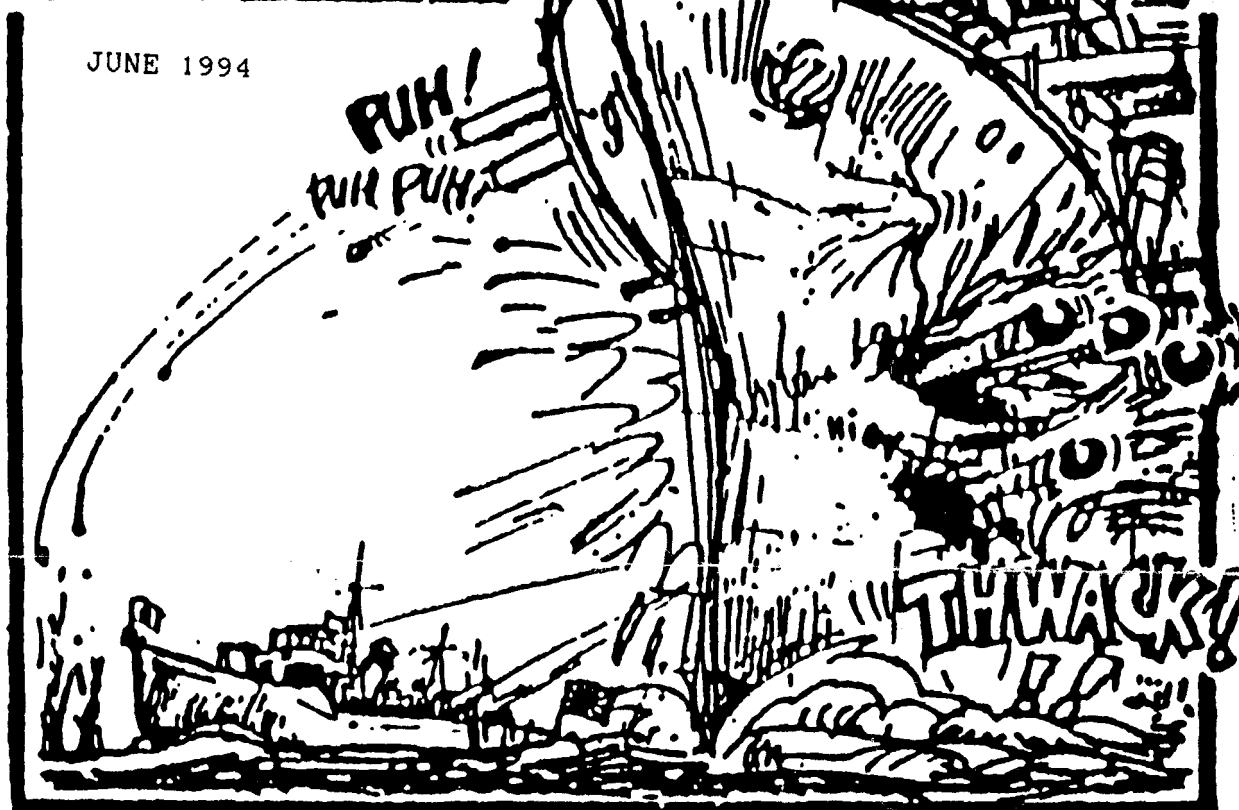


HULLBUSTERS

JUNE 1994



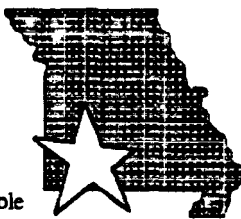
MO Notes:

by Steve Milholland

DATELINE: MAY 24, 1994 - The Spring BB Fest here in Springfield, MO (May 21-22) is now history, but memorable history indeed for those who were in attendance. I really feel sorry for those who were unable to be here for one of the most enjoyable regionals that I can remember.

The weekend weather was perfect, highs in the low 80's without a cloud in sight all weekend. Our new lake at Ritter Springs Park proved itself to be a great site for battles with shaded pit, shallow water and relative seclusion from mass quantities of people. Last but not least, lots of great combat action leaving everyone happy thoughts to ponder on the trip home.

In attendance were: from Missouri, myself, James Foster, Rick Whitsell, and Willard Adams, from Arkansas were Jay Edwards and Terry Keef, from Oklahoma; Jim Ewers, from Texas; Jim Pate and Chris Pearce, and from Georgia; "Bart Man" Purvis, Randy Kricke, and son Curtis Kricke. This is only about half of those who were supposed to attend, it seems that a lot of folks had last minute obligations



that prevented them from being here. It is hoped that they will all be able to come to our fall regionals in September. they sure missed a good Spring regionals.

Also in attendance but acting as a dedicated videographer was none other than "Curly" Barrett from Roseville, MN.

SATURDAY MAY, 21 -- Fleet Battle # 1

BLUE	Jay Edwards	DMB Vitoreo Veneto
	James Foster	SRN Sverige
Adm.	Chris Pearce	HMS Queen Elizabeth
	Willard Adams	USS Washington
	Bart Purvis	USS Pennsylvania
	Randy Kricke	USS Atlanta

RED	Jim Ewers	HMS Exeter
	Steve Milholland	DKM Lutzow
Adm.	Jim Pate	USS Indiana
	Rick Whitsell	USS North Carolina
	Terry Keef	HMS Vanguard
	Curtis Kricke	DKM Graf Spee

As is usual with this group, battling started out very fast and furious. Battleships played the "Hug-em & Slug-em" game while the cruisers played "Hit & Run" or "Run & Gun". Battleships tried to run down and side gun the cruisers but most of the small ship captains were too cagey to allow that. Cruisers would come in with bow cannons on

exposed and occupied battleships to get in a few shots before breaking away. Some ships maneuvered around and under the single dock in the lake while others used the pilings of another dock which was washed away in last years flood as battling obstacles.

Sometime near the end of the sortie, HMS Vanguard starting showing signs of distress. After a few short minutes of harrasment by the Q.E. and Sverige, she went down by the dock pilings. Terry Keef was the first of the weekend to enter the "Order of the Soggy Shorts". This left Blue fleet with a decided points advantage at the end of sortie one.

The second sortie was where things really started to happen. Shortly after sortie #2 of battle #1 began, USS Atlanta went dead in the water. After some much due attention by DKM Lutzow and others, she went down stern first. Randy Kricke became second of the day for wet underwear. After seeing the rather massive damage to his recovered USS Atlanta, Bart Purvis expressed doubts about further loans of his ships to rookie captains. After hearing Barts comment, Randy Kricke expressed doubts about future borrowing of ships with defective drive systems. After a brief exchange of good natured ribbing, bones were set, wounds were stitched, and the two were fast friends again.

Next to feel the chill of Spring water was none other than Red fleet Admiral Jim Pate. His USS Indiana was doing its usual fine job when his pump suddenly developed a decorative spray pattern in its output stream. Obviously, some form of detritus had found its way past the pump screen and had partially blocked the outlet hole. Indiana went to the bottom amid cheers from Blue fleet. Jim said later that he thinks Springfield is bad luck for his Indiana, it only sank once in 1993 and that was also in Springfield.

After all was said and done, Blue fleet was victorious in battle #1, 4905 points to 3806.

Fleet battle #2 saw the fleets exchange Admirals. Jim Pate was now in charge of Blue Fleet and Chris Pearce of Red. While there were no sinks in battle #2, battling was still fierce, fierce enough to accumulate over 7000 points. Blue fleet won again, 4729 points to 2379.

