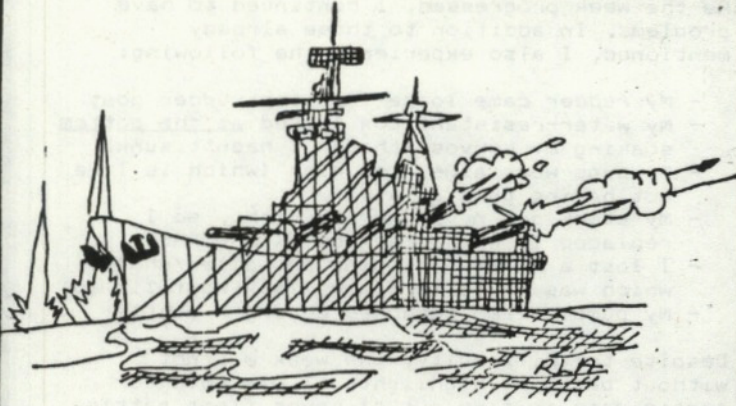


HULL BUSTERS



OCT 89

A Rookie's Odyssey

by Lief Goodson

It was 1:00 am Sunday morning, July 9, 1989. As I lay my head to rest, I contemplated the completion of a journey that had begun almost ten months earlier. I had become fascinated with R/C warship combat after reading the article in U.S. Boat and Ship Modeler. However, I thought that the time and money required would keep me from ever participating in this hobby. After several months of R/C combat floating around in the back of my mind, I decided to contact someone for additional information. So I sent letters to the two closest points of contact listed in the magazine article, Marty Hayes and Dan Hamilton. To my surprise, both sent me a bundle of information including an introduction tape by Fluegel and Barrett and a personal tape from Dan. The overwhelming welcome I received convinced me to get involved, and here I was one day away from the 1989 Nationals. It had been a struggle to get my ship built, mostly do to my own stubbornness and preconceived notions. However, a poor debut at the South East Spring Regionals helped me overcome my false pride. Despite several hours of help from John French, Rick Schultz and Will Montgomery my ship was only on the water for a total of two and one half minutes. With tips and help from several veteran battlers, I left the regionals committed to having my ship ready for the 1989 Nationals which I was now about to face. The following paragraphs describe my experience at the 1989 Nationals.

My objectives for Nationals were clear - bond with people who actually cared about this (my) hobby; become a full fledge R/C combatant; bring home the "Rookie of the Year" award; and most important - sink Fluegel's ship. (It was Fluegel's arrogance on audio tape which was responsible for me and every other rookie in Florida building allied ships). I planned on arriving at the nat's lake early Sunday afternoon to speed test my boat. Unfortunately, I did not arrive at lakeside until after six pm, and found ten thousand people surrounding the lake (I later found out they were there to attend an open air concert). I was so intimidated by the crowd my boat remained in the car. I then proceeded to the hotel and found many other battlers congregating to swap lies as is their custom. After attending a

briefing from Steve Mulholland, the Contest Director (CD), I returned to my room to prepare my USS Houston for a week's worth of battling. As the sun began to rise, I added the final touches to insure my ship's reliable performance throughout the week (or so I thought). I then laid down for about an hour before leaving for the lake (unfortunately unable to actually sleep). I arrived at the fairground at 8:00 am, one hour before the scheduled battle start time. After fixing a leaking Nycoil connection, I put my ship in the small pond by the workshop for one final test. For some unknown reason my stern gun was not working consistently (although it had worked perfectly in the hotel room). I dinked with it for some time without making much progress. Since time was running out, I decided I would try to fix it later and moved to the battling lake to ready for my first National's battle.

The battle began on schedule, and I boldly steamed forward with the allied fleet to engage the axis scum. Their were ships everywhere! I quickly realized I had not spent enough time on ship recognition. Which ships were the bad guys? After firing several shots from my bow gun in the general direction of many of the ships, I found myself along side evil incarnate, Fluegel's DKM Scharnhorst. He wasted no time - pumping several bb's into my Houston. Realizing this was not the best place to be, I ran to another part of the lake firing at ships as I went. Soon I was out of bb's and declared "five" slinking away to an abandoned corner of the lake. The battle ended with the Houston still afloat. Wow! I had successfully completed my first sortie. There would be no stopping me now.

My damage was minimal, although I did have one rather large hole below the water line. I quickly reloaded my bow gun and recharged my freon tank (although it didn't really need recharging, everyone else was doing it so I followed suit). Within minutes my ship was back on the pond awaiting the second sortie. Dan Hamilton invited me to cruise with him during this sortie and I was excited. As the CD announced "War!", Dan and I steamed under a low bridge to engage the cowering enemy. However, before my ship reached the other side of the bridge it was completely out of control. I declared "Out-of-control five!" as my cruiser charged full speed towards the cement embankment. **POW!** My ship slammed into the bank and then (surprisingly) I regained control. I announced that I was back in the battle before I realized that my radio box had shifted leaving me only partial rudder control, and that a dogbone had come out of my universal leaving me with only one functioning propeller. With the courage of Admiral Halsey and the brains of Mr. T, I charged the enemy. Quickly, I found myself between the side mounts of the DKM Scharnhorst and IJN Kirishima. Seconds later the HMS Valiant and Queen Elizabeth rescued me, but it was too late. Fiercely pumping water, my USS Houston slip beneath the waves.

I retrieved my ship and began to repair her for the next battle. Some water had leaked in my water-resistant box, but it did not seem to be enough to cause any damage. After preparing everything, I installed fresh propulsion and pump batteries and turned the receiver switch on to check things out. Nothing happened! None of the servos would respond. I surmised that the receiver must have gotten wet. So I painstakingly removed all my servos from my radio box so I could get to my receiver. After taking the receiver from within its inner bag, I discovered that it was quite dry. Huh? The next prognosis was that my receiver batteries had instantaneously discharged when the Houston

sank. I tried recharging the receiver nicad pack, but the charger indicator LED did not light. I finally discovered the real problem was that the plastic wrap covering the nicad pack had torn and one of the cells was not making contact. This ordeal kept me from entering the second fleet battle of the day. Unfortunately, as I watched the action of this battle, my ship (with a full freon tank) was left in the blazing Tennessee sun. In my absence, the freon in my tank expanded and blew out the seals in my poppet valves which were mounted in my water-resistant box. Things weren't going well! But I had come to battle and was not going to let these setbacks stop me.

My ship was ready for the last fleet battle of the day. During the middle of the first sortie however, my ship refused to go in reverse. I quickly retreated to a corner of the lake and sat out my five minutes determined to fix my throttle before the next sortie. I fixed the throttle between sorties, but only temporarily. As the IJN Kirishima pulled along side the Houston, I discovered my throttle fix was short lived. The Kirishima, with its down-angled side mount pumped twelve bb's into my hull - all below the water line. Within a couple of minutes, I was once again wading in the lake to retrieve my ship from its watery grave. That ended my first day of battling at nat's, and somewhat discouraged I returned to the hotel.

Back at the hotel room I contemplated making another big mistake - staying in my room and

fixing my boat instead of going to dinner with the other combatants. Fortunately, I decided to go to dinner, and throughout the week I discovered that fellowshiping with the battlers was as much fun as combat on the lake.

As the week progressed, I continued to have problems. In addition to those already mentioned, I also experience the following:

- My rudder came loose from the rudder post
- My water-resistant box leaked at the bottom soaking my servos (though I hadn't sunk)
- My guns were aimed too high (which is like not having guns at all)
- My stern gun never worked right, so I replaced it with one from SKUNKWORKS
- I lost a non-functioning propeller/shaft which was RTV'd in place (leaking followed)
- My pump became detached during a battle

Despite the difficulty, the week was not without battling highlights. I was able to participate in five out of seven fleet battles, the campaign and night battles, as well as two one-on-one battles. (Note: Rookies probably shouldn't go one-on-one with former Von Fluegel Travelling Trophy winners.) I assisted in sinking a Jap convoy ship, a Jap heavy cruiser, an Italian light cruiser, and put several bb's into Fluegel's Scharnhorst which later sank. (That counts as an assist, right?). I was even honored with the "Rookie of the Year" award. All in all, I had a great time, and felt as though I had made a lot of new friends (including Fluegel).

Blow-by-Blow

FRIDAY

Battle Reports

FRIDAY BATTLING-THE ALLIES MOP UP

By Tom Jass

Fluegel wanted me to describe the Friday battling since I was once again doing the battle scoring on my Apple III computer; he knows that if he assigns me to describe Friday, he'll get the score summary for the week as a bonus.

