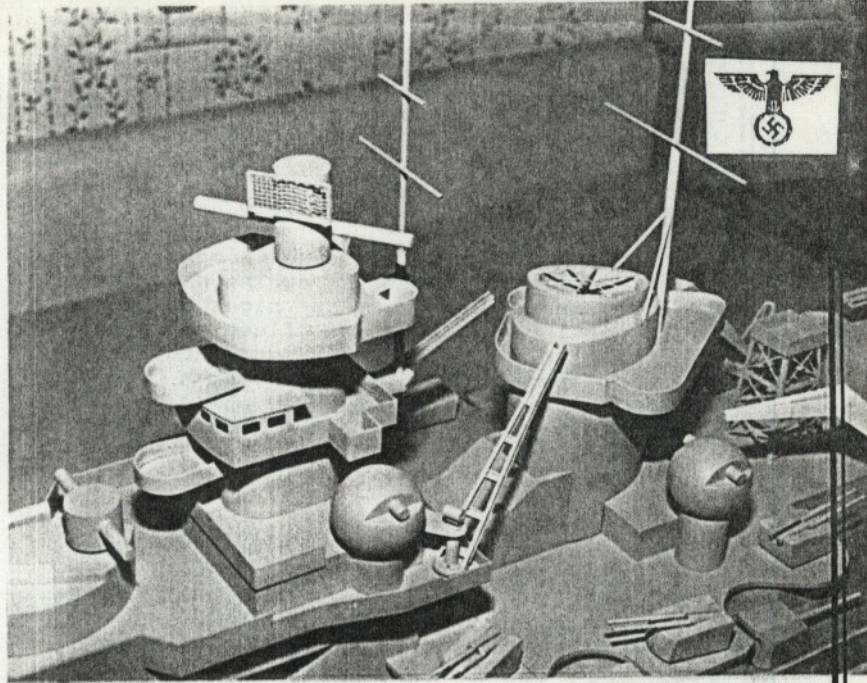
Some advice for the new batch of rookies from the Rookie of the Year; Build a cruiser!



I really didn't know what I was getting into when I started building (I already had a set of plans for the Gneisenau, that's why I built it). It wasn't easy steering/starting/stopping all 5+ feet of the Gneisenau during the week. It took me quite a while to get used to it and be able to pull my own weight for the Axis fleet.

If you do build a large long boat, don't battle cruisers! Chris Peirce and Chris Au gave me a first hand lesson on this. A cruiser's turning and acceleration capability will get you every time. My hat is off to all of the Allied cruiser captains; Bart, Tom, Chris, and Rick. You guys did a wonderful job chasing and hitting me during the week. When I finally figured out I couldn't beat you I took Frank Patelli's advice and just tried to ignore you while I went after the larger Allied boats. I'm not sure how much more effective the Gneisenau became but my frustration level sure went down!

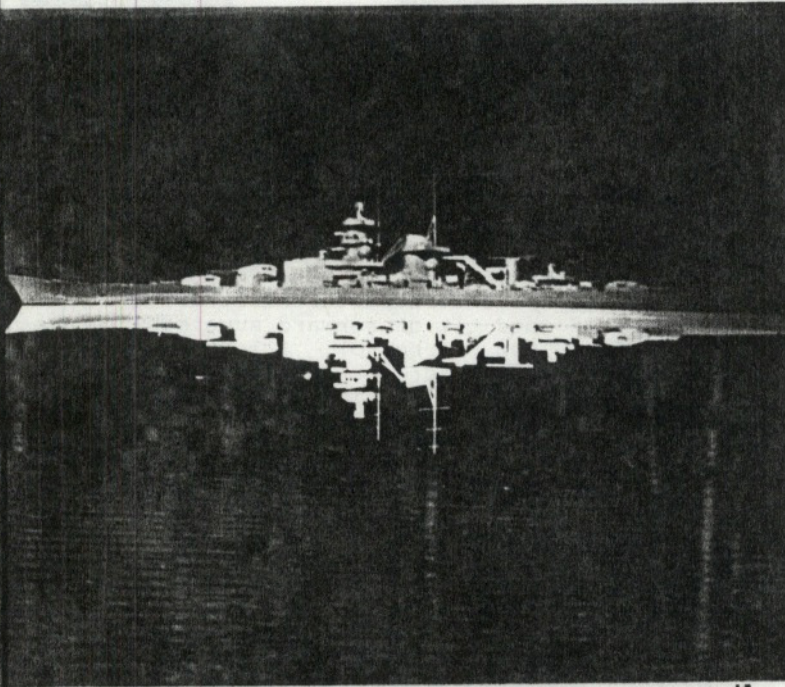
A building tip for all you nuggets; don't just use super glue! Screw/bolt everything you don't want to lose to the deck. Super glue does not take the shock of a BB hit very well.