Fleet battle #3, on Sunday morning, saw another exchange. Red fleet exchanged Steve Milholland (DKM Lutzow) for Blue fleets James Foster (SRN Sverige). Each fleet was also short one ship as the father and son team of Randy and Curtis Kricke had

left for home in Evans, GA earlier that morning.

Sortie #1 saw the fourth sink of the event when the USS Washington turned submarine. The seemingly invincible Sverige of James Foster also found itself on the receiving end of several triple stern salvos during the melee. After the sortie was over it was seen that the little Swedish ship had several large below the waterline hits and could be put down with a little work in the second sortie.

In sortie #2 the Indiana immediately went for the wounded Sverige. James Foster fought the little ship gamely (as always) and seemed to be holding his own and the pump seemed to keeping up with flooding. In a turning side by side maneuver the little ship was suddenly sucked into the prop draft at the Indianas stern and held in place along the battleships side, unable to get out. When Jim Pate centered the big ships rudder, the rooster tail that ensued swamped the Sverige and rolled it over and sank it.

It was felt that this was not really a true combat sink but was not a true ram sink either. A cordial compromise was reached between the two captains and Contest Director by calling it a combat sink but awarding only half the normal 600 sink points to Blue fleet.

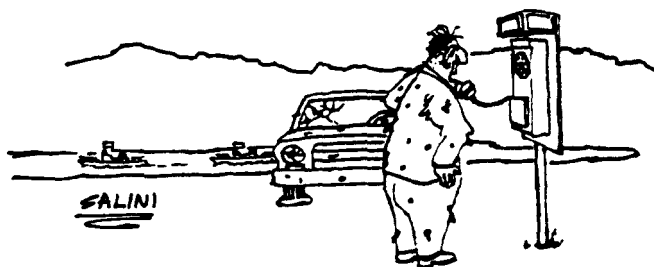
After all was over, Blue fleet won battle #3 for a clean sweep of the BB fest.

Winning the trophies for class 5-6 High Sortie Average was Jay Edwards and the "V squared". Class 2-3 High Sortie Average award went to James Foster and the SRN Sverige. An award that is becoming traditional at Springfield events is the trophy for the "Most Mangled Ship". This trophy is lovingly and specially prepared for visual effect to commemorate that ship which absorbed the most BBs in a single battle. Jim Pates USS Indiana barely beat last springs winner, Terry Keefs HMS Vanguard, by 6 holes, 105 to 99 holes.

That's it for this Spring, I hope that those of you who missed it will be here in the fall. We have the same park and lake reserved for the weekend of Sept. 10 and 11, 1994.

Speaking of the park and lake, everyone who was here seems to think that Ritter Springs would be a good prospect for a National site. We will be discussing this further at Nats., and may put in our bid for the '95 Nats. here in Springfield.

SEE "YA IN HOUSTON !!



"CAN YOU SEND A TOW TRUCK? I'M AT THE PARK RIGHT NEXT TO LAKE GENE HOWE."

Brian's Best and Worst Nats

By Brian Craven

Worst Moment: All Nats long with no control of my ship. Radio problems all week long, and I got into very few battles!

Best Moment: Getting Flugel on tape KILLING his own convoy ship in the campaign battle. Also seeing the new campaign battles (Campaign and LITE Campaign). Played out for the very first time! The Nats in Houston!!!

Electronic "Water-Sensing" Pump Switches: One More Look!!!

by Lief Goodson

I know what you veterans reading this are thinking. "Bad idea!", "Asking for trouble!", "Violates the KISS principal!", etc. But wait a minute Mr. Know-it-all! Maybe the electronic pump switch is not such a bad idea after all. Considering many veteran's ships have electronic gun switches, electronic throttle circuits (regulating shaft speed) and electronic who-knows-what-else, maybe its time we gave electronic pump switches another look.

Like most veterans I have had electronic "water-sensing" pump switches in my ship before. And like most veterans, I have had one of these switches fail in combat (luckily I had a servo activated back-up that saved me). But maybe the problem was not with the "concept" of the electronic water-sensing switch, but with the way we have implemented that concept. First let me validate the concept and then I will discuss implementation of the concept.

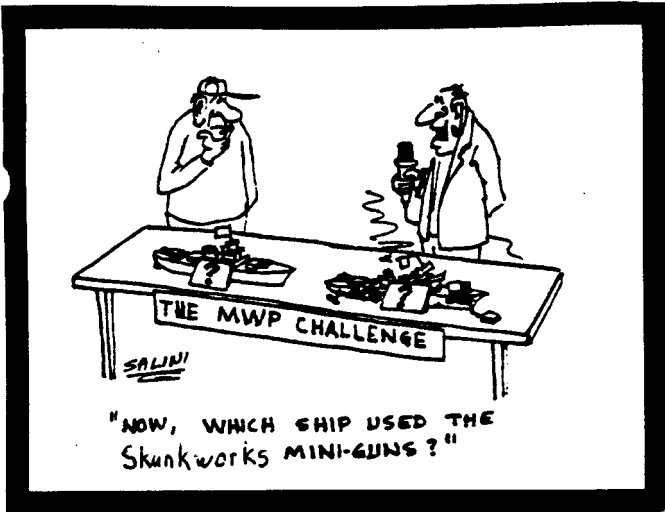
For those new to this hobby, the idea of an automatic switch to turn on your pump without your initiation may seem nifty, but superfluous. But let me set you straight. Scores of battlers (including me) can cite many instances where we sank because we merely FORGOT to turn our pumps on until it was

is the simplest, and consequently, best setup which only requires two electronic components (a transistor and relay) and a sensor plate.

Unfortunately, I feel obligated to explain why/how this auto-switch circuit works in addition to showing how to make one. Simply stated - the transistor is the "auto-switch". The transistor allows electricity to flow between its collector and emitter, as long as the resistance between the transistor's base and collector is somewhere less than infinite. In our auto-switch application the resistance between the base and collector is practically infinite until water bridges the two points. Hence without a continuous bead of water contacting both the base and collector no electricity can flow between the emitter and collector. The relay is used to take the current load off the transistor, while the sensor plate provides two relatively large contact surfaces for the water. If you are wondering if the relay and contact plate are absolutely necessary the answer is "not really". However finding a transistor that can handle the current load and which has contacts sensitive enough to pick up the subtle changes in resistance between the base and collector is not easy or cheap. So that is why the circuit uses the relay and sensor plate.