The Friday battling was anticlimatic -- the Allies had already sewn up victory during the week and Friday was similar to the time during WWII when the Allies were driving toward Berlin in Europe and had captured Iwo Jima in the Pacific. The outcome was not in doubt, it was just a matter of how the surrenders would be arranged.

Friday was the most beautiful day of the week -- it was cool (in the 70s) and the humidity was low for a change. The Allies were hoping to keep their win streak alive (they hadn't lost since Monday) and the Axis were planning to end the week on a high note. The Axis fleet was composed of the following ships: DKM SCHARNHORST (D.W. Fluegel); DMB ANDREA DORIA (Rick Schultz); IJN KIRISHIMA (Jeff Lide); IJN SUZUYA (David Haynes); DBM ZARA (Ron Thibault); IJN TONE (Gerald Roberts); IJN MAYA (Scott Lide) and DMB C. ROMANI (Beth Schultz). The Allies would counter with USS ALABAMA (Steve Milholland); USS MASSACHUSETTS (James Foster); HMS VALIANT (Dan Hamilton); HMS QUEEN ELIZABETH (Bob Amend); HMS WARSPITE (Marty Hayes); USS OKLAHOMA CITY (Stan Watkins); USS HOUSTON (Lief Goodson); USS SALT LAKE CITY (Will Montgomery) and HMS BELFAST (Tom Jass). Even though the order of battle showed 9 Allied ships against 8 Axis, the Allies had the Axis once again out gunned 39 units to 27 units and they were on a roll! Could the Axis stem the tide? The Allies

had decided to make DBM ZARA a special target as she was piloted by rookie Ron Thibault and was unsunk for the week (except for her ram sink by USS SOUTH DAKOTA on Monday).

In order to get this article (and the week's scoring) to Fluegel for the August HULL BUSTERS, I'm describing the battle from my notes without the benefit of video. In the middle of the sortie HMS VALIANT went dead in the water in the south pond and was set upon by DKM SCHARNHORST. The Allied South Dakotas and Queen Elizabeth's came to defend and



punished DKM SCHARNHORST as she was blasting the hapless HMS VALIANT. IJN KIRISHIMA poked her nose (starboard down angled broadside) into the action and attempted to punch some below the waterline holes into HMS VALIANT. VALIANT's pumps seemed to be working, so she just had to ride out the storm. Meanwhile, in the middle pond, IJN TONE had lost her speed (she was a 22 second CH) and the Allied snips finally were able to catch her and vent a week's

worth of frustration on her. The holed her with 39 above the waterline, 3 on and 5 below. IJN TONE lasted out the first sortie, but would be a prime target in Sortie 2. HMS BELFAST was ineffective in this sortie as she was extremely slow (turned out to be a thrown dog bone) and went on five early on. The Axis punished the USS SALT LAKE CITY for 305 points (12 above, 3 on and 2 below the waterline). DMB C. ROMANI was sunk in this sortie in the middle pond but I don't know who did her (and Beth) in. Rumor has it that the USS SALT LAKE CITY was deeply involved.

Sortie 1 Axis damage was as follows: DKM SCHARNHORST, 670 points (17 above, 6 on and 7 below the waterline); IJN KIRISHIMA, 300 points; DBM ANDREA DORIA, 215 points; DBM ZARA, 115 points; IJN MAYA, 50 points; IJN TONE, 715 points; IJN SUZUYA, 165 points; DMB C. ROMANI, 540 points (sunk). The Allies fared much better: USS MASSACHUSETTS, 70 points; USS ALABAMA, 190 points; HMS QUEEN ELIZABETH, 190 points; HMS VALIANT, 615 points (17 above, 2 on and 4 below the waterline); HMS WARSPITE, 0 points; USS HOUSTON, 140 points; USS OKLAHOMA CITY, 110 points; USS SALT LAKE CITY, 305 points; HMS BELFAST, 0 points. The Allies had won the first sortie, 2770 to 1620.



Sortie 2 started after a wait for me to repair the port drive shaft on HMS BELFAST; the dog bone was still acting up. USS SALT LAKE CITY went on five immediately and the HMS BELFAST followed as the port shaft was still not providing turns to the screw. The Allied CHs were hurting. In the south pond DBM ANDREA DORIA was putting more hurt into USS OKLAHOMA CITY as HMS VALIANT and HMS QUEEN ELIZABETH defended. In the middle pond USS MASSACHUSETTS and USS ALABAMA were returning the attention to a limping DKM SCHARNHORST, and other Allied ships were putting the finishing touches into IJN TONE. TONE sank first and then DKM SCHARNHORST slid below the pond surface for the second time during the week. It was ironic that Fluegel's sink was probably the salvation of Stan's USS OKLAHOMA CITY; when Fluegel was in the water recovering his BC, USS OKLAHOMA CITY was given temporary respite from further damage from DBM ANDREA DORIA and IJN KIRISHIMA and the CH was able to pump out her damaged hull and last the sortie. When the ponds were cleared of the Axis pollution (Fluegel and his ship) the battling moved to the south pond and USS ALABAMA and USS MASSACHUSETTS joined the HMS VALIANT, HMS QUEEN ELIZABETH and HMS WARSPITE in getting serious about punishing DBM ANDREA DORIA. DBM ANDREA DORIA was forced to run the gauntlet of Allied BBs for what seemed like hours and finally the Allied BBs put the Italian BB down -- but Rick never gave an inch or struck his colors or declared "five". Truly a display of guts and a Northeastern Club fighting spirit that the real Italian Navy never displayed. The Allies had sunk four Axis ships during the battle -- a fitting end to the 1989 Nats and the Allied domination of the three ponds.

After the Axis fleet had been almost completely sunk, the damage from Sortie 2 was totaled. The Axis damage was: DKM SCHARNHORST, 940 points (sunk); DBM ANDREA DORIA, 1170 points (sunk); IJN KIRISHIMA, 235 points; IJN TONE, 1120 points (sunk); DBM ZARA, 525 points (but afloat); IJN SUZUYA, 30 points; IJN MAYA, 130 points. The Allies had suffered, but not nearly as much: USS MASSACHUSETTS, 70 points; USS ALABAMA, 300 points; HMS QUEEN ELIZABETH, 110 points; HMS VALIANT, 420 points; HMS WARSPITE, 480 points (18 above, 2 on and 5 below); USS HOUSTON, 90 points; USS SALT LAKE CITY and HMS BELFAST escaped with no damage. The Allies had won the second sortie 4150 to 1705 and the last 1989 Nats fleet battle, 6920 to 3325.

FRIDAY FRIDAY ONE-ON-ONE BATTLING

Two battles occurred (I witnessed neither as I was with my trusty Apple III entering the scores). IJN KIRISHIMA defeated USS ALABAMA by a score of 465 to 170 in a one sortie affair. Lief Goodson challenged Will Montgomery to a two sortie battle -- USS HOUSTON versus USS SALT LAKE CITY. The optimism of some rookies!! USS SALT LAKE CITY gound USS HOUSTON into the water by a one-sided score of 810 to 30. Lief had a good week at Nats, and we're looking forward to him leading the Florida club into an active status.

AWARDS BANQUET

Members of both fleets assembled at a Steakhouse at 7:00 PM for our annual Nats Awards Banquet. The IJN captains (Roberts, Haynes and both Lides) were slickly attired in Japanese Navy dress white uniforms with authentic IJN cap devices and shoulder board insignia -- impressive!! Marty Hayes penned an Axis surrender document for Fluegel to sign, but he declined to refuse to recognize reality (a typical German trait) and continued to live with his delusions of Axis victory -- just like the defeated Hitler!! The Japanese captains showed some real Axis class by presenting the victorious Allied Admiral, Will Montgomery, with a surrender sword signifying Allied "control of the seas" in Knoxville.

Special thanks to Mary Hamilton for arranging the reservations for the banquet and to her and Shirley Dees for scurrying around during the week to obtain truly beautiful award plaques!! The 1989 Nats Individual Champions are listed below; except for the Von Fluegel Award which is awarded to the captain with the total high points for the week, all the battling awards shown below were given for high sortie average. The "Chicken Ship of the Week Award" was initiated last year by Scott Lide and Carl Shafer (as the 1988 winner) was free to present the award to the (non)-battler of the 1989 Nats.