If you don't do this you will be decorating the pond with superstructure like I did. Along the same line, don't get too attached to your boat. This is kind of hard to do while building it but believe me, you need to be aloof from it. Maybe even throw a couple of good sized rocks at your boat every once and a while just to get you ready for battling.

One last bit of Rookie advice; down angle your guns! I originally had mine pretty much level and thought of battling at a distance. You will only hit superstructure like this (which is fine if you like making people like me cringe when you hit their boat) but will yield you no points. As I got more confident and really started getting in close I found I could only put holes above the waterline. You really need a decent down angle (especially broadside mounted guns) to get those damaging below the waterline hits. Doc Broring gave me a good lesson on this with his Tiger's viciously down angled broadside gun during my final one-on-one on Friday of Nats. I had Doc in front of my two stern guns for almost all of the battle but he was able to pull along side of me for just one good pass with his broadside gun. He put 5 or 6 very nice below the waterline hits in me that lit off both of my pumps and decided the battle in his favor (good job Doc! It was a very fun battle and a great way to end the week).

I guess I better end this "little" story or half of it will end up on D.W.'s editing room floor. In closing I would really like to thank Will and Frank for doing a wonderful job as CD and Site Host. Nats seemed to be extremely well organized and moved along nicely. Thanks also to all the battlers who shared their time, help, thoughts, advice, and sea stories with me throughout the week. Like Wade told me, "You join the club for the battling but stay in it because of the people." Will see you all next year...



CARL SHAFER

YEAR POINTS PARTICIPANTS PLACED LOCATION

1988	Attended,	18	No obts	Texas
1989	989	25	21	Tennessee
1990	3501	32	10	Maryland
1991	896	26	27	Maryland

Carl is noted for his rapid rate of construction.

A HULL BUSTER PRODUCT

CARD # 5



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FRIDAY BATTLING

By Tom Jass

Friday dawned with a light breeze and humid, all the ships were extensively patched and battered but the captains were anxious to go and have one last blast at each other. The moss in the ponds is sparse and was not a factor in the battling.

FLEET BATTLE 6

The last fleet battle of 1991 Nats pitted 13 Allied ships (mounting 55 units) against 10 Axis ships with 55.5 units; although 9 of the Allied units were mounted in fore and aft guns in CHs and a DD, it was overall fairly even and besides, who could the Allies complain to anyway? Everyone seemed to throw caution to the winds and wade into each other with a vengeance.

As usual throughout the week, there were two battles going on during this sortie. BISMARCK, GNEISENAU, ROMA and LUTZOW (CH) were battling against the two TIGERS, CHICAGO, HOUSTON and BELFAST as the faster Allied ships continued to form a separate squadron and battle the Axis fast fleet. TIGER (Jass) went after BISMARCK and they exchanged side shots throughout the battle. TIGER (Broring) challenged ROMA and GNEISENAU. The Allied CHs helped out around the edges of both battles, plinking at the Axis ships while they were engrossed with the Allied BCs. Jass and Fluegel were throwing caution to the winds and just slugging it out! In the other sub-battle WARSPITE, MASSACHUSETTS, GANGUT, QUEEN ELIZABETH, INDIANA, ARIZONA and SAVANNAH were fighting at close range with MUSASHI, VON der TANN, KONGO, DERFLINGER, HIEI, HINDENBURG and LUTZOW (BC). HIEI pounded INDIANA and the three DERFLINGERS joined in; INDIANA was the first to go down after being destroyed with 29 hits below the waterline. After Steve removed her from the water, INDIANA was the next Allied BB to succumb -- she sank primarily due to a large ram hole that Jim did not call. Tough luck for a major Allied combatant. WARSPITE noticed that HIEI was down in the water, but not pumping so she and QUEEN ELIZABETH punished the Japanese BC with more broadsides. HIEI sank to somewhat avenge the sunken Allied BBs. (Turned out later that Will's pump switch would not activate, and HIEI sank for the only time during the week.) The battling was fast and furious during this first sortie and numerous ships still afloat at the end were hurting bad -- the second sortie threatened to increase the ships who would meet Davy Jones.

