

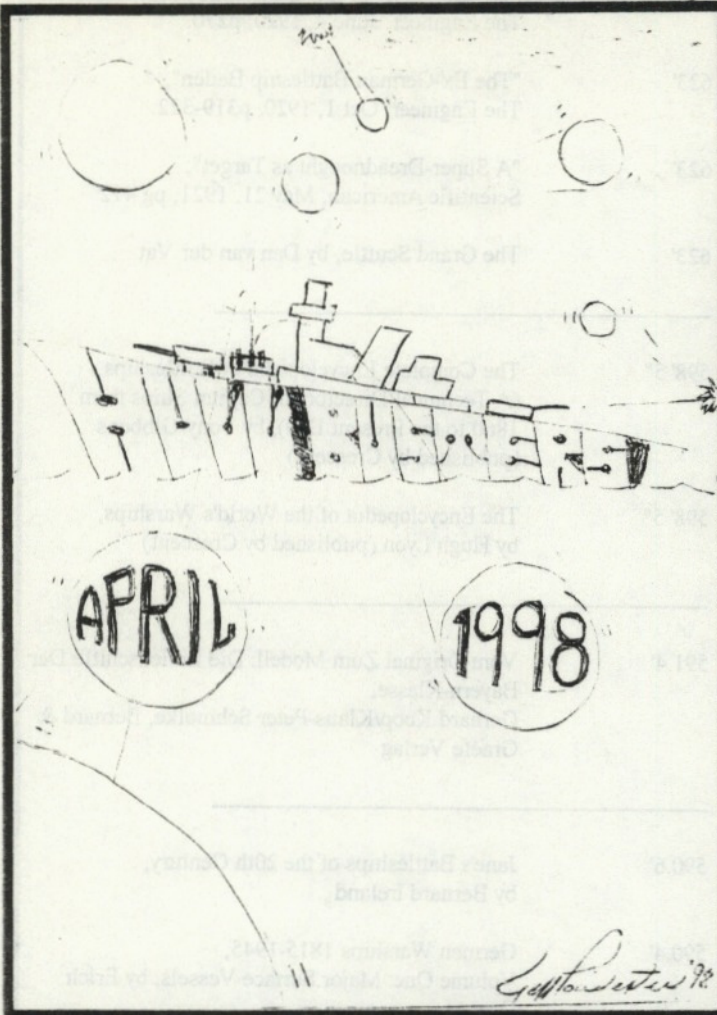
PUMP ARTICLE

BY Jim Pate.

I, Fluegel asked Jim to do a pump article. Jim declined but he did recommend a pump motor for us in "the 6 volt world", its the Tamiya 540 (without pinion gear). Its Tamiya number is #7435044. Its Tower Hobby catalog number is TAMA 1675. Tower Hobby's phone number is 1 800 637 4989. One costs \$19.29 and two, with tax and shipping costs \$41.58. I ordered two, I want to "Pump like a Pate".

This item is not in their (Tower Hobby) catalog, but that was no problem, they know they have them.

PS: Just got the motor, its not as good as the Traxxos 6 volt (\$15).



documents, specifying 5 (yes 5) different lengths for the Baden, as summarized in the following table: (a complete list of those references is provided at the end of this article)

Length	# of Sources
623'	6
598' 5"	2
591.4'	1
590.4'	3
589' 10"	4

In an effort to seek further expert opinions, the E-board contacted a number of naval experts through the Naval Institute Press, Jane's and Conway's. Unfortunately, none of them provided anymore input than that shown above.

Traditionally, as established by Dan Hamilton, the Ship List could be changed if 3 different sources were found to support the figures. Many of us can remember the debates surrounding the "30 knot" Bismarck, but since 3 sources were never found, the speed was never changed (until the speed by length rule was adopted).

Unfortunately, in the Baden's case, there is enough evidence to support two different lengths: 590' as currently listed in the Ship List and 623' as supported by the sources summarized above. Over the period of two months, the E-board members discussed the matter, solicited input from other club members (thanks George Goff for your help) and tried to determine an appropriate solution. After calling for the final vote, I was presented with 2 members supporting the 623' length and 2 members supporting the 590' length.

So, there it is, 16 documents supporting a bunch of different lengths, Allied and Axis captains prepared to call "foul" regardless of which way the decision goes and an E-board split down the middle. So, guess who has to make the decision? (Where is Dan Hamilton when you need him?)