<u>Von Fluegel Award</u>	James Foster	USA Fleet
<u>Class I Ship</u>	James Foster	USA Fleet
<u>Class II Ship</u>	D.W. Fluegel	DKM Fleet
<u>Class III Ship</u>	Jeff Lide	IJN Fleet
<u>Class IV Ship</u>	Will Montgomery	USA Fleet
<u>Small Ship</u>	Dan Dees	USA Fleet
<u>Convoy Captain</u>	Stan Watkins	USA Fleet
<u>Chicken Ship of the Week</u>	D.W. Fluegel	DKM Fleet
<u>Best of Scale-Warship</u>	D.W. Fluegel	DKM Fleet
	Dan Dees	USA Fleet
<u>Best of Scale-Convoy Ship</u>	D.W. Fluegel	
<u>Brian Spsychalski Award</u>	Ron Thibault	DMB Fleet
<u>Rookie of the Year</u>	Lief Goodson	USA Fleet

Knoxville in 1989 was the site of a battle just as

decisive as Midway and Stalingrad rolled into one!!
(This Nats should hereafter be known as the
"Knoxville Turkey Shoot".) The Allied fleet was
superior in numbers to the defeated Axis and the
configuration of the ponds hurt the Axis as there
was no place for wounded ships to retreat. During a
typical fleet battle the Allied fleet usually was
able to field a fleet of about 40-44 units; the Axis
fleet was usually in the 30 unit range. The Axis
were typically outgunned by a factor of 50% -- not
good odds in a confined site.

LIEF GOODSON	1714
STAN WATKINS	1628
DAN DEES	945
DAN SCHULTZ	540
BETH SCHULTZ	298

1989 NATIONALS

TOTAL POINTS

NAME	TOTAL POINTS
JAMES FOSTER	6809
WILL MONTGOMERY	5318
STEVE MILHOLLAND	4917
BOB AMEND	4805
D.W. FLUEGEL	4734
JEFF LIDE	4393
DAN HAMILTON	4330
MARTY HAYES	3930
RON THIBAUT	3562
MIKE DESKIN	3488
GERALD ROBERTS	3045
DAVID HAYNES	2747
TOM JASS	2273
SCOTT LIDE	2254
CARL SHAFER	2010
RICK SCHULTZ	1927

1989 NATIONALS SCORESHEET

		POINTS	
		ALLIED	AXIS
MONDAY	FLEET BATTLE 1	3,250	4,110
	FLEET BATTLE 2	3,425	2,790
	FLEET BATTLE 3	3,685	3,730
TUESDAY	FLEET BATTLE 4	5,115	5,040
WEDNESDAY	SMALL SHIP	20	300
	NIGHT BATTLE	2,815	1,740
THURSDAY	FLEET BATTLE 5	3,935	1,175
	FLEET BATTLE 6	5,345	2,990
FRIDAY	FLEET BATTLE 7	4,920	3,325
TOTAL		34,510	25,200
CAMPAIGN		6,250	1,800
GRAND TOTAL		40,760	27,000

1989 NATS		FLEET 1		FLEET 2		FLEET 3		FLEET 4		FLEET 5		FLEET 6		FLEET 7		NIGHT		ONE/ONE		SMALL SHIP		ONE/ONE		TOTAL		SORTIE AVERAGE		
NAME		POINTS	ISORT	POINTS	ISORT	POINTS	ISORT	POINTS	ISORT	POINTS	ISORT	POINTS	ISORT	POINTS	ISORT	POINTS	ISORT	POINTS	ISORT	POINTS	ISORT	POINTS	ISORT	POINTS	ISORT	POINTS	ISORT	
	FOSTER	550	12	481	12	405	12	735	12	519	12	856	12	971	12	432	11	1860	13					6809	18	378		
	MILHOLLAND	550	12	481	12	405	12	735	12	519	12	856	12	971	12			400	12					4917	16	307		
1.	MONTGOMERY	50	12	481	12	405	12	735	12	519	12	856	12					500	11					3446	13	265		
	SHAFER	550	12	481	12																			1031	14	257		
	DESKIN	886	12	464	12			966	12			622	12			340	11	210	11					3488	10	349		
	FLUEGEL	775	12	493	12	952	12	845	12	257	12	545	12	570	12	297	11							4734	15	316		
2.	AMEND	481	12	421	12	354	12	643	12	454	12	589	12	850	12	378	11	635	11					4805	16	300		
	HAMILTON	481	12	421	12	354	12	643	12	454	12	749	12	850	12	378	11							4330	15	289		
	HAYES	481	12	21	12	354	12	643	12	454	12	749	12	850	12	378	11							3930	15	262		
	JASS	-137	11	361	12	304	12	233	11	389	12	292	12			224	11							1666	11	152		
3.	SCHULTZ, DAN			-264	11	253	12	551	12															540	5	108		
	SCHULTZ, RICK							724	12	220	12			488	12	255	11							1687	7	241		
	LIDE, JEFF	665	12	423	12	816	12	724	12			267	12	488	12			1050	12					4333	14	309		
	WATKINS			301	12	253	12	194	11					607	12	270	11							1625	8	203		
	HAYNES	554	12	352	12	680	12	-31	11	184	12	389	12	407	12	212	11							2747	14	196		
	ROBERTS	554	12	352	12	223	11	604	12	184	12	389	12	407	12	212	11							2925	14	209		
	LIDE, SCOTT	122	11	352	12	380	12	604	12			389	12	407	12									2254	11	205		
4.	THIBAUT	554	12	352	12	480	12	604	12	184	12	389	12	407	12	212	11	180	12					3562	17	210		
	SHAFER					140	11			324	12	220	11			270	11	35	14					989	9	110		
	GOODSON	344	12			253	12			210	11			607	12	270	11	30	14					1714	12	143		
	JASS													607	12									607	12	304		
	MONTGOMERY													607	12			1265	15					1872	7	267		
	LIDE, JEFF															212	11							212	11	212		
	SCHULTZ, BETH							147	12			151	11											298	3	99		
5.	DEES			241	12	203	12			92	11	176	11			216	11							945	9	105		
	SCHULTZ, R.																	120	12	120	12			240	4	60		
	WATKINS																			3	1			3	1	3		
SS	LIDE, J.																			60	12			60	12	30		
	ROBERTS																			120	12			120	12	60		

PENETRABLE HULL AREA

By Tom Jass

THE PRESENT SITUATION

The composition of the Allied Fleet at the 1989 Knoxville Nats highlights a situation which, I believe, may have serious effects as we gain new members and see larger and larger Allied and Axis fleets. The Allied battleline was composed of seven BBs -- four of the SOUTH DAKOTA class and three of the QUEEN ELIZABETH class. Where are the NORTH CAROLINAS, the KING GEORGES, the IOWAs, a VANGUARD? Given our present rule structure these ships are where they belong, in books and on plansets, but not in the water battling. Our battlers have built the BBs that are effective within our rules -- that's natural, given the major investment in money and time that the construction of a BB represents. Why build a NORTH CAROLINA when a SOUTH DAKOTA gives the same speed and gun configuration on a 4" shorter hull; why build a KING GEORGE when a QUEEN ELIZABETH has the same speed, one more turret and dual rudders on an 8" shorter hull? Why ever build an IOWA class, a VANGUARD or a YAMATO (even with the present additional units)? If we ever want to see these large capital ships in the water battling we must modify our rules to negate their present disadvantage -- their length.

Another problem we face (and haven't found an acceptable solution in a year's worth of wrangling) is the definition of hull mounted casement guns. When are casement guns considered as part of the hull and when are they part of the superstructure? If all hull mounted casement guns are part of the superstructure they may be built impenetrable, and this makes WWI ships even more desirable as BBs and BCs. At the 1989 Rules Meeting at Knoxville we once again discussed (argued?) this problem at length. Main decks, forecastle decks, walkways outboard of the casements -- all these characteristics enter into the definition of the casement guns problem. The question in this case is not one of penetrable hull length, but of penetrable freeboard. But perhaps hull length and freeboard do compliment each other; more than likely the PROBLEM IS TO SOMEHOW MORE NEARLY EQUALIZE THE PENETRABLE HULL AREA FOR DISSIMILAR SHIPS RATHER THAN JUST THE PENETRABLE HULL LENGTH.

Unless we want to continue to see Allied fleets composed entirely of SOUTH DAKOTAs and QUEEN ELIZABETHs and Axis fleets composed of WWI battlecruisers with non-existent freeboard areas, we must discuss and propose rule changes to cause other BB and BC classes to be desirable and effective.

SHIP TABLE: CLASSES I-III

Our ships are divided into Classes which reflect their relative offensive and defensive power and the period when they were built. More modern ships are usually given more units (a higher class) to reflect improved armour construction, more advanced and efficient engineering plants, more effective fire control (including radar) and better damage control ability. The HMS HOOD is thus given one unit more than the HMS TIGER to reflect that the HOOD was oil rather than coal powered, the HOOD was designed after the battle lessons of WWI had been experienced and the TIGER had not been given the internal magazine protection afforded the HOOD. I am not proposing to alter our Class system, but rather the penetrable length and freeboard of ships within our present Class structure.