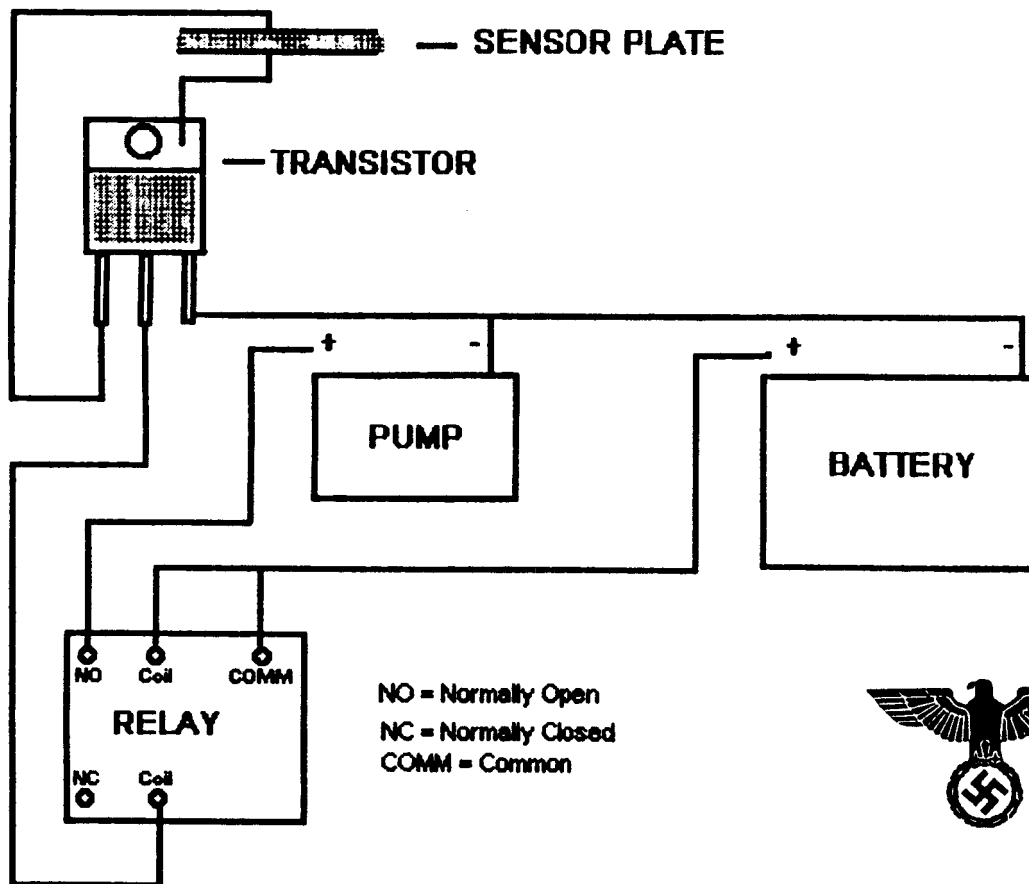
Keys to making the circuit reliable:

- NEVER, EVER, NEVER use the auto-switch as your only pump turn-on method unless you do not care if you sink. It is intended as a backup for times when you forget to turn your pump on.
- Transistor: Radio Shack carries transistors that can be used for the auto-switch circuit. A TIP3055 Transistor (P/N 276-2020) for 12 volt systems and a TIP120 Transistor (P/N 276-2068) for 6 volt systems.
- Relay: All you need is a SPST Relay, but SPDT and DPDT



too late. (There would have been many more such sinks if Will Montgomery was not constantly reminding friend and foe alike to "Turn your pump on!"). No doubt the best way to avoid the "I forgot to turn my pump on" syndrome is to have a manual (i.e. not remote controlled) switch on the outside of your ship that you merely turn on just before the beginning of a battle and turn off at the end of the battle. However, this method still allows captains to forget to turn on their pump at the battle's start, and also results in the pump being on continuously - thereby decreasing battery life and increasing the probability of a pump failure. Thus there is a valid need for an automatic pump turn-on switch.

First, let me say that I have never used a float switch - so I not going to address float switches. I will describe what I believe is the best electronic "auto-switch" setup. Shown below



relays will work equally well. For a 12 volt system, I recommend a relay with a 7 to 9 volt coil. For a 6 volt system, I recommend a relay with a 5 volt coil. This is so that when your battery drops below 12 or 6 volts the auto-switch will still work. I also recommend that you use a relay with contacts rated at about 10 amps. I had a 5 volt relay rated at 2 amps in a circuit which burned out in the middle of a sortie. Unfortunately, Radio Shack does not have relays ideal for either 12 volt or 6 volt circuits. You will have to go to a real electronics store for the ideal relay. One last note on relays, be careful of really large relays because activating their coils may put too great of a load on the transistor.

- **Sensor Plate:** The sensor plate is a 1" square piece of plastic with copper or brass glued to each side. The plastic should be 1/16" to 1/8" thick, while the thickness of the brass/copper does not really matter. Resist the temptation to use wood or PC board instead of plastic as I have discovered that these will absorb water, thereby causing the auto-switch to stay on.

- **Hook-up Wire:** Inasmuch as the circuit is measuring subtle changes in resistance, I recommend using two-phase speaker

wire (22 or 24 gage) for connecting the sensor plate to the transistor.

- **Installation:** This is where most problems occur. First, let me say that water will not hurt this circuit (especially if you use an encapsulated relay). In fact as some of the bigger relays require a fair amount of current to activate their coils which may cause the transistor to get hot - maybe very hot. So I like to keep the transistor at or below the sensor plate, so the water will cool it. To simplify matters (and reduce the number of wires required) you might want to mount the transistor right on the sensor plate. If you do this, remember that the transistor tab is connected to the collector and make sure you do not short any of the connections. The sensor plate should be mounted near your pump, but not so close that pump foam from not having enough water in your hull will keep your auto-switch constantly activated. Lastly, it really does not matter whether you install the sensor plate in a horizontal or vertical orientation. I prefer horizontal.

I hope my advice will help those of you adventurous enough to build your own auto-switch. I recently completed the S.E. Spring Regionals using this auto-switch circuit in my SMS Moltke. It worked well!

Good Ships vs. Bad Ships

By Chris Pearce

If you've been around the hobby very long, then you've probably heard this old saw as many times as I have (maybe not!), "There are no bad ships, only bad captains." Usually, everybody looks vaguely profound, and those of us who know better might chuckle a bit, but there is a point to this statement. But, you ask yourself, if this statement is true, why is it that we only seem to see the same ships and ship classes on the water, year after year?

Well, if you ask me, the answer's simple. If you're just getting started in the hobby, like I was many years ago, you might ask someone more experienced what the best ship is to start out with, and build it, or else learn the hard way; either way, you'll start out with a proven design, or be looking for one awfully quick. Thing is, when it comes time to build that second ship, which will it be??? Now, if you're like I am, you want to win, and what's more natural than to look on the lake and see what works.

So, you're at Nats, and what should you see, but Jim Pate and his Indiana annihilating the Axis' best, or Lief's Moltke tormenting the Allies. Then, you see the hapless Iowas or Yamatos being shredded. What are you going to think? "Well, shucky darn, I wanna build me one of them thar Iowas so I can suck down 1000 bbs and visit my chiropractor after picking the hulk up off the bottom." Well, I for one don't think you're that stupid, and you're much more likely to build what you see works for other people.

And what is the result? At this year's Nats, we'll see four North Carolinas, two South Dakotas, two Bismarcks, two Nagatos, and a host of other similar ships. Will there be a Konig? A Rodney? A Hood??? I doubt it. "But wait," you say, "Surely, there must be a place for other ships in the hobby???" As a matter of fact, this question was posed to me recently by a battler who has been in the hobby longer than I have. My answer to him, sadly enough, was yes, and no.

Okay, so what kind of answer is that? Very simple - As with everything else in this hobby, there are trade-offs. For example, I have the Queen Elizabeth, which at 52 inches long, has 5.5 units, twin rudders, and 26 second speed. If I wanted to make a statement, I could build the Hood, which has 5.5 units and 24

second speed, all on a length of 72 inches with only one rudder! Hmm... Half again the target area, poor turning and acceleration, and all for a lousy two seconds speed. What a bargain... As you can tell, I'm probably not going to be building the Hood anytime soon; However, if I were a brave, pioneering soul, who really wanted to build the Hood, I would, and I would make sure that it was the best one this hobby has ever seen. (That wouldn't be hard!)