Sortie 1 Axis damage was as follows: LUTZOW (BC), 220; DERFLINGER, 385; BISMARCK, 875 (50, 7 & 4); VON der TANN, 160 (plus 200 penalty); KONGO, 440; GNEISENAU, 180; LUTZOW (CH), 170; HIEI, 1370 (sunk); HINDENBURG, 215; MUSASHI, 245; ROMA, 115.

The Allies were blasted for over 8000 points of damage as follows: MASSACHUSETTS, 3215 (sunk with 69, 5 & 28); CHICAGO, 75; BELFAST, 100; INDIANA, 1310 (sunk); TIGER (Paul), 140; TIGER (John), 960; WARSPITE, 335; GANGUT, 685; ARIZONA, 350; HOUSTON, 0; SAVANNAH, 95; VOIKOV, 0.

The last fleet sortie of the week found the TIGERS once again singling out BISMARCK to attempt to finish the job they had started in Sortie 1. The same Allied CHs added their support to help put down Axis Public Enemy #1. They were successful as BISMARCK settled slowly by the stern to register her second sink of the week. Jass' TIGER also expired shortly thereafter, settling on an even keel quickly once her high hull hits submerged below the pond water; John said he felt trading a 4.5 unit BC for a 6.5 unit BB (especially driven by Fluegel) was a good deal. The other Axis BBs and BCs punished QUEEN ELIZABETH for an additional 670 points during this sortie. At the end of the battle CHICAGO was the only Allied ship still on the water; she was chased by MUSASHI, KONGO, GNEISENAU and the three DERFLINGERS who circled around her like wolves shooting off their remaining ammo. Chris kept CHICAGO near the shore as she ran the capital ship gauntlet, settling lower and lower in the water. She finally sank

with just 2 seconds left on her 5 minutes -- it was that close. There were at least eight Allied captains crowded on the shore around the struggling CH as she fought to retain her unsunk status for the week.

Sortie 2 Axis damage was: HINDENBURG, 620; DERFLINGER, 400; BISMARCK, 1680 (sunk); VON der TANN, 290; KONGO, 365; GNEISENAU, 120; LUTZOW (CH), 235; LUTZOW (BC), 230; MUSASHI, 705; ROMA, 215. Total Axis damage was 4860 points.

Allied damage for Sortie 2 was 4010 points divided as follows: CHICAGO, 1135 (sunk); TIGER (Paul), 435; WARSPITE, 527; VOIKOV, 0; TIGER (John), 1110 (sunk); BELFAST, 60; QUEEN ELIZABETH, 670; SAVANNAH, 215; GANGUT, 155; ARIZONA, 50; HOUSTON, 30. The Allies had won the second sortie, 4860 to 4010 and had scored their highest fleet total of the week but lost the final battle by a score of 11,725 to 8835.



ONE ON ONES

Official scoring was to cease at 3:00 PM so that Frank had sufficient time to score the entire week (even using his trusty computer).

WARSPITE and LOUISVILLE arranged a battle so that Adam Thibault could register 8 official sorties during the week; WARSPITE spanked the youngster for a 140 to 40 win. MUSASHI was challenged by the Blattau twins so the Axis buddies lined up on opposite sides for a change. The German BCs finally triumphed 980 to 680 after a really exciting sortie. Gerald almost suckered the brothers into defeat when he ran the BB aground in the narrow channel and then blasted them when they came in alongside to punish MUSASHI.