During last winter when Peter Futschik and I were taping about the penetrable length and freeboard situation, I constructed a Table which grouped the Class I through III ships by speed classification. It is in this issue of HULL BUSTERS for your

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study. In Class I, for example, increasing speed from 26 to 24 seconds forces you to build a ship that is 110' longer (about 9") if you wish to stay with the shortest ship in the Class. In Class II you must build a model which is 130' longer (almost 11") if you desire a ship model which is 24 seconds rather than 26 seconds. These approximate ratios are fairly constant in Class I through III between speed classes. This is not unexpected, for increased speed almost always resulted in increased length in real warships. To drive an IOWA class BB at 32 knots required 212,000 shp and 887' of length as compared to 130,000 shp and 680' loa in the SOUTH DAKOTA class which were 27 knot ships. The difference in lengths between ships of the same approximate speed (SOUTH DAKOTA versus KING GEORGE, for example) is partly due to more efficient American power plants which produced more shp per equal volume of engineroom compared to British power plants.

THE IAMWC SOLUTION

The International Association of Model Warship Combatants (Foster's and Milholland's Skunkworks Club) has addressed the penetrable hull area problem in their rules in a head on method. The penetrable hull areas that are required per ship class in the Skunkworks rules are shown below:

HULL PENETRATION DIMENSIONS

Class	Length	Height above WL
1	48"	1 3/8"
2	44"	1 1/4"
3	40"	1 1/8"
4	36"	1"
5	32"	7/8"
6	28"	3/4"
7	24"	5/8"
8	20"	1/2"

For the above Classes 1-4 the penetrable hull height below the waterline is 5/8"; for Classes 5-6, 1/2"; for Classes 7-8, 3/8". This penetrable hull area may be split up into a maximum of 2 separate, non-adjacent areas. The smallest split section may be 40% of the total. The first penetrable section must begin at the rear end of the impenetrable bow area.

I certainly agree with the basic philosophy of this approach. Their rules attempt to equalize the effectiveness of all ships within a class. My proposal will differ somewhat, however, from their

solution.

MY PROPOSALPENETRABLE HULL LENGTH

I disagree with the Skunkworks approach that gives all ships (whether BB, BC, CH or CL) the same speed. I like our present setup and want to keep the speed distinctions that we have now. I propose (for Club discussion) that all capital ships in a class within the same speed division have the same penetrable hull length as the shortest ship in that class. For example, each of the 5 ship classes in the Class I, 26 second division (SOUTH DAKOTA, NORTH CAROLINA, KING GEORGE, BISMARCK and YAMATO) could be built with penetrable lengths equal to 85% of the 680' length of the SOUTH DAKOTA class. This situation would be true in each speed division of Classes I-III. This would benefit all fleets about equally, as each fleet wins some and loses some. The losing fleet per class (because they are the shortest ship) are:

Class I (24 second).....Italy (790')
 Class I (26 second).....USA (680')
 Class I (28 second).....British (710')
 Class II (24 second)....Germany (770')
 Class II (26 second)....British (640')
 Class II (28 second)....USA (562')
 Class III (24 second)...France & British (704')
 Class III (26 second)...Germany (563')
 Class III (28 second)...Germany (479')

Speed Regulator for setting boat speed

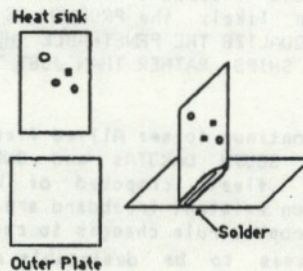
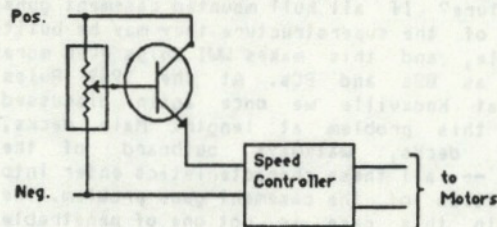
The following is a speed regulator for setting your legal boat speed. The parts are any NPN transistor (check current rating for your boat), and a 1 - 5 K pot (10 or 20 turn preferred). What happens is that by connecting the transistor up in a emitter follower configuration the emitter maintains the voltage dictated by the voltage on the base of the transistor. The voltage on the base is constant due to the pot (variable resistor), which is connected between the plus and minus of the supply voltage and has its wiper connected to the base of the transistor. The collector of the transistor is connected to the plus of the supply voltage and the voltage is dropped over the transistor in the same manner as the voltage is dropped over the diodes or resistors many use to limit speed now. See the dwg. for schematic.

The problem is that if the voltage drop is high (.5 volt to several volts.) this develops a power drop on the transistor (heat). So it is important to provide a heat sink for the transistor. This heat sink should be in the form of a L or T form, made of brass, and mounted so that there is a plate on the outside of the hull to pass the heat to the water. Obviously, the plate will have to be sealed to the bottom of the hull, much in the same way as freon tanks are sealed. (I recomend RTV.) The exact size and shape of the outer plate and heatsink are not important, the heatsink holes and shape depend upon what type of transistor you use. I show in the dwgs. a worst case situation of using a very heavy transistor (10-20 Amps.) In even worst cases the transistors can be paralleled (doubling the current capabilities.)

Note that this speed regulator goes between the supply voltage (batteries) and your speed control (switches, etc.) and controls how much voltage is available to the speed controller. Reversing and possibly multiple speeds are still available through the normal speed control.

Perhaps this proposal has all the earmarks of a good compromise -- everyone is a loser, and everyone is a winner!! Only the Japanese are not on the list of losers above, and the IJN builders are penalized because they don't have many ships in Classes I and II anyway (as they shot their wad in building the YAMATOs). Its especially even if we ignore the 28 second ships in Classes I-III (only fools like Jass, Pearce, Shafer and Barrett build these slow targets); the USA, Italy and France lose once each and Germany and Britain lose twice (although in the second loss in Class III, 26 seconds the VON der TANN is only 4' shorter than the HMS INVINCIBLE).

This proposal will definitely help the Axis BISMARCK and YAMATO classes as they could reduce their penetrable hull length by 11" and 15" respectively. They would be much more competitive with the QUEEN ELIZABETHS and the SOUTH DAKOTAs. Conversely, the IOWAs and the VANGUARDS could reduce their penetrable length by 8" and 2" to come into line with the LITTORIO. The NAGATOs could shed 8" of penetrable length and the SEYDLITZs could shed almost 9". There is something for each fleet -- all lose a little and all gain a little. Though the longer ships in each class gain some advantage through less penetrable hull length, they will still be on the whole less maneuverable than the shorter ships in that class.

Speed Regulator drawings

Mount the outer plate flat on the bottom of the Hull and the heat sink projecting up into the ship - then mount the transistor on the heat sink.

The advantage of this speed regulator is that adjustments for speed are easily done and are not of the "step" method which would be employed by use of diodes and resistors. This becomes an "analog" adjustment allowing very small incremental changes. (or you can adjust it as close as a nat's behind). The disadvantage is that you could not run your ship's engines for a long time on shore without a heat build up that could eventually short out the transistor (short runs of a minute or two would not build up enough heat to hurt anything.)

A disadvantage is that the pot uses current when the ship is not being run (all of the time which the voltage is applied. If you have a main power switch this is no problem but if not you should disconnect the batteries to prevent the drain of 12 ma. max.

Marty Hayes, Captain of the Warspite.

Building an IOWA is still a decision of considerable import, but at least the length disadvantage is lessened with my proposal.

All these minimum lengths should be determined based on the short ship within the Class rendered in 1/144 scale. You would still be able to build the larger ships in 1/150 scale, but the penetrable length would not be reduced. You would just be allowed to build a smaller, lighter ship which is easier to build and transport. The decision of where to place the penetrable area must also be addressed. I feel the entire penetrable hull length should be placed in one continuous block immediately behind the solid bow. Hull hits are most damaging in the bow, rather than the stern area. If the impenetrable hull area is in the bow the longer ships who have gained an advantage will have that advantage minimized. The YAMATO would have the same penetrable hull length as the SOUTH DAKOTA and it should be in the same relatively vulnerable position. If we allowed the impenetrable areas to be split into separate blocks (ala Skunkworks rules) I feel that all battlers would soon place the maximum length as far sternward as possible to minimize the effects of hull hits forward.