Or, on the other hand, I could build the Konig, which at 46 inches has 28 second speed, 5 units, and twin rudders. The Axis high command would be all over me for violating their "Speed is everything" rule. The nasty 26 second Allied battleships could catch me. Oh, how terrible. Obviously, I wouldn't do a thing like this unless I were absolutely sure of myself, and I would want to ensure that anyone who tried to chase my Konig would regret it soon afterward.

The point I'm trying to make here is that there are plenty of other ships I could build, but there's a penalty in building them, a sort of handicap, whether that be excessive length and target area, poor maneuverability, slow speed, or whatever. At face value, a battler could look at those ships, and say, "Those are bad ships". And as a result, they would never be built by anyone who "knows better", and those few which did get built by those who didn't (i.e. beginners) would be such flops that they would reinforce the theory that these are bad ships.

That's where the catch phrase comes in, "There are no bad ships, only bad captains." As it turns out, this statement is very true. Unfortunately, this statement is also very rarely proven. While there are many very good captains in this hobby, most (like me) would rather fight the enemy than our ship, and choose ships which best suit our own abilities. However, there are a few who seem to make it their goal to build ships which have never before been built, and to build them so well that other people will see them and want to imitate them. Two years ago, if I mentioned building a Pre-Dreadnought to anybody in the hobby, I would have been laughed out of the room. Thanks to James Foster's efforts with the Sverige, I've heard many other battlers mention that it might be fun to have one of those slow, old ships, or maybe even an Armored Cruiser. And where, a few years ago, nobody would have thought of building a French light cruiser, Mike Deskin's La Galissionere has turned more than a few heads. Why, I myself managed to make the Vanguard into a decent ship, but nobody has decided to try and

repeat that effort (Maybe I sold it too quickly?) Anyways, these (and many others) are examples of Captains who have taken unknown, marginal, or even "bad" ships and made them effective.

On the other hand, if I built the Hood and armed it with bow sidemounts, and a single stern cannon, and two lousy pumps, and had poor damage control, etc. etc. etc., people would look at it and say, "What a dog! I can't believe anybody would build a ship that lousy!" and as a result, nobody but the feeble minded would be inclined to build one in the near future. Is it any wonder we don't see very many new designs on the water?

"But wait!" you say, "Maybe we should help these ships out, maybe give them extra units, or speed..." Well, that is an option, and one that we might think about in a few cases (I would prefer a 6.5 unit Hood, or a 5.5 unit Renown... Ha - ha...). But my contention is that there really is nothing wrong with a lot of these ships, like the Konig, or the Iowa, or even the Nagato... The only problem is that they haven't received the expert attention they deserve. If a Captain put one of these ships on the water and made it the killer it truly can be, then others might be more inclined to follow their lead. If we were to give certain of these ships extra capabilities (which they don't need), someone like me might build one just to show the other club members what a big mistake they made. (Go ahead, give me a 6.5 unit Hood, I dare you!)

So, if you're one of those people who are constantly whining and complaining about how there isn't any variety of ships on the water, my challenge to you is to pick a ship you like, something unusual, and go out there and prove to yourself and to the rest of the hobby how effective it can be. If you're a good

Captain, and you have the building and battling skills (and are willing to make the compromises) to make it work, then more power to you. If you don't, then you'll only help prove the old saw. (You bad Captain, you!)

On the other hand, if you're just getting started, and you think you'd like to build the USS Billboard that your Father served on in Korea, my recommendation to you is to build something else first, something which has been proven effective by years of battling, and learn how to make it reliable and battle it effectively. Then, once you've gained that all-important experience, you can either build the Billboard to the best of your abilities, or build something you like even better!

Either way, if you ask me, the important thing is for us all to have fun. If having something different and unusual is your idea of fun, then by all means, go for it! At the same time, don't come crying to me when you're patching hundreds of holes. I'll probably be patching my own thousand holes in my new Hood... (I shoulda known better!) If you're idea of a good time is to go out there and kick the enemy all over the lake, then your best bet is to look and see which ships are really doing the damage and pick one of those. Who knows, maybe in a couple of years, miracle Captain X will build the Billboard and prove to one and all what an awesome ship it is (maybe not!). And if you prefer to whine and cry about how nobody ever builds anything different, don't come cry on my shoulder, get out there and build something different, show us what you're made of! After all, you wouldn't want to admit to being a bad Captain, would you???

New Men

Ship Club 1994

1. Rogowski Francis S.	910-423-1402	2240 Hope Mill RD	Fayetteville	NC	28304
2. Montgomery Will	410-760-8991	110 Thomas Rd.	Glen Burnie	MD	21060
3. Pittelli Frank	410-266-8498	33 Milelinor Dr.	Edge Water	MD	21037
4. Blattau Michael	410-867-1910	320 Frank Moreland Pl.	Lothian	MD	20711
5. Kantor James	815-232-6431	848 W. Stephenson	Freeport	IL	61032
6. Cory James		751 Childers Rd.	Smithville	GA	31787
7. Adams Willard	833-1775	500 S. Ralston	Suger Creek	MO	64054
8. Goff George E.	305-434-2574	17330 S.W. 58th St.	Ft. Landerdale	FL	33331
9. Cole Donald	407-277-6590	9000 Haywood Ct.	Orlando	FL	32825
10. Deskin Michael W.	513-890-1593	213 J.E. Bohanan Dr. Apt 3	Vandalia	OH	45377
11. Deskin Karen C.	513-890-1593	213 J.E. Bohanan Dr. Apt 3	Vandalia	OH	45377
**12. Judd Waverly		10555 Daylton Greenville Pk	Brookville	OH	45309
13. Boyd Danny	109-769-3783	2940 Myrle St.	Vidor	TX	77662
**14. Kutz Joseph	259-2465	608 Eaglecreek Dr.	Leander	TX	78641
15. Edwards Jay	501-425-7412	601 Navada Ave.	Mountain Home	ARK	72653
16. Fisher Don	508-384-6328	P.O. Box 38	Wrentham	MA	02093
17. Milholland Steven	417-831-2309	Rt. 2 Box 81-A	Springfield	MO	65802
18. Whitsell Richard	816-734-4757	9807 N. Lydia	Kansas City	MO	64155
**19. Horbul Jr. Ron		360 Andover Blvd. N.E.	Anoka	MN	55304
20. Koehn Wade	713-952-3078	1251 Wilcrest No. 103	Houston	TX	77042
21. Purvis H.B.	912-367-7306	Rtc. 7 Box 465	Baxley	GA	31513
22. Craven Brian K.	713-537-1435	12310 Ocean Laurel Lane	Houston	TX	77014
23. Thibault Aban	803-279-3196	2103 North Ridge Rd.	North Augusta	SC	29841
24. Thibault Ronald J.	803-279-3196	2103 North Ridge Rd.	North Augusta	SC	29841
**25. Oster Alan J.	407-349-2175	1004 Nightingale Pt.	Genera	FL	32732