Chris Pearce wanted to increase his point total so he and Francis agreed to battle QUEEN ELIZABETH against GANGUT in a "Texas Death Match" -- battle until one ship sinks. They were so crazy that they agreed to battle in Sortie 2 with their pumps turned off to hasten the ultimate end. GANGUT finally prevailed by a 2500 to 1310 score as QUEEN ELIZABETH dipped below the calm waters early in the second round.

After the 3:00 PM deadline had passed more battles were held just to settle scores and blast holes. Pittelli (HINDENBURG) fought Pate (INDIANA), and INDIANA sank a hapless HINDENBURG when her pump failed to light off; Pate put the German BC down with the stern guns of INDIANA. He was saving her side guns for future punishment. The TIGERS (Broring and Jass) got it on too; John looked like the close winner, but neither ship was even scored -- they just blasted each other for the fun of it.

FINAL POINT TALLIES

The battling had been furious and savage throughout the week -- but the Axis had walked (rather sailed) off with five of the eight fleet battles and also campaign. A summary is shown below:

BATTLE	AXIS	ALLIES
Fleet 1A	4269	4670
Fleet 1B	4821	2002
Fleet 2	7406	8701
Fleet 3	13588	7482
Campaign	2256	1563
Night	2278	3601
Fleet 4	11966	8237
Fleet 5	7875	5958
Fleet 6	11728	8833

The number of ship sinks (22) during these battles was truly awesome: INDIANA, VON DER TANN and INVINCIBLE were sunk in F1; VON DER TANN again sank in F2; BISMARCK, ARIZONA AND MARYLAND in F3; WARSPITE and LUTZOW in Campaign; HINDENBURG went down with lights burning in Night battle; F4 was a big blaster of ships -- VON DER TANN, HINDENBURG, LUTZOW, TIGER, QUEEN ELIZABETH, GANGUT and SAVANNAH sank below the moss; F5 saw no sinks as the odds balanced out; F6 ended the fleet melees with six additional sinks -- INDIANA, MASSACHUSETTS, HIEI, TIGER, BISMARCK and CHICAGO.

BANQUET AND AWARDS

The Friday night banquet was sponsored by the MAG wives who provided the tired captains with a delicious buffet set up at the Odenton Village Fire Hall; the spread included cold cuts, potato salad, fresh fruit salad, beverages and numerous fancy, home-made desserts!! 'Twas the best meal of the week. After the chowing was completed Will Montgomery (the CD) and Frank Pittelli (the Site Host) passed out the numerous awards to the deserving captains. As usual the Class Awards are for high sortie average, while the von Fluegel trophy is given to the total high point captain. Best of Scale and "Most Feared" awards are voted by participating battlers. The 1991 Nats winners were:

Von Fluegel Award	Gerald Roberts
Class 7 & 6	Gerald Roberts
Class 5	Ken Kelly
Class 4	Will Montgomery
Class 3	Wade Koehn
Small Ship	Mitch Henshaw
Best of Scale	Joe Vilar
Best of Scale	John Jass
B of S (Convoy)	Leif Goodson
Convoy Captain	Mitch Henshaw
Rookie of the Year	Ken Kelly
Most Feared Ally	Chris Pearce
Most Feared Axis	Gerald Roberts
B. Sychalski Award	Will Montgomery

The Axis had swept most of the battling awards, and they deserved the booty as their battling during the week attested to their victory at sea in 1991. All captains expressed that the battling was fierce and close throughout the week and the number of sinks was unexpectedly high -- but with strong competition that is to be expected, even with no turning systems and 20 degree down angled side guns.

The sortie averages for eac battling ship is shown below:

Class 7 & 6	
Gerald Roberts	642
Joe Vilar	581
D.W. Fluegel	577
Jim Pate	334
Steve Andrews	316
Class 5	
Ken Kelly	427
Chris Pearce	402
Ron Thibault	356
Marty Hayes	307
Danny Schultz	296



LETTER FROM THE NORTH
Sept 10, 1991
P.O. Brad Browne

There is some great news up here guys, I've got an international organization. We're the NORCAN Battle Squadron. At present there are only three of us, and I'm the only one with really any materials or ships (almost) ready for the water, but one guy, Matt has ordered a Brooklyn from Skunkworks, and he'll be up and ready before long with a bit of luck. The ads that Skunkworks puts out are reaping their benefits, that's how these gentlemen got interested. There are others out there as well, you only have to find them.