FREEBOARD

I have evolved into a position where I feel that the only solution to the casement guns problem is to address the question of penetrable freeboard. As an Allied ship builder I have long felt that American and British ships are generally at a battling disadvantage under our present rules due to their relatively greater freeboards compared to especially German and Italian ships. On the whole the USA, Japan and Britian designed their ships to steam for long periods at sea (several weeks on station) in all states of sea. On the other hand the Italian and German fleets were designed for short dashes into the oceans with quick returns to shore facilities. Some of the Italian ships did not even provide berthing space on board for all of the sailors in the crew. This design trait was prevalent in both WWI and WWII ships. The American CHs of the BROOKLYN class and the British CHs of the COUNTY class possessed freeboard that dwarfed most Axis CHs. Most of our battling occurs in still ponds where "high" waves do not penalize ships with minimum freeboard -- even the lake at

Amarillo in 1988 was relatively calm. Generally, low Axis freeboard combined with casement guns mounted in the hull (even above the main deck but below the forecastle deck) accentuates the advantage in favor of the Axis if casement guns are allowed to be constructed impenetrable.

My proposal for penetrable freeboard is as follows:

Class I, II & III.....1 1/4" above WL
Class IV & V.....1" above WL
Classes VI-VIII.....Per Planset

The capital ships would therefore have 15 feet of penetrable freeboard above their waterline. If any portion of the casement guns fall within this dimension, that portion would be built to the same penetrable rules as the penetrable hull area. Cruisers would leave 12 feet penetrable. This seems reasonable and I welcome your discussion and comments.

I would like to adopt another Skunkworks approach and state in the construction rules that if a stringer (as defined in our rules) passes through or into any portion of the penetrable hull area, an additional 1/8 inch of penetrable hull height must be added to the ship. This approach leaves the use of stringers (which make construction easier) to the builder -- if you want them you pay a penalty to even out making your building easier.

The argument always arises at this point that the BB captains will simply allow their hulls to fill with water to the degree that would cause their penetrable hull area to be reduced to a minimum and maintain that level with their pumps. I have two rule changes that address that scenario. Let's eliminate the +10% overload displacement that the Ship List allows for Class I through III ships. They don't need this allowance to be easily built (as do the cruisers and smaller ships); most of us who have capital ships have to ballast them to get to the standard displacement waterline. In addition let's require that the plates used in automatic pump turnon switches be set to turn on at 1/4" water depth. That will prevent the situation described above. Or, how about a switch that is inserted in the pump power circuit that turns off all power to pumps when the water level

RESULTS OF 1989 BALLOTING

My friends, let us say it now and say it proudly: we've come a long way. We began many moons ago with a handful of ships and a dream of glory; now whole fleets sail into action, guided by seasoned captains, governed by a constitution which ensures equality and promotes fair play. A long way indeed. Our hobby is still growing, and our potential seems limitless; I confidently predict that the day will come when we will be able to accurately restage the great sea battles of WWII, with sortles involving several hundred ships; when ours will be not merely a participatory but also a spectator sport; when Hullbusters will be a slick, four-color mag, with Fluegel's dour visage gracing the title page. All this will necessitate change, and I'll have more to say about that in future columns.

In what may well prove to be the political coup of the year, I managed, somehow or another, to get myself elected Secretary. Whether this was due to my personal charm, Fluegel's calculated lies, or the thoughtful application of Axis slush funds is, I

believe, wholly irrelevant; what matters is, I won! And I'd like to thank the little people who made it possible. On second thought, forget the little people. I want to thank the big people, the people who make this hobby what it is: the best! Now that the Executive Board belongs to the Axis (forget those two Allied pimps) you can all rest assured that order and efficiency will be our watchwords, and that we will ignore our Axis instincts and work for the best interests of the hobby.

Now on to real news: the results of the proposals. Sixty-five votes were available, and a two-thirds majority was needed for passage.

1. 61 yes, 4 no, passed
2. 50 yes, 13 no, 2 no vote or opinion, passed
3. 52 yes, 13 no, passed
4. 36 yes, 29 no, did not pass
5. 49 yes, 16 no, passed
6. 61 yes, 44 no, passed
7. 43 yes, 22 no, did not pass
8. 47 yes, 18 no, passed
9. 37 yes, 24 no, 4 votes abstained, did not pass
10. 57 yes, 8 no, passed
11. 59 yes, 6 no, passed
12. 44 yes, 21 no, passed

13. 61 yes, 4 no, passed
14. 54 yes, 11 no, passed
15. 34 yes, 31 no, did not pass
16. 51 yes, 14 no, passed
17. 38 yes, 27 no, did not pass
18. 45 yes, 20 no, passed
19. 59 yes, 6 no, passed
20. 43 yes, 22 no, did not pass

A few statistical points of interest: father and son teams voted identically, as did husband and wife teams, but brothers usually opposed each other. Also, most voters were scrupulous, voting against proposals that might benefit one side at the other's expense.

I'll have an article in every Hullbusters until the end of my term, unless I manage to rig up a lifetime appointment. Battle scores, voting results, individual scores, send me all your scores! Don't forget that Hullbusters is our ideas forum. Write articles, opinions, how-to's, anything that might help our hobby. My phone number is 504-282-4340, or send tapes to: 5137 Painters, New Orleans, LA., 70122. Remember, the first line of our constitution is fun! See ya!

Wade Koehn

within the hull is 1 1/2" (or another figure) above the waterline. This switch would have to operate like a circuit breaker in that once thrown it would have to be manually reset (after the subsequent sink). There are simple ways to insure that BBs can't cruise around with 1/4" of freeboard showing. Put your thinking caps on!!

MODIFYING OUR SHIPS

If we adopted these rule changes could we modify our existing ships easily? I believe we could. The reduction in penetrable freeboard height could be accomplished by installing another hardwood gunwale at the proper height above the waterline and resheeting the penetrable skin. The skin above which would be made impenetrable could be resheeted with plywood or plastic. A "down and dirty" approach would be to leave the ship as is, but not count hull hits which are above the penetrable freeboard line. (A ship in this condition couldn't claim, however, that the high holes caused a sink and that it should be disallowed.) The new, reduced penetrable hull length could be cared for by sheeting with plywood between ribs which lie within the impenetrable hull area. I am sure that those of us with ships which would have shorter and narrower penetrable hull surfaces would spend the time necessary to modify the affected ships.

WHAT ABOUT CRUISERS?

I don't feel that many classes of cruisers are unbuilt because of their hull characteristics -- except maybe for the large USA WWII cruisers (CLEVELAND class and DES MOINES class) whose large hull lengths and generous freeboards make them less desirable than the Treaty class American cruisers. WWI cruisers are unbuilt because of their relatively slow (26-28 second) speed. But, if we're dealing with freeboard within the

capital ship classes, let's be consistent and deal with the cruisers also. I propose that we make the maximum penetrable freeboard on Class IV and Class V cruisers 1" above and below the waterline. I propose leaving the penetrable hull length as it exists in our present rules -- 85% of the overall length. This will simulate the relative lack of armour protection that CHs and CLs enjoyed as compared to capital ships. I believe that the hulls of convoy ships, DDs and smaller ships should be built as they are under the existing rules. These ships had no armour, and their small displacement forces a builder of a DD to think light weight anyway.

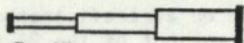
JASS PROPOSAL

SHORT SHIP	CLASS	SPEED (SECONDS)	HULL LENGTH (FEET)	PENETRABLE HULL LENGTH (INCHES)*
LITTORIA	I	24	790	55.96
SOUTH DAKOTA	I	26	680	48.17
RODNEY	I	28	710	50.29
SCHARNHORST	II	24	770	54.54
QUEEN ELIZABETH	II	26	640	45.33
WYOMING	II	28	562	39.81
DUNKERQUE	III	24	704	49.87
VON DER TANN	III	26	563	39.88
WESTFALLEN	III	28	479	33.93
MICHIGAN	III	30	453	32.09

NOTES: * PENETRABLE HULL LENGTH = OVERALL LENGTH X 85%
ON ABOVE CLASSES PENETRABLE HEIGHT = 1 1/4"