1000		1000		1000
<u>**26.</u> Smith	Mike	407-896-4029	2502 S. Conway #23	Orlando FL 32812
27.Hunt	Ron	919-288-6152	2611 Startford Dr.	Greenboro NC 27408
<u>**28.</u> Hunt	Cameron	919-288-6152	2611 Startford Dr.	Greenboro NC 27408
29.Hayes	Martin	410-757-5593	1113 Crestview Dr.	Annapolis MD 21401
30.Baker	Steven	404-254-9697	2270 Smokey Rd.	Newnan GA 30263
31.Friend	Buddy	503-856-3411	Rt.1 Box 5	Haines ORE 97833
<u>**32.</u> Eakin	Bob	322-6453	1611 Bert Dr.	Wichita Falls TX 76302
33.Pearce	Chris	817-738-8942	6516 St.John Dr.#3049	Ft.Worth TX 76132
<u>**34.</u> Walker	Kevin	818-287-1371	6156 North Loida Ave	Temple City CA 91780
<u>**35.</u> Jackson	Dana R.	813-869-1044	12852 Ironwood Circle	Hudson FL 34667
36.Goodson	Lief	813-646-8114	4419 Selkirk Lane,E.	Lakeland FL 33813
37.Pate	Jim	512-669-2441	HC 64 Box 21	Fredericksburg TX 78624
38.Stevenson	Wayne J.	421-5743	6134 Twin Oak Dr.	Greendale WI 53129
39.Broring	Paul J.	410-598-4772	2808 Ashmont Ter.	Silver Spring MD 20906
40.Fluegel	D.W.	214-681-9471	3524 Gray Dr.	Mesquite TX 75150
41.Lewis	Kurt	776-2329	10407 Balsamwood Dr.	Laurel MD 20708
42.Lewis	David	776-2329	10407 Balsamwood Dr.	Laurel MD 20708
<u>**43.</u> Pitzer	Wayne	865-7500	Pearl Star Route	Gatesville TX 76528
44.Kelly	Kenneth G.	215-362-2038	505 Winding Rd.	Lansdale PA 19446
<u>**45.</u> Keef	Terry	759-2773	Rt.1 Box 176D	Bigelow AR 72016
46.Griffin	Charlie		1520 Summer Run #102	St.Louis MO 63033
47.Schultz	Daniel	410-757-6842	1106 Skyway Dr.	Annapolis MD 21401
48.Jass	Tom (HOUSTON SITE HOST)		P.O. Box 229	Arcadia MI 49613
49.Jass	John		P.O. Box 229	Arcadia MI 49613
50.Foster	James C.	886-0419	2662 W. Village Ter.	Springfield MD 65810
51.Gerrish	Wayne	407-246-7795	1426 28th St.	Orlando FL 32805
52.Ewers	James F.	918-584-0827	103 S. Elwood	Tulsa OK 74103
53.Barrett	John J.	612-639-8329	2613 Wheeler St. N.	Roseville MN 55113
54.Haynes	David	915-673-5130	1141 Santos	Abilene TX 79605
55.Elledge	Michael J.	407-275-3095	5942 Bull Dolphin Lane	Orlando FL 32822
<u>**56.</u> Kricke	Randy	706-868-0817	4128 Heritage Lane	Evans GA 30809
<u>**57.</u> Kricke	Curtis	706-868-0817	4128 Heritage lane	Evans GA 30809
<u>**58.</u> Kricke	Andrew	706-868-0817	4128 Heritage lane	Evans GA 30809
59.Noble	Edward E.	513-235-1061	5716 Beth Rd.	Huber Height OH 45424
<u>**60.</u> Whitehurst	Stuart M.		1078 Sullivan St.	Bay Shore NY 11706
<u>**61.</u> Perdue	Lee A.	313-721-3033	35999 Stellwagen	Wayne MI 48184

The names underlined are Executive Board Members. Francis produced this list (I love the phone numbers!) of club members on June 6th, I'm sure a few more have joined since then.

Intelligence Report

The Axis are so strapped for personnel this year that they are sending the Hitler Youth into the fray. That's right, the Fuhrer himself, also known as Fluegel is sending his son Paul into battle on the Axis side, in a small suicide vessel known by the ultra-secret codename "Lutzow". Resistance agents close to the shipyards report that this new naval terror has a new propulsion system capable of relatively high speeds for short periods of time, after which it lies still as a

limpet mine in the middle of the sea. The same sources contend that it may be just that, a limpet mine disguised as a ship. However, our analysts in London contend that that this cannot be true - if it were truly a sea-going bomb, it would be constructed at the infamous Shaferwerks. The Fluegel yard is much better known for known for its Heavy Water experiments, and the Admiralty is sure that both the Lutzow and the Bismarck will be indeed heavy when they are retrieved from their watery graves. We trust that all Allied captains will do their best to help their Heavy Water experiments succeed.

AXIS CHALLENGED TO A CRUISER CONFLAGRATION !!

The Allied cruiser and destroyer captains hereby issue a challenge to their Axis counterparts to meet in unrestricted naval warfare (One 2-sortie battle with a class 1, 2, or 3 ship) at E & H Ranch on Wednesday, July 13, at 10:00 AM.

A preliminary count of available cruisers indicates that the Allies will be outnumbered 32 to 12, however it is expected that scuttling of German cruisers, after the first sortie, in the designated River Plate estuary will lower the odds to a more respectable 18 to 12.

News from

SKUNKWORKS



Hello again to all my old friends out there in the world of R/C Model Warship Combat. I have lots of good news to report regarding new products for our "Magnificent Obsession". There is also good news with regard to magazine articles. In this article will also be some tips to people who are using vacuum molded turrets and stacks on their models, i.e. SKUNKWORKS kits.

MAGAZINE ARTICLES

For those of you who have not seen it yet, rush right out and pick up a copy of the June '94 issue of SCALE SHIP MODELER magazine. There is a fine article about (guess what?) R/C Model Warship Combat by none other than our own Steve "Fab" Baker.

The article is very informative for people who have never heard of what we do before, giving generalized details about ship construction and battling procedures.

The editors of SSM saw fit to place "Fabs" article first in the magazine, ahead of all others. Not only did they use an amazing 17 photos with the article, all good action shots with sinkings and BB splashes, but they allocated 9 full pages of the magazine to showcase this fine effort. There was even one full page of color photos and a good photo of a BB splash between two ships on the cover!

NEW FIBERGLASS KITS

What's the latest new items for sale from SKUNKWORKS? As of May 10th, we now have complete fiberglass hulled kits of the Northampton class cruiser USS HOUSTON available (class 3, 3 units, 24 seconds). This fine example of the American cruiser has always been a favorite among battlers, known for good looks and good performance on the water. Complete kit price is the same as our fiberglass LUTZOW and BROOKLYN, \$ 150.00, for hull and deck only, \$ 75.00.

Also available in fiberglass are the French LE TERRIBLE (class 1, 1-1/2 units, 22 seconds) and GLORIE (class 2, 2-1/2 units, 23 seconds). At this time we only have hulls and plywood decks. Prices are \$ 45.00 for the LE TERRIBLE and \$ 70.00 for the GLORIE.

It is hoped that complete kits for these two fine French ships will be available by the end of the summer.

ALUMINUM CO2 REGULATORS !!

Now for the news that all small ship captains have been waiting for, by the time you read this, SKUNKWORKS MFG. should have available for shipment a brand new type of CO2 regulator machined entirely of aluminum. You now have an option allowing you to shave over a 1/2 pound of weight from your small ship.

Just like the Williams 150F regulator that everyone uses now, this aluminum model will accept all sizes of refillable bottles. Fast Max (2.0 oz. capsule) adapters, and 12 gram capsule adapters.

This new regulator will be available with either a 100 or 140 psi. spring and is already ported for 10/32 fittings without need of an adapter. Dimensions are: dia. 1.25 in., length 2.625 in., weight 5.5 ounces. Compare this to the brass Williams 150F with 10/32 adapter at a whopping 14 ounces. Price of this fabulous new Aluminum regulator will be \$ 45.00 ea.