Last night, my Graf Spee was launched (in the bathtub). She floats beautifully, on her proper waterline at a full load. After an hour in the tub, there were only two small dribbles of water getting into the hull, and I'll be sealing those up tonight. The stuffing tubes, motors, waterproof boxes and guns still have to be put in, but I'll cross those bridges when I come to them.

When I was building the main gun turrets, I came up with what may save a bit of time, and perhaps money. I tried to vacuform a copy of the turret that I had built, and I tried about 9 or 10 times. Finally, fed up with the results, I took the best looking one, and I decided to try using it as a mold. I poured in the fiberglass resin, and put in several layers of cloth leaving it overnight to dry, I removed it from the mold (which wasn't

damaged) and sanded it down. I decided to test it. I set it on the floor, and slowly put my weight (165 lbs) on it. It took the weight. I jumped on it, and it took that too. I was delighted, and repeated the process, so I now have two of them. As of tonight, the superstructure is basically complete, but some of the many finer details have yet to be added.

I am interested in setting up my ship with CO2 guns, instead of the regular Freon system. If there is anyone out there that has plans or whatever for a CO2 gun system, please drop me a line. We're considering using all CO2 at NORCAN (partly because of environmental reasons, and partly because of the massive price of Freon in Ottawa and also it's scarcity).

Captain Brad Browne

Commander of NORCAN Battle Squadron

DKM GRAF SPEE, laid down July 10, 1991, launched Sept 19, 1991

U-900, laid down and launched in June of 1990

HMCS BATTLEFORD, laid down and launched in January of 1991

Keep pressing on!
Phillipians 3:14

Brad Browne

Class 4	
Will Montgomery	500
Mike Blattau	466
David Haynes	465
Francis Rogowski	461
Nathan Blattau	432
Leif Goodson	419
Frank Pittelli	393
Paul Broring	339
John Jass	264
Steve Baker	247

Class 3	
Wade Koehn	347
Rick Whitsell	297
Chris Au	276
Bart Purvis	262
Tom Jass	220
Chris Pearce	144
Adam Thibault	132

Small Ships	
Carl Schafer	203
Mitch Henshaw	116

As usual the Rules Meeting was long in duration and involved numerous, complex rule change proposals. Even with only one rule change published in HULL BUSTERS in 1991, there was a flood of proposals authored from the

floor -- democracy in action! The meeting began around 8:00 PM and ended close to midnight -- just like in Campaign, the paperwork never ends. The changes which gathered 50% of the votes and hence will appear on the official ballot are probably listed elsewhere in this issue. The 1992 officers were elected after all the rule proposals had been acted upon. The new officers are:

President	Marty Hayes
Vice President	D.W. Fluegel
Secretary	Leif Goodson
Treasurer	Ron Thibault
1992 Nats CD	Tom Jass

The Site Host for the 1992 Nats which will be held in Orlando, Florida will be named by the Executive Board in the next few weeks after the Florida battlers have been polled for volunteers. If they can duplicate the success that they had at the 1991 SE Spring Regionals, next year's Nats could be the best ever.

Thanks to all of the MAGs (male and female) for hosting such a great 1991 Nats -- especially Marty and Jane Hayes for their pool parties, Frank Pittelli for his hosting and scoring, the wives for their delicious buffet, John French for his tour of the Naval Academy Museum and Will Montgomery for defining what a CD should be!! See you all next year in coooool and sunny Orlando.