SHIP NAME	LENGTH (FEET)	LENGTH (INCHES)	SPEED (SECONDS)	CLASS	SHIP NAME	LENGTH (FEET)	LENGTH (INCHES)	SPEED (SECONDS)	CLASS
LITTORIA	790	65.8	24	I	DUNKERQUE	704	58.7	24	III
RICHELIEU	813	67.8	24	I	TIGER	704	58.7	24	III
VANGUARD	814	67.8	24	I	KONGO	729	60.8	24	III
IOWA	887	73.9	24	I	COURAGEOUS	786	65.5	24	III
SOUTH DAKOTA	680	56.7	26	I	FURIOUS	794	66.2	24	III
N. CAROLINA	729	60.8	26	I	RENOUN	794	66.2	24	III
KING GEORGE	745	62.1	26	I	ALASKA	809	67.4	24	III
BISMARCK	813	67.8	26	I	VON DER TANN	563	46.9	26	III
YAMATO	863	71.9	26	I	INVINCIBLE	567	47.3	26	III
RODNEY	710	59.2	28	I	INDEF'ABLE	590	49.2	26	III
SCHARNHORST	770	64.2	24	II	MOLTKE	611	50.9	26	III
HOOD	861	71.8	24	II	C. CAUDOUR	611	50.9	26	III
Q. ELIZABETH	640	53.3	26	II	ANDREA DORIA	613	51.1	26	III
HYUGA	721	60.1	26	II	SEYDLITZ	658	54.8	26	III
NAGATO	738	61.5	26	II	HINDENBERG	689	57.4	26	III
WYOMING	562	46.8	28	II	WESTFALLEN	479	39.9	28	III
ARKANSAS	562	46.8	28	II	DELAWARE	510	42.5	28	III
TEXAS	573	47.8	28	II	FLORIDA	522	43.5	28	III
KONIG	580	48.3	28	II	(6 SHIPS)
NEVADA	583	48.6	28	II	HERCULES	546	45.5	28	III
BAYERN	590	49.2	28	II	HELGOLAND	548	45.7	28	III
PENNSYLVANIA	608	50.7	28	II	COURBET	548	45.7	28	III
IRON DUKE	623	51.9	28	II	D. ALLEGHERI	552	46.0	28	III
REVENGE	624	52.0	28	II	ERIN	560	46.7	28	III
N. MEXICO	624	52.0	28	II	KAISER	564	47.0	28	III
TENNESSEE	625	52.1	28	II	ORION	581	48.4	28	III
MARYLAND	625	52.1	28	II	KING GEORGE	598	49.8	28	III
AGINCOURT	672	56.0	28	II	MICHIGAN	453	37.8	30	III
FUSO	698	58.2	28	II					

Observations of the Founding Father



By Stan Watkins 9/19/89

Greetings Combatants!

This observation is being written to inject a little knowledge for consideration for potential Nats (and Regional) Site Hosts. It is really great to have Nats in your home town. We can all imagine advantages. There are some other things to consider before making your commitment. I believe we need a written club policy.

Lots of combatants have thought about this and some of the ideas have been expressed in this column before. For example in the February 89 Observations column, "As site host I hereby request the contest director to require detweaking of any gun that can penetrate two pieces of corrugated cardboard more than one shot in 10." and "So combatants, even though some of you are not concerned about the safety risk, try to anticipate a special site safety requirement of the 1982 World's Fair Site in Knoxville Tennessee and please come with gun power necessary only to penetrate a 14 inch drop test hull skin at a range of 10 feet." Sounds ridiculous doesn't it. Maybe I am too concerned about the risk. My best friend, Fluegel keeps telling me that.

But since I am sort of obsessed with the risk of harming people, I had to add even a more far out fear (Property Damage) in the June 89 Observations column. The article stated in part "Another concern is the closeness of the large picture windows of the Convention Center. They are only about 50 feet from the lake and run almost the whole length of the lake. Please remember that the cost of the breaking of the windows will have to be covered by the club (sorry, I just can't afford to pay for the hundreds of dollars the replacement of even one of these windows would cost). So remember that and keep your gun power down. There will be lots of chances for BBs to glance off of the smooth water. Generally, there is no hazard because of a about 3 foot high bank on the Convention Center side of the lake, but a high power glancing shot could possibly break a window. Please help."

By stating all of this concern and renouncing all liability for damage was the Site Host really covered by the club or NAMBA insurance? Who knows? I guess it would be up to the board or president (or treasurer) if a claim came in. And what about personal injury (shooting a child's eye out)? Is the Site Host Liable? Well, these are not really valid concerns because there really is no risk, right???

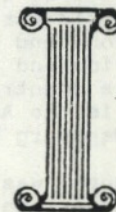
You see why I recommended that the Nationals Site Host get a vote on the board. Actually, I misstated my rule proposal (and that is my fault). What I meant was that the Site Host should have a vote on safety issues that could effect his site. I guess it was a dumb idea because it was overwhelmingly voted down!

So, when I received the call from a manager of the Convention Center a few weeks ago, asking if our club had insurance to pay for the window with the BB type hole in it, I decided it wasn't such a dumb idea after all. Thank God it was only a \$297 window and not an eye. I didn't know what to say to the man. So, I said that he could send me a letter explaining the problem and that I would send it to the President (he gave vocal opposition to the Site Host vote idea) of the club and he could decide what to do. He said he would send me the letter within the week. People (especially Tennesseans) don't like to write, maybe that is why I have still not received the letter. I hope he never sends it. But if he does the club (whoever that is) will have to make some decisions that will set precedence. If the club refuses to pay, that will be a clear message to future Site Hosts that they are on their own. They have no input to safety issues that effect their site but are fully liable for problems that result. If the club does pay, that will say that the club will support the Site Hosts but to what limits? \$297 is not too bad. What if we had broken 3 or 6 or 10 windows? How does \$2970 grab you? Or \$10,000 in surgery to repair a damaged eye? Well, NAMBA insurance covers it, right? Maybe, but the insurance company stands an excellent chance of beating the claim (read the NAMBA combat safety rules some time). Also, since we have so few members, I'll bet that NAMBA (or their insurer) will drop us like a hot potato if we turn in even a \$297 claim. It would tell them that our sport hobby is not as "harmless" as they had thought and that if a BB can break a 3/8 inch thick glass window at 50 ft. what might that do to an eye? Even at 50 feet that tells me that some guns could put out an eye. Just something to think about. That is what this column is about. I'll let you other potential Site Hosts know who pays the bill (if it comes in). I think you might like to know where you stand (alone?). Well, Thank you GOD for protecting us (and others from us) so far.....and

Let's battle, but let's also think and act to reduce the risk and plan on resolving liability questions before they are problems.

Stan Watkins
1042 Lovell View Dr.
Knoxville, TN 37932
(615) 675-7747

President's Column



Its time to talk of unpleasant things -- like going to the dentist, or being an Axis at Knoxville in 1989!! Or, even worse, 1991 frequencies and the effect on us. First, some background information on what January 1, 1991 will bring to our hobby.

BACKGROUND

We presently have assigned to us fifteen even numbered channels (62 to 90); the frequencies go from 75.430 MHz to 75.990 MHz, in steps of 0.04 MHz. The good news is that the FCC has authorized 15 additional R/C channels for surface modelers. ↗

These additional frequencies will give us a total of 30 channels in the 75 MHz band; in addition, the 6 existing frequencies in the 26 & 27 MHz band will remain usable for surface models. The bad news is that the 15 new channels will be between the existing 15 channels for surface users in the 75 MHz band. Our new frequencies will be the odd numbered channels between 62 and 90 -- with an interval of 0.02 MHz between channels. This means that all of our existing 75 MHz radio equipment (both receivers and transmitters) will have to be modified to discriminate a narrower signal. The 30 narrow band (NB) channels that will be available on 1-1-91 will provide us with sufficient channels to battle in large fleets on surface frequencies. The information that appears below about what the R/C manufacturers plan to do for 1991 was gathered by me over the phone with the companies listed. Their plans may change between now and 1991, so hold off just yet on buying new equipment. Just as a point of interest, the aircraft people will have 50 channels (25 new ones) to use after 1-1-91; (that's what 250,000 AMA members can accomplish lobbying in Washington). The fifty aircraft frequencies will all be in the 72 MHz frequency range.

FUTABA

Futaba plans to manufacture and sell 1991 NB crystals for only the existing 15 channels in the 75 MHz band. The car and boat racing clubs have told Futaba that they do not require the 15 additional 75 MHz channels (thanks, guys!!). We are not a big enough market for Futaba to manufacture the crystals for the additional fifteen 75 MHz NB frequencies. Futaba told me that their "Conquest" transmitters are 1991 NB compatible right now. They will modify other existing Futaba R/C transmitters to make them 1991 NB compatible for about \$10. They have no plans, however, to modify existing receivers -- you must purchase a new 1991 NB 75 MHz receiver. EVEN IF YOU MODIFY YOUR EXISTING TRANSMITTER AND BUY A NEW RECEIVER, THEY WILL ONLY BE CRYSTALLED ON ONE OF THE EXISTING 15 EVEN NUMBERED SURFACE CHANNELS.