After consulting with some of the elder statesman in the hobby and after reviewing each of the documents and after considering the way our democratic process is suppose to work, the following decision has been reached:

Effective, 1 Jan 1999, unless otherwise superceded by a rule proposal, passed by the membership on the 1998 ballot, the Ship List will be modified to include two entries for the Baden, one with a length of 590' and one with a length of 623'. Any ship built to the 590' length will have 28 sec speed, and any ship built to the 623' length will have 26 sec speed.

President's Column

by

Frank Pittelli, WA98

If anyone is thinking of running for the President's job, I can only offer you one word of advice: DON'T DO IT!!!!

Over the years, a small group of Allied and Axis captains have maintained an on-going debate regarding the relative merits of the Baden (the newly adopted flag-ship of our Editor In Chief). Captains on both sides had plenty of opinions and statements regarding the Baden, but little if anything was ever done until Mike Blattau ventured into the bowels of his University Library and emerged with some dynamite.

Mike found a collection of articles written in the 1920's that specify the length of the Baden as 623 feet. One of the articles was written by a British Naval expert who was given permission by the Admiralty to inspect the Baden in person after it was captured by the British. Other articles, published in the Engineer and Scientific American within the next two years specify the same length. Equipped with this documentation, Mike formally requested the E-board to change the Ship List.

During our review of the information, the E-board compiled 16

Well hello

it's been a long time, but i'm back. i'm building a doria. hull is done. guns are mounted. s/s is about 75%. can't wait to see everyone at nats. my address is amen@blazenet.net hope to hear from you soon. Tried to look at the web site for TAG but couldn't get in.

see you later
bob amend :)

This decision reflects the fact that a majority of the E-board feels that both lengths are indeed valid (which requires a change to the Ship List) but that the membership should be allowed to reverse that decision if a 2/3rds majority agrees during the yearly balloting. By delaying the effective date of the change, all members have plenty of time to examine the documents themselves, to discuss the matter with others and to try to convince others to vote with them.

But before anyone starts ranting and raving about this decision, I encourage everyone to actually read the sources found and debate from "facts", not from emotions. There are many historical questions that can never be answered, and the length of the Baden may be one of them. Nonetheless, we must acknowledge that both sides could be right, as the compromise decision above intends to do.

On a less controversial note, I am pleased to hear from all parts of the country that a fresh batch of new recruits are anxious to show off their new ships during Spring Regionals, with large attendance expected at most events. I have also been told that the holy trinity (Watkins, Fluegel and Poindexter) will definitely be attending NATS '98 (20th Anniversary Monster Blowout Celebration) in Maryland. Each of them has constructed a brand new boat for the "Year of Stan", and all veterans and rookies alike are anxious to give them a 200 BB salute in their honor.

Marty Hayes and Steve Pavlosky have been working extra hours to make sure that NATS '98 runs as smoothly as NATS '97 did, and the State Park can't wait for us to come back. If you haven't made plans yet, do so, or you might miss the greatest R/C warship battle ever held anywhere in the world.

----- cut here -----

Length	Reference
623'	Jane's Fighting Ships of World War I
623'	German Warships of World War I, Naval Institute Press, 1992
623'	"German Naval Construction, 1914-1918",

The Engineer, June 4, 1920, p270.

- 623' "The Ex-German Battleship Baden",
The Engineer, Oct 1, 1920, p319-322.
- 623' "A Super-Dreadnought as Target",
Scientific American, May 21, 1921, pg 412
- 623' The Grand Scuttle, by Dan van der Vat

598' 5" The Complete Encyclopedia of Battleships
(A Technical Directory of Capital Ships from
1860 to the Present Day), by Tony Gibbons
(published by Crescent)

598' 5" The Encyclopedia of the World's Warships,
by Hugh Lyon (published by Crescent)

591.4' Vom Original Zum Modell: Die Linienschiffe Der
Bayern-Klasse,
Gerhard Koop/Klaus-Peter Schmolke, Bernard &
Graefe Verlag

590.6' Jane's Battleships of the 20th Century,
by Bernard Ireland

590.4' German Warships 1815-1945,
Volume One: Major Surface Vessels, by Erich
Groner

590.4' Battleships and Battle Cruisers 1905 to 1970,
By Siegfried Breyer

589' 10" Warship Vol.#1 Pub.
By Conway's & Naval Institute Press,

589' 10" Conway's All the World's Fighting Ships, 1906-
1921

589' 10" Conway's All The World's Battleships 1906 to the
Present

589' 10" German Battleships 1897-1945,
by R. A. Burt

Switches.