My Captain
by Nancy Whitsell

*He came to me
one winter's day.
And was I amazed
at what he had to say.*

*A desire to join the
RC Combat Warship Club.
What is this-
some new pub?*

*In battle, to captain
a ship was his dream.
Oh, how long will it take
to be part of the team.*

*To build a warship
with BB's that fly.
Had to be better
than Mom's apple pie.*

*After a year of so
his ship was done.
And putting it on the water-
Well, nothing could be more
fun.*

*Then he really threw me.
Said he wanted to go to NATS.
I wondered, "Why go anywhere?
Missouri has gnats."*

*So off to NATS
he did go.
How he would do
he didn't know.*

*No longer a use
for a large vocabulary.
To him, only words like engine
and rudder are necessary.*

*What a change
this all has brought.
And lots of patience
I've been taught.*

*Even so,
of one thing I'm certain.
There's none other
I'd want for a captain.*

FILE:NATS91

TOTAL 1991 NATIONALS SCORING

CAPTAIN	SHIP CLASS	AXIS FLEET						CAM-PAIGN	TOTALS ONE/ONE	# SORTIES	TOTAL POINTS		
		FLEET 1A	FLEET 1B	FLEET 2	FLEET 3	NIGHT BATTLE	FLEET 4					FLEET 5	FLEET 6
BLATTAU, M	4	750		624	1176	217	1078	680	1044	88	1636	17	7293
BLATTAU, N	4	750		624	1176	217	1178	680	1044	288	1026	17	6983
FLUEGEL, DW	6			779	1370		1472	850	1305	288		11	6064
GOODSON, L	4	950		624	1076	217	474	680	844	-512	2056	18	6409
HAYNES, D	4		877	624	1176	217	1178	680	1044	288		14	6084
KELLY, K	5	1069		702	558	244	1324	765	1174	288	816	17	6940
KOEHN, W	4		766	545	1029	190	415	595	814	288		14	4642
MONTGOMERY, W	3					190						1	190
MONTGOMERY, W	4		877	624	1176		1178	680	675	288	2282	16	7780
PITTELLI, F	4	750		624	1176	217	578	480	1044	88	457	15	5414
ROBERTS, G	7		1205	857	1617	298	1619	935	1435	288	680	15	8934
SCHAFFER, C	1				588					288	20	4	896
VILAR, J	6		1096	779	1470	271	1472	850	1305	288		14	7531
		4269	4821	7406	13588	2278	11966	7875	11728	2256	8973		75160

CAPTAIN	SHIP CLASS	ALLIED FLEET						CAM-PAIGN	TOTALS ONE/ONE	# SORTIES	TOTAL POINTS		
		FLEET 1A	FLEET 1B	FLEET 2	FLEET 3	NIGHT BATTLE	FLEET 4					FLEET 5	FLEET 6
ANDREWS, S	6		324	861	794		843	655	425	139	200	14	4241
AU, C	3	650		602	298		590	459	607	139	383	14	3728
BAKER, S	4		159	689	636					139		7	1623
BRORING, P	4	743		689	295		675	524	808	139	1010	15	4883
HAYNES, M	5		291	775	714	589	758	590	909	278	255	16	5159
HENSHAW, M	1				262	337		62	404	139	10	9	1214
JASS, J	4		259	689	141	524	675		608	139		11	3035
JASS, T	3		226	196	556		590	456	607	139		13	2770
PATE, J	6	414		861	794	655	843	425	139			12	4131
PEARCE, C	5	835		575	714	589	758	590	909	-522	2055	18	6503
PEARCE, C	3										288	2	288
PURVIS, B	3		226	602	556		590	459	707	139		13	3279
ROGOWSKI, F	5	743		589	524	398	524	808	139		3855	17	7580
SCHULTZ, D	5		291	775	714		590		139			9	2509
THIBAUT, A	3		226	196			590				40	8	1052
THIBAUT, R	5	635		714			590	909	139			9	2987
WHITSELL, R	3	650		602	556	458	590	459	707	139		14	4161
		4670	2002	8701	7482	3601	8237	5958	8833	1563	8096		59143

WHAT'S A BUBBA

By Jacob Brimmer (Head Bubba) 8/10/91

There seems to be a renewed interest in the BUBBA factor. For those of you who do not know what a "Bubba" is, this will be explained. A Bubba is anyone who disagrees with Scott or Jeff Lide (Paula Lide is often a Bubba). Scott and Jeff are the only true "Non-Bubbas". Since there are more Bubbas than Non-Bubbas, the Bubbas are considered to be a conspiracy to get the Non-Bubbas. When the latest new Scott/Jeff sneaky trick ship/gadget is illegalized it was a Bubba plot. When Nats dates are changed with no notice, it was the Bubbas who were out to get revenge on the disrespectful Non-Bubbas. This should help the Bubbas understand Scott's article in this issue of Hull Busters.