AIRTRONICS

Airtronics is essentially in the same position as Futaba. Airtronics will not make 1991 NB 75 MHz gear on the 15 new channels. (Same reason as Futaba -- the racers do not need them.) Airtronics will, however, modify both existing transmitters and receivers to meet 1991 75 MHz NB requirements; the cost will be about \$60 to \$80 depending on the exact setup you have. Airtronics (and Futaba, too)

said they have no plans to make 75 MHz NB equipment in other than 2 channel configurations -- to serve the BIG market, the racers.

ACE RADIO

Finally some good news!! Ace is planning to make and sell crystals for all 30 of the 1991 75 MHz NB surface channels. They will configure any of their surface or aircraft transmitters and receivers for use on any one of the 30 channels in the 75 MHz NB range!! They have a 4 channel radio (transmitter and receiver without servos) for \$175. This radio has 2 functions on the left joystick and 2 on the right joystick. For an extra \$17 you can get a fifth channel. Their gear is compatible with Futaba and Airtronics servos; you only need to change the plugs on the servos. We may all end up with Ace radios and join Steve Milholland in his "I'm in -- I'm out!!" routine.

RECOMMENDATIONS

It's still too early in the game to run out and buy new equipment or send in existing equipment for modification. The major players (Futaba and Airtronics) could still change their minds -- but I doubt it. James Foster is looking into another crystal source that might allow us to plug in the 15 new frequencies into 1991 75 MHz NB modified Futaba and Airtronics gear.

If the picture remains as it is now, all of us could get 1991 75 MHz NB compatible by spending \$60 to \$80 to modify our existing Futaba or Airtronics equipment (although we would remain on the existing 15 channels), or we could spend \$180 to buy new Ace equipment and specify any one of the 30 channels. But, either way you must modify your present 75 MHz wide band gear. Why? Because if, for example, after 1-1-91 you are using a pre-1991 (illegal) radio on Channel 68 (75.550 MHz) and I turn on my 1991 legal Channel 69 radio (75.570 MHz), my signal will swamp out your receiver and you will lose control of your ship. We will all have to spend \$\$ to get 1991 75 MHz NB legal -- as the FCC says, "You can pay me now, or pay me later". Actually don't blame the FCC for this situation; the modeling community requested the additional frequencies. With the airwaves so crowded, the only place to get "new" frequencies is between existing frequencies. I'll keep you updated on this topic as the situation evolves.

Hope to see you at Decatur in October,

Tom Jass

Naval Review

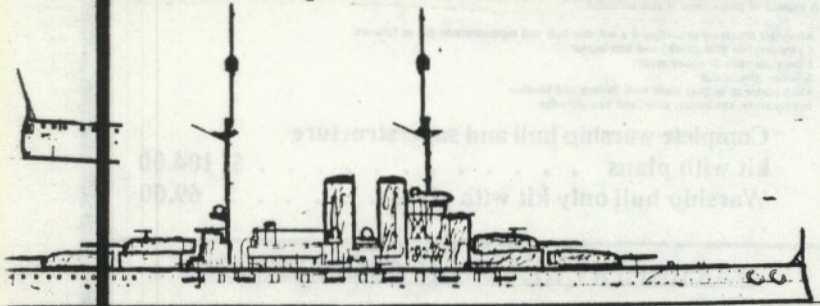
Welcome once again to another naval review. For this review we will go back to a time beyond the Second World War, beyond the 1930's with years of depression, and the 1920's the years of prohibition and the speak easy to a navy indeed an entire country that no longer exists. This country is the Austro-Hungarian Empire, also known as the Hapsburg Empire, and sometimes simply as Austria.

This country was a giant sprawling multi national Empire under the hegemony of German speaking peoples at the center of the Empire. The Royal family of this Empire was the Hapsburg German family of Austria, hence the name Hapsburg Empire. The Empire consisted of what are now the nations of Austria, Hungary, Yugoslavia, Czechoslovakia, and parts of Poland, Bulgaria, and Italy. It contained within its borders various peoples such as Austrians, Hungarians, Slavs, Croats, and Slovaks. In all over 20 different nationalities inhabited the Empire. The Empire was destroyed by the First World War and by the internal pressures of nationalism among its polygog of peoples. The various peoples of the Empire longed for their own separate nations and their own identity. Only the Hapsburg Emperor Frans Joseph held the Empire

together in the face of these internal political problems.

The assassination of the Heir to the Austrian Throne Arch Duke Frans Ferdinand began World War One. After the death of the heir to the throne and that of the Emperor himself during the war along with the deterioration of the war situation, the threads holding the Empire together began to unravel. Rising nationalistic feelings began to undermine the Empire to such an extent that it became devoid of all meaning to pursue trying to win the war. In such a situation it is no wonder that Germany felt betrayed when her Ally that she began the war for started to falter. At the wars end the Empire was divided into its various parts by the treaty of Versailles. Under the leadership of the house of Hapsburg the Empire did however have a significant effect on European history, practically dominating central Europe. The coast line of the Empire was 370 miles long on the Adriatic Sea. The Adriatic Sea lying as it does between the boot of Italy and the coast of the former Empire made it easy for the Allied powers to confine the Austrian navy there. This is exactly what happened. Well aware of this confinement feature the Austrian navy waged a ceaseless war within itself prior to the outbreak of the real war as to the size and composition of

the navy, and weather to restrict itself to coastal defence operations or enter world power arenas by building a powerful surface fleet. In the end as with most such volatile situations a compromise was worked out among the sides that suited both sides some and neither side entirely. Austria built Battleships to provide power projection for foreign policy and numerous small craft for coast defence and cooperation with the Battleships in the local Adriatic. What was lacking was a Destroyer force capable of escorting the Battleships to the central Mediterranean. But



VIRIBUS UNITIS class battleships

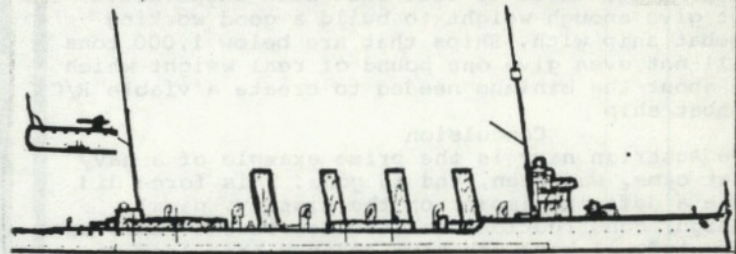
perhaps in this instance they were not really needed as Austrian Battleships spent so little time outside of home waters. The Battleships did help to gain the confidence of the German Kaiser and had an important influence on the German alliance. This interconnecting web of alliances helped to ensure that the assassination of the Crown Prince Grand Duke Frans Ferdinand and his wife would launch World War One by dragging Germany, Russia, France, and England quickly into a quarrel essentially between Austria and Serbia. The war began with Austrian victories and those of her German Ally. Austrian strength began to wane however and resulted in the final defeat by the Allies in 1918. The death of the old Austrian Emperor Frans Joesph in 1916 played a major part in Austria's demise as he was the only symbol under which the Empire united and all the peoples served. Although the war continued until 1918 the heart of Austria was not in it after his death.

The Ships and Facilities

The principal bases and dock yards of the navy were located at Pola, Cattano, Fuime, and Trieste. The major armament supplier was the Skoda Werkes. All Austrian ships were built in Austrian yards, but many ship designs had foreign assistance. The Battle of Lissa fought in 1866 which was a major naval victory for the Austrians over the Italians had an important influence on Austrian naval policies. This battle strongly weighted into consideration for building Battleships. The manning of these large ships in the Austrian navy was always a problem. The source was the multi national make up of the crews. Officers were required to speak at least six different languages to communicate with their crews. The compact Viribus Unitas class Battleships were the most powerful Battleships ever built in their size. These ships were the pride of the Austrian navy. These Battle Wagons had several technical innovations such as the world's first triple turrents and super imposed turrents fore and aft. This gave a very heavy broadside with good in theory end on end fire although this was somewhat limited in practise due to blast considerations. The Skoda Werkes 12 inch guns were among the best in the world. The Viribus Unitas was named after the personal motto of the Emperor Frans Joesph which meant translated to "of one purpose" and or "common unity". All of the class had 4 shafts and yarrow turbines with twin rudders except Svent Istvan which had twin shafts and babcock turbines with twin rudders. The Viribus Unitas was sunk at the wars end by limpet mines. The Svent Istvan was torpedoed and the other 2 ships of the class were ceded to the Allies with the Tegetthoff being scrapped by the Italians in 1925 and Prinz Eugen sunk as a target for the French fleet in 1922. The Erzherzog Carl and Radetzky class

Predreadnoughts were of course badly out classed by the Dreadnought Battleships of the time but served useful purposes such as bombardment duties and support of the larger Battleships. All 6 Predreadnought Battleships were scrapped by the Allies in the 1920's.