OTHER NEWS

What else is looming on the horizon at SKUNKWORKS? The next ships that we will be producing in fiberglass will most

likely be the German Z class destroyer (class 1, 1-1/2 units, 22 seconds), the Japanese AGANA class light cruiser (class 2, 2-1/2 units, 23 seconds), and the American ATLANTA class light cruiser (class 2, 2-1/2 units, 23 seconds). Call for an update on these new arrivals.

ARMORING VACUUM MOLDED PARTS

For those of you who have SKUNKWORKS ship kits out there, listen up! One thing that has (until now) not been included with our kits is instruction on armoring vacuum molded superstructure parts. This can be very effectively done, very easily and very simply by putting a layer of fiberglass mat on the inside of the vacuumed parts. All of my vacuum molded turrets, secondaries, and stacks on my DKM Lutzow and DKM Bismarck have this layer of mat and for the last two battling years have proven to be virtually bullet proofed. This process is also extremely light. My Bismarck main turrets, complete with wood rangefinder ears, brass dummy barrel, and foam floatation inside weigh only 1-3/4 ounces each.



Photo #1

Small strips of fiberglass mat are cut to lay along the inside vertical surfaces of the Bismarck turret.

Why do I recommend fiberglass mat instead of fiberglass cloth? Two reasons, mat is stronger for one, it will take 5 or 6 layers of 6-1/2 oz. cloth to equal the strength and thickness of one layer of 1-1/2 oz. mat. The second reason is design. Mat, with its multi-directional layers of fibers is designed to conform exactly to corners and tight areas during a molding process, cloth is not designed to do this and will bunch up and wrinkle when pushed into tight spaces.

You will need scissors, a package of 1-1/2 oz. fiberglass mat, and fiberglass resin & catalyst. These can be obtained at any auto parts store or automotive dept. of Wal-Mart. I specifically recommend fiberglass (polyester) resin for use with mat and not epoxy resin because epoxy resin does not have the styrene monomer needed to de-bond the layers of mat fibers and make them conform to complex shapes. Polyester resin does have the styrene monomer needed to do this.

To begin, turn the molded turrets (or stacks or barbettes) upside down. It is easiest to do this process before the turrets have been cut away from their molded base, but it can still be done even if they are now being used. Using shears, cut small pieces of mat to just fit along the inside vertical sides of the turret. Mat should extend about 1/8 in. above the upturned bottom of the turret. You can cut a separate piece of mat to lay into the turret: top if you want but it is not necessary as BBs seldom hit there.

Next, mix up approx. 1 oz. of resin, catalyzing according to mfg. directions. It should be mixed to gel within 20 to 30 minutes. If the resin takes too long to gel, it could start to dissolve and warp the plastic of the turret itself. If you do not have experience with fiberglass resin it is best to experiment with a piece of mat laid onto a scrap piece of plastic.

When the resin is ready, pour a small amount into the turret.



Photo #2

The finished process. Turret at right has resin mat in place, turret at left has been trimmed back to final dimensions. **BULLETPROOF!**

With a stiff bristle brush (disposable epoxy brushes work fine), brush the resin over and into the mat. With a jabbing motion, stipple resin into the mat fibers with the bristles of the brush, making sure that all bubbles have been removed. When the mat is completely saturated with resin from top to bottom, set it aside until gelation and cure is complete.

When cured, the turret/mat conglomerate can now be trimmed back to where you want the bottom edge of the turret to be. Here you can use a hand razor saw, band saw, or Dremel tool and cutting wheel. You can now drill holes in the turret face for installing barrels, which can then be firmly placed with a little resin on the inside of the joint.

Other parts like smokestacks and barbettes can be armored in the same way to give a much more durable superstructure with little or no weight increase to your model. If anyone has any questions about this process, feel free to call me at (417) 831-2309, anytime.

Till next time,

Steve Millholland



Blow-by-Blow

Battle Reports

A Stone in the Crown by BB Cannon

On April 30 and May 1 of 1994 the Axis and Allied fleets met in Fredricksberg Texas to fight for the ownership of the first stone in the coveted Texas Triple Crown. In the past several years, the events have been dominated by the Allied fleet, could the Axis make a comeback and reclaim some of the bragging rights currently held by the Allies?

Of the fourteen ships attending the battle, eleven entered the first battle. This was the first battle for Joe Kutz, and Steve Constance, two up and coming Skunkwork's armed rookers. For the Allies were two battleships one heavy cruiser and one light cruiser, actually a pre-dreadnought I think. On the Axis fleet were two battleships, three heavy cruisers, and one destroyer. The Axis fleet had the edge in number of ships and units, but that does not always insure a victory. The following scores form the first engagement bear this out. It was a costly sortie for the Axis as they lost all three heavy cruisers while for the Allies, one of their battleships went to the bottom.

Allied damage:

Indiana	1	1	0	35
Valiant	7	3	2	+200 1095
Devonshire	5	3	0	100
James F	2	1	0	45
				1275

Axis damage:

Lutzow	37	5	16	+700 1995
Akizuki	1	0	2	110
Mutsu	71	1	3	885
Bismark W	6	0	1	110
Suzuya	45	5	18	+700 2175
Adm. Scheer	40	4	8	+700 1600
				7865

With so many ships lost in the first sortie, it was decided that one was enough so all ships were

repaired and made ready to begin another battle. This next battle would hopefully be of the two sortie type. The weather was as bad as the damage as we all tried to work on the ships behind whatever wind break we could find or make.

For the next battle the Allied fleet would gain the services of another six unit battleship. For the Axis fleet, one battleship would join in, but one heavy cruiser and the destroyer would not be going out.

This would indeed be a two sortie battle, but the Axis once again paid heavily in the first sortie by losing one battleship and two heavy cruisers.

Allied damage:

Valiant	18	6	8	730
Indiana	15	2	0	200
South Dakota	3	0	0	30
Devonshire	32	3	1	+350 795
James F	1	1	1	85
				1840

Axis damage:

Mutsu	116	5	3	+1000 2435
Lutzow P.F.	34	1	4	+700 1265
Bismark W	142	7	15	2345
Lutzow S.C.	13	1	2	+700 955
Suzuya	26	7	13	+700 1785
				8785

Obviously in this battle the Allied fleet reined supreme in a most lopsided way. Luckily there was not time for a third fleet battle.

The actual battle account for the two days was lost with the sunken ships, only the damage reports for the Sat. engagements survived. The accuracy of these may even be in question as they were assessed under the greatest duress. What is obvious is the fact that the Axis have not yet found the key to victory over the Allies in yet another Crown event.

Battler's Calendar By D.W. Fluegel.

June	25-26	Second Texas Triple Crown. See the battle announcement in this issue of Hull Busters.
July	11-15	1994 Nationals - Houston, TX
July	16	Axis celebrate another victory!
Sept	10-11	Refer to page 976-977 "MO Notes".
Oct	1-2nd	Southeastern regionals at Baxley, GA. Insured and sanctioned.

Rule Proposals to Consider

by
Mike Deskin
Waverly Judd
Lief Goodson

As the deadline is upon us for the submission of rule proposals, we offer the following three proposals for consideration without explanation. Please think about each, and be prepared to discuss each at the rules meeting at Nat's.