Helpful Hints

By Chris Pearce

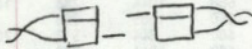
Today's subjects include connectors and washers... I was looking in the local hobby shop and discovered two very useful varieties washers.

The first of these was suggested to me by Rick Strickland and is made by North West Short Line for model trains. It is a 1/8" i.d. thrust washer, of bronze, with a 3/16" o.d. These washers are excellent for cutting down propellor shaft noise, and such.

The second of these is made by SIG, for airplanes, a 3/16" i.d. nylon washer. The nice thing about this washer is that when threaded over Clippard parts, it makes for a much better and stronger seal than the little rubber washers that come with them. While they do require a bit of tightening to make a good seal, they are very useful for things like freon tank connections, and other things we don't want to come loose or leak.

About connectors - for those who haven't heard, the Deans' 3-pin connector with the center pin removed is excellent for use on pumps, motors, and just about anything.

However, removing the center pin removes its polarizing quality... So try exchanging a male/female pair of pins between the plugs, like so...



The result is compact, cheap, efficient, and generally wonderful polarized plugs.

Lastly, a silkspan hint. If you look carefully, you'll notice that silkspan has a grain to it. By placing this grain crosswise to the balsa's grain when sheeting, it does an even better job of reinforcing the balsa, and you take smaller holes... (What a deal!)

Well, that's it for now, and for those of you whom I didn't get to see in Florida, I'll be looking forward to seeing you, and your new creations, next year... Until then, God bless, and keep your radio dry... --

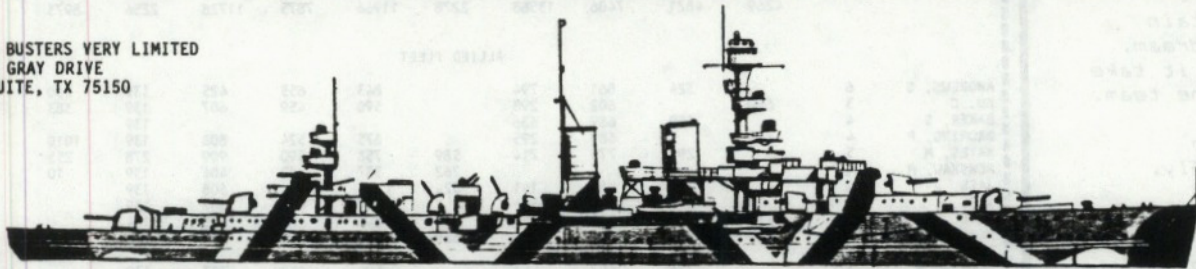
RUDDER UPDATE

by Fluegel 9-28-91

The trend away from sheet metal rudders and toward fat hydrodynamic rudders continues to rage across the hobby world. Peter, Baker, Bart, Gerald, and myself have beefed up our rudders since the last issue of HULLBUSTERS. Bart's cruiser has trimmed the turning diameter down from approx 17 feet to approx 9 feet. Baker did a bathtub test and noted an increase in side thrust. I took THE BISMARCK out and measured a 360 port turn in 13.93 seconds. That's about a 1.5 second increase in turning time. The diameter was approx 1.75 ship lengths which is about the same. The credibility of these numbers are tainted because the ship was slower in the 100 foot speed trial by 1.75 seconds. This may be due to the drag the twin 0.7 inch wide (each) rudders have added.

I haven't noted the starboard turn because I dropped my transmitter and broke the antenna, however, it looked significantly worse (both the turn and the transmitter). I also incurred some pump screen clogging which further hampered the test. Even with my poor early test results I still remain optimistic. --

HULL BUSTERS VERY LIMITED
3524 GRAY DRIVE
MESQUITE, TX 75150



HULL BUSTERS