The next major group of the Austrian navy was her squadron of Light Protected Cruisers. These ships were the Admiral Spaun and the sub class of improved Admiral Spaun's also known as the Salda class. The improved meant lighter engines and the saved weight being used to add two more 3.9 inch guns and strenghtened hull scantlings. These Cruisers were faster and better protected than most foreign Cruisers but were more weakly armed. Admiral Spaun was to have been rearmed with 3 X 5.9 inch guns and the Salda's with 5 X 5.9 inch guns in 1918 but as the war was almost over this did not materialize. These ships played an active role in Adriatic patrols frequently engaging allied forces. They all survived the war being ceded to the Allies and scrapped in the 1920's. The Austrian navy produced very few large Destroyers before the war feeling quite rightly that the range and seaworthyness were not needed in the Adriatic, preferring Light Cruisers for escort further afield. However during the war a need was felt to match the larger Allied Destroyer designs. The final result was the Ersatz Tatra class which was an improved and lenghtened version



ADMIRAL SPAUN scout cruiser

of the Tatra class. These 4 Destroyers were the last and finest of the Austrian navy. They were ceded to France and Italy and lasted until the 1930's. The deep weight of the Erstz Tatra is for the Dukla renamed Matelot Leblanc after her final refit in French service. The Fleet sortied in 1914 on the out break of war to escort the German Mediterrean Squadron (Goeben and Breslau) to Pola, but the German Admiral had other ideas and made for Turkish waters. The Austrian fleet remained at sea for some time to draw off members of the Allied fleets by their activities. The German plan to send the Austrian fleet to Turkey to help against Russia was turned down. As it would have probably been a one way mission and would leave the coast undefended and open to invasion, the Austrians kept their fleet home. When Italy entered the war on the Allied side renegging on its treaty with the central powers, the fleet sortied and bombarded the Italian coast at Ancona. With Italy in the war the Allies were able to blockade the Adriatic at Otranto and bottle up the Austrian fleet. The nature of the Dalmatia coast of the Empire with its chain of islands and deep narrow channels meant that the Battleships and fleet although hemmed in could move between its bases with ease. The area was used by the Austrian forces to raid Allied convoys, the Italian coast line, and the blockading warships. The final operation by the Austrian Battlefleet was to be a grand attack on the Otranto barrage Allied blockade, but when the fleet left port the Battleship Svent Istvan was torpedoed and sunk and the operation was called off. The Austrians attempted to add to their navy during the war but were unable due a shortage of raw materials and skilled man power. Some of these ships would have been an improved Tegetthoff Class Battleships also known as the Ersatz Monarch class only one keel was reported laid down. The Austrians also wanted more Light Cruisers. They were to be larger at 5,000 tons standard with 4.7 inch guns, a 4.7

armor belt, and 30 knot speed. They could not even be laid down however as the entire dock yard force where they were to be built had been drafted into the army. The Austrians had also accepted the need for larger Destroyers and had begun gathering materials for a new class of 2,400 ton Destroyers, which would have been large indeed for that time but a shortage of high tensile steel prevented them from being laid down. Although their capital ships sat out most of the war in port as a fleet in being, their small ships were handled with great daring keeping the Allied patrolling forces on constant alert and guard.

Combat Use

The Virbis Unitas Battleships are small efficient 4 unit Battleships. They have excellent maneuverability. They have the weight for good battery storage and a wide beam to get them in there, but they are on the slow side. Speed did not seem to be a handicap for Jim lisher or James Foster though. This class has proven to be a good one. What was it said by that famous captain Mercury Peabody there are no bad ships only bad captains. The light Cruisers are small targets and have a higher turn of speed than the Battleships, they are class 6 Cruisers. The Ersatz Tatra class Destroyers are small but they were the largest ones built by the Austrian navy. Ships Below 1,000 tons standard displacement are not listed on the ships list, as it is felt that such ships would not give enough weight to build a good working combat ship with. Ships that are below 1,000 tons will not even give one pound of real weight which is about the minimum needed to create a viable R/C combat ship

Conclusion

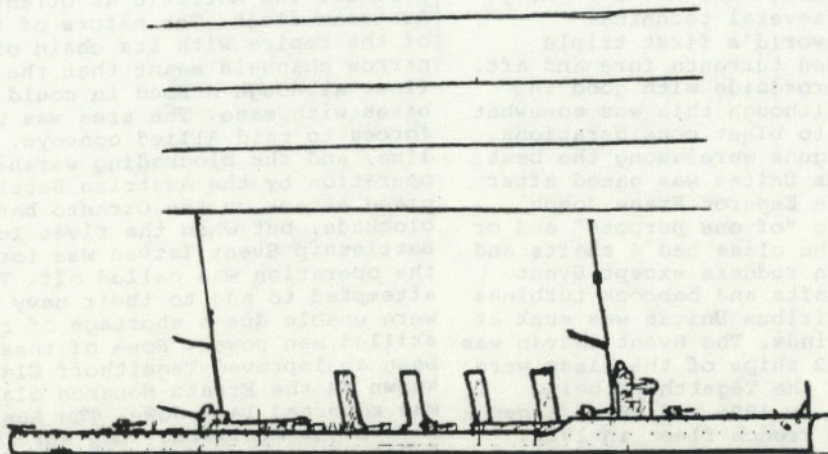
The Austrian navy is the prime example of a navy that came, was seen, and is gone. This force did have a definite impact on the history, naval design, construction, and tactics in the years of our study. I hope you have enjoyed this look at a bygone navy.

FILENAME: AUSTRIA
LRC=D18

CLASS	NAME	# SHIPS	LOA (FEET)	BEAM (FEET)	STANDARD DISP (TONS)	FULL DISP (TONS)	HEAVY	GUNS	SPEED (KNOTS)	BUILT	OFF/DEF CLASS	SPEED (SEC/100 FT)
							MODEL (LBS)					
PREDREADNAUGHT	ERZ. CARL	3	414	72	10,600	12,400	9,302	8.2	4 9.4	20.00	1906-07	4 28
	RADETZKY	3	456	81	14,500	16,200	12,153	9.1	4 12.0	20.00	1908-10	4 28
BREADNAUGHT	VIR. UNITIS	4	499	90	20,000	22,000	16,504	11.0	12 12.0	20.00	1912-15	3 28
LIGHT CRUISER	ADM. SPALM	1	428	42	3,500	4,200	3,151	2.4	7 3.9	27.00	1910	6 26
	SAIDI	3	428	42	3,500	4,200	3,151	2.4	9 3.9	27.00	1910	6 26
DESTROYER	ERS. TATRA	4	280	26	1,000	1,400	1,050	NA	2 3.9	32.00	1917-18	7 24

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SAIDA class scout cruisers

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Included in the warship kits are:
 Precut plywood ribs, deck, keel, deck rim, and radio box.
 Balsa and plywood hull sheeting.
 Fiberglass cloth for reinforcement of the hull bottom.
 Prop shafts and shaft housings.
 Basic superstructure blocks, decks, stacks, and turret necessary to meet the rules of IAMWC and BR/CWCC. Superstructure parts are preformed of wood, plastic, high density foam, and metal tubing.
 A set of 1/164 scale plans for fine detailing of the hull and superstructure if desired (Note: materials for fine detailing are NOT included in these kits).
 A manual of instructions is also included.

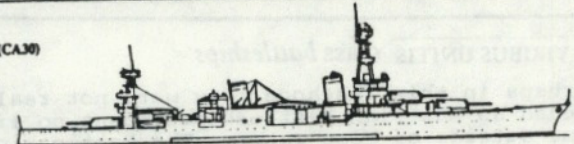
Materials necessary to complete a warship hull and superstructure are as follows:
 Cyanoacrylate glue (thick) and accelerator
 Fiberglass resin or epoxy resin
 Silicone glue/sealer
 Model dope or lacquer paint with thinner and brushes
 Hobby knife, sandpaper, ruler, and straight edge

Complete warship hull and superstructure kit with plans \$ 104.00
Warship hull only kit with plans \$ 69.00

WARSHIPS AVAILABLE AS COMPLETE KITS

USS HOUSTON (CA30)

Length: 58.00 in.
 Beam: 5.50 in.
 Max wt: 9.68 lb.



USS BROOKLYN

Length: 58.69 in.
 Beam: 5.15 in.
 Max wt: 9.68 lb.



HMS EXETER

Length: 47.92 in.
 Beam: 4.83 in.
 Max wt: 8.25 lb.