1. Add the following subparagraph to paragraph II.H.8 (page 11) of the rules:

"II.H.8.a Ships of the following classes may have two (2) side shooting guns in a single turret, as long as they are the only side shooting guns in that quadrant:
Iowa Class Battleship
Yamato Class Battleship
Richelieu Class Battleship"

2. Replace paragraph II.A.11 (page 8) with the following:

"II.A.11 Class 2 and lower ships using CO₂ may add 25% or one (1) round (whichever is greater) to their full load displacement and must have a minimum of 1/2" of freeboard at their lowest point."

3. Add the underlined phrase to paragraph II.A.2 (page 7) of the rules to read as follows:

"II.A.2 The total hull length that can be solid material shall not exceed 15% of the overall length of the hull (20% for class 1 ships). This includes ribs, solid material at the bow and stern...."

Vicious Rumors

With Russian politician Vladimir Zhiranovsky being compared to Adolf Hitler, the Axis Admiralty is wondering if they will now have some good ships to build. How's your Gangut?

Tri-Pact Disbands!

By Donner N. Blitzen

Secret Axis communique which have been leaked to our offices by reliable sources who've had to find real jobs since Dan Rostenkowski has been indicted tell a tale of woe in the Axis organization. The Mighty Tri-Pact is no more. After hearing this amazing news, I obtained an interview with one of the former Tri-Pact members, on conditions of anonymity. We will refer to this informant here as "Big Mouth".

Blitzen: "After your past triumphs, like the 1991 Nats, it just seems hard to believe that such an illustrious organization as yours would break up."

Big Mouth: "Yes, 1991; those were the days. Allies lining up to be sunk. We were invincible. Nobody could sink us, especially if we called "ram" in time. We usually remembered to."

Blitzen: "And then what happened?"

Big Mouth: "Well, it all started in 1992, when we tried to start the concept of the 'Tri-Pact Team Trophy'. Nobody seemed to take it seriously. Nobody seemed to take us seriously. The only group that took up our challenge did it with a great deal of sarcasm and mocked our glorious concept."

Blitzen: "But they did take the challenge?"

Big Mouth: "Yes, they did."

Blitzen: "And then there was the 1992 Nats?"

Big Mouth: "That's right; we went into that Nats with such high hopes, only to have them shattered on Monday by Jim Pate and his awesome USS Indiana. We thought we could take him out; he took us out instead."

Blitzen: "To the tune of two out of three sunk and 2000+ points of damage on the survivor, if I recall correctly."

Big Mouth: "Don't remind me."

Blitzen: "Enough to win the 1992 Nats for the Allies?"

Big Mouth: "No comment."

Blitzen: "And what about the Team Trophy?"

Big Mouth: "No comment."

Blitzen: "Rumor has it that you declined battle on Wednesday when challenged by a member of the opposing team."

Big Mouth: "No comment."

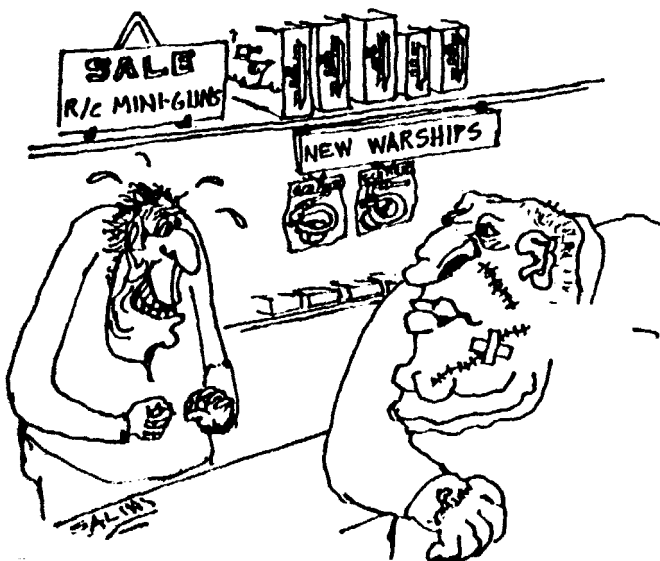
Blitzen: "And then what happened in 1993? Since your humiliation at the hands of a few Allies, what was your new strategy?"

Big Mouth: "New ships, new rules to make our new ships even more effective than they ought to be, extra practice in the strategic use of ram calls, extra fangs for the shark boat, you know, the usual."

Blitzen: "Business as usual, eh?"

Big Mouth: "That's right, but then, the sneaky Allies changed the Nats date on us so we couldn't go."

Blitzen: "How disgraceful. At least the Allies didn't benefit from their subterfuge. They ended up losing Nats by less than 2000 points."



"I'M SORRY SIR, WE'RE FRESH OUT OF WARSHIPS AND MINI-GUNS."

Big Mouth: "Yeah."

Blitzen: "But wait a second, that means that the Axis fleet did better without you, doesn't it???"

Big Mouth: "No comment."

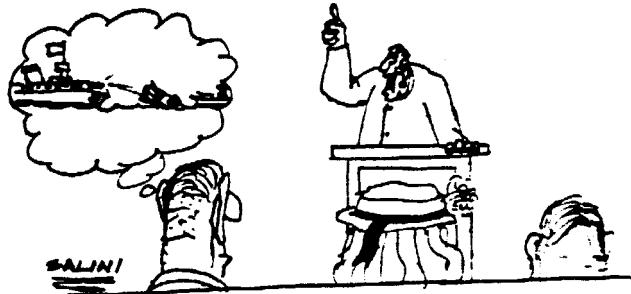
Blitzen: "So is that what's behind the current break-up? One of your former members has even gone so far as to build and battle an Allied ship!"

Big Mouth: "No comment."

Blitzen: "Well, thank you for your time, Mr. Big Mouth. By the way, has anyone ever mentioned that you bear a remarkable resemblance to Groucho Marx???"

Big Mouth: "You bet your life - Now get out!!!"

So there you have it, sports fans, the mighty Tri-Pact brought to shame, first by losing the Nats for the Axis in 1992, and then having the Axis do better without them in 1993. What greater shame can there be? Will the Tri-Pact be heard from again? Probably not in 1994! Now, we return you to your regularly scheduled propaganda.



"... AND WE MUST CONCENTRATE ON THOUGHTS OF PEACE IN THESE TROUBLED TIMES ..."

IR/CWCC CLUB DIRECTORY

This column is published periodically as a service to readers of HULL BUSTERS. If you and a couple of your buddies are forming a club that conforms to the construction and battling rules of the IR/CWCC and would like to be a part of this Directory, send your CLUB NAME, along with the NAME, ADDRESS, and PHONE NUMBER of a contact person to: Club Directory, c/o Steve Milholland, Rt. 2, Box 81-A, Springfield, MO 65802.

NEW ENGLAND DREADNOUGHT FLOTILLA

Contact: Don Fisher (508) 384-6328
P.O. Box 38, Wrentham, MA 02093

MARYLAND ATTACK GROUP

Contact: Martin Hayes (410) 757-5593
1113 Crestview Dr Annapolis, MD 21402

MICHIGAN AREA

Contact: Tom Jass (616) 889-6124
P.O. Box 225, Arcadia, MI 49613

BUCKEYE BATTLE SQUADRON

Contact: Mike Deskin (513) 890-1593
213 Bohanan Dr. #3, Vandalia, OH 45377

PORT POLAR BEAR FIGHTING WARSHIPS

Contact: John Barrett (612) 639-8329
2613 Wheeler St.N, Roseville, MN 55113

K.C. WARSHIP PIRATES

Contact: Rick Whitsell (816) 734-4757
9807 N. Lydia, Kansas City, MO 64155

BATTLE GROUP BB 63

Contact: Steve Milholland (417) 831-2309
Rt. 2, Box 81-A, Springfield, MO 65802

ARKANSAS AREA

Contact: Jay Edwards (501) 425-3399
601 Nevada, Mtn. Home, AR 72653
or Terry Keef (501) 759-2773
Rt. 1 Box 176-D, Bigelow, AR 72061

OKLAHOMA AREA

Contact: Jim Ewers (918) 584-0827
103 S. Elwood, Tulsa, OK 74103

DALLAS FIGHTING WARSHIPS

Contact: Chris Pearce (817) 738-8942
6516 St. Johns, #3049, Ft. Worth, TX 76132

HOUSTON DREADNOUGHTS

Contact: Brian Craven (718) 537-8722
12310 Ocean Laurel, Houston, TX 77042

CORPUS CHRISTI AREA

Contact: Gerald Roberts (512) 992-7089
7425 Piper, Corpus Christi, TX 78412

WICHITA FALLS AREA

Contact: Bob Eakin
1611 Bert Dr., Wich. Falls, TX 76302

GEORGIA ATTACK GROUP

Contact: Steve Baker (404) 254-9697
2270 Smokey Rd., Newnan, GA 30263

SAVANNAH RIVER BB SQUADRON

Contact: Ron Thibault (803) 279-3196
2103 N. Ridge Rd., N. Augusta, SC 29841

FLORIDA ATTACK FORCE

Contact: Mike Elledge (407) 275-3095
5942 Bull Dolphin Ln., Orlando, FL 32822

OREGON BATTLE SQUADRON

Contact: Buddy Friend (503) 856-3411
Rt. 1, Box 5, Haines, OR 97833
or Dan Dees (503) 620-6578
11034 SW 81st, Tigard, OR 97223

ATLANTIC HIGH SEAS FLEET

Contact: Curt Stokes (902) 454-5755
3486 Wolfe Crescent, Halifax,
Nova Scotia, CANADA B3L-3S2

LAKE SUPERIOUR 1ST BATTLE GROUP

Contact: Bob Sereda (807) 935-2072
RR #5, 284 Pole Line Rd, Thunder Bay
Ontario, CANADA P7C-5M9

NEW BRUNSWICK AREA CONTACT CFB GEORGETOWN RIC MODEL CLUB

Contact: Gordon Dyck (506) 357-3179
14 Brennan Court, Oromocto
New Brunswick, CANADA E2V-1J5

You're probably in the Axis fleet if:

You got this year's fleet strategies from the back of a box of "Fascist Flakes".

Your superstructure came free with 10 boxtops, plus postage and handling.

BOOK REVIEW

... A lot of these dogfaces have put in more time at sea than half the men in the navy. These salty infantrymen offer fatherly advice to young sailors on how to tie the bowline and they often correct the seafaring language of the officer of the deck when he calls the "head" a "toilet."

The doggies don't envy the navy. They like its excellent food and dry bunks, but they don't like the cramped shipboard life, and bad as the beach may be, they don't want to stay aboard the ship when the Luftwaffe and the shore batteries start operating. A ship is a hellish big target, and there is no place to hide.

Once he gets ashore the foot soldier is in his element. He breathes easier, even while he scoops up sand by the helmetful to hide himself. . . .



'You guys oughta carry a little dirt to dig holes in.'

This cartoon and narrative came from Bill Mauldin's book "UP FRONT" published in 1945.

Top 10 Reasons to join the Axis fleet

10. Just can't get enough of those "Fascist Flakes".
9. You always did look better with that cheesy little moustache.
8. Your car has a David Duke for President bumper sticker.
7. Thought the "goose step" was a popular sixties dance.
6. One word: Henpecked
5. Like hanging around with other dysfunctional nut cases.
4. Heard about secret "Initiation rites" in the British fleet.
3. Love the smell of Ambroid as you patch, patch, patch.
2. Believed Fluegel when he said that the Axis were winners.
1. Mom always did like your younger, Allied brother best.



FINAL NATS 94 UPDATE

If you are reading this and you haven't sent in your money for NATS the price just went up to \$125.00 May 31, 1994. Sorry about having to increase the price but, it is necessary because I have to cover the cost of the food deposit if we don't have enough money in time.

Plan on having the height of your ship at 14 inches to be on the safe side. Brian and I will ask them to not fill the ponds for the two weeks preceding NATS if we get a lot of rain. Of course if there is a deluge right before NATS it will be more difficult to control the water height.

There's a nice sandy sloping beach right across from the pavilion that we were at last year that most people will probably launch there ships from. Also there will be three or four pallets placed around the lakes to give an easy site to launch your ship.

We have one frequency conflict right now but, we are working on resolving it. Please bring extra crystals, and radios so we have more options open to us. We need to start going to narrow band radios, mine is, so we can get more ships out there in each battle. If you want to but a new radio and you wonder what channels are taken send me a letter, or give me a call and I'll send you the list of channels we have at NATS.

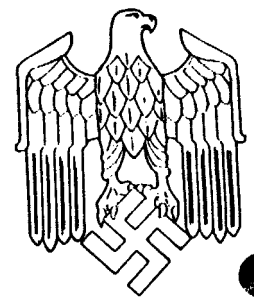
If you have any questions call or write me. See ya at NATS!!

Wade Koehn
1251 Wilcrest Apt. 103
Houston, TX. 77042
713-952-3078

Editors note: The phone number for the motel (Holiday Inn) is 1-713-449-2311. Be sure to tell them you are with the model warship group. The price has gone up.

Also, the video of last years NATS was the best ever and the hardware and experience set up for this years tape should make it still better. But, without the rough footage, it wont happen. If you brought a video recorder last year, do it again this year!

Editors note: as of June the 20th It appears there will be 26 battler's at NATS (Per phone conversation with Wade).





SALINI

"IT'S THE GUY NEXT DOOR.
HE WANTS TO SEE IF YOUR
SHIP CAN REALLY SHOOT B-B'S."

The Second Stone of the 1994 Texas Triple Crown !!!

June 25th., and 26th. in Houston, will be the second stone of the Texas Triple Crown. This will be a sanctioned battle. You will need to contact Brian Craven for details. His address is 12310 Ocean Laurel Lane, Houston, Tx. 77014. My phone number is (713) 537-1435, you will need to leave message on the phone! This is PBC Enterprises number and I will call you back!

The Campaign targets (new and improved) will be there for practice! Come and see the sub. and other new ships on the water (JIM GET IT ON THE WATER). Test your ships under battle conditions!

Anyway, show up with your ship. No Fees, memberships, no trophies, and no hassle. Just fun, SUN, nice people, pretty surroundings, and a great host (ME)!!!

We will be taking a trip to the NATS lake to see the improvements to the lake .

CONCLUSION.

I would like to thank all the authors who contributed to this excellent issue. Lief, Steve, Cravin, Chris, Dirty, Wade, and Bad-Bart. THANKS! Oh, I almost forgot, Blitzen.

I have said it before but it bears repeating, thanks to Jass for the help he has given to H.B. for several years. Unfortunately, his retirement has made him unable to print H.B.

and I have had to pick up the cost. A copy, mailed, cost me approx 90 cents. Hull Busters will cost more next year. I'm thinking 8 or 9 dollars, foreign subscribers even more. I hate to raise the rate, but at least I will see how insanely obsessed you are. To announce this rate increase is not easy for me, and I hope it won't increase again for another glorious 1000 pages. Did you notice that H.B. has published 1000 pages? That's a lot of work, and a lot of contributing authors!

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