By Fluegel

The construction of the Baden continues to be the undoings of the Allied machine. No expense has been spared. I purchased large size, high amp switches to make the speed control. One day, when I was sinking, (extensive sea trials) my drive motor started smoking. I could find no reason for this problem. Turned

out, it was my new, "fancy-dansey" expensive switches.

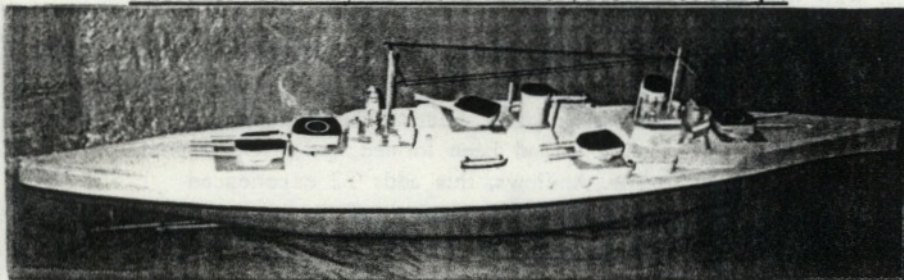
In conversation to "Mr. Sink", Bart, he told me of his past problems with these switches, and he recommended using the small, inexpensive Radio shack switches. I replaced my switches, back to the old faithful, Radio shack switches. Water tests revealed that the big expensive switches were the problem, and these inexpensive, small, Radio Shack switches are just what the admiral ordered.

Lots of internet addresses.

I am not sure who sent me this list but maybe it is of some help for someday. I am not on the list, its fluegel7@juno.com

- 1 glendon@medicine.newcastle.edu.au
- 2 Peter.Casey@StMarys.ca
- 3 robertmc@accessnv.com
- 4 PKDeme@aol.com
- 5 Gegoff@aol.com
- 6 RLHOOT@aol.com
- 7 skogga@aol.com
- 8 Animal3603@aol.com
- 9 BFISCHER74@AOL.COM
- 10 TravisBart@aol.com
- 11 BEOL@aol.com
- 12 NDOMITBLE@aol.com
- 13 CasketWork@aol.com
- 14 ImPaCt1280@aol.com
- 15 wraymond@best.com
- 16 Brian@coresw.com
- 17 peters@shr.dec.com
- 18 John_Percy@DGC.ceo.dg.com
- 19 nachi@goodnet.com
- 20 nuke@highway1.com
- 21 dlricci@hotmail.com
- 22 rpsvpher@interserv.com
- 23 constellation@juno.com
- 24 tbeckett@juno.com
- 25 arav@juno.com
- 26 LiefG@juno.com
- 27 jimpate@kctc.com
- 28 BryanR@kutz.com
- 29 joe@kutz.com
- 30 lsd@mickey.tds-eagan.lmco.com
- 31 John_Bacon/CAM/Lotus.LOTUS@crd.lotus.com
- 32 mechdave@msn.com
- 33 habeeb@ix.netcom.com
- 34 csg2@ix.netcom.com
- 35 mtwest@pooh.PagePlus.COM
- 36 frank@pittelli.com
- 37 WXMD31B@prodigy.com
- 38 jcutler@ptc.com
- 39 cdecker@ptc.com
- 40 psage@dallasne.quik.com
- 41 peter.moster@megadolt.inka.de
- 42 au@pilot.msu.edu
- 43 bdfox@mtu.edu
- 44 nblattau@eng.umd.edu
- 45 baden@Glue.umd.edu
- 46 nblattau@Glue.umd.edu
- 47 John.J.Barrett-1@tc.umn.edu
- 48 kchunt@hamlet.uncg.edu
- 49 rgriffin@mail.wsu.edu
- 50 tannert@oem.doe.gov
- 51 lpricci@worldnet.att.net
- 52 Warship@worldnet.att.net
- 53 madcow69@postoffice.worldnet.att.net
- 54 HEADGEEK@postoffice.worldnet.att.net
- 55 penfold@postoffice.worldnet.att.net
- 56 kwilliams@citynet.net
- 57 mhaves@clark.net
- 58 thibault@csra.net
- 59 battleships4ever@ibm.net
- 60 mhitchco@linkonline.net
- 61 bkuhl@cityhall.luminet.net
- 62 elledge@magicnet.net
- 63 rkehr@pacificnet.net
- 64 pbc@phoenix.net
- 65 keels@pineland.net
- 66 swampv@smartnet.net
- 67 rew@sound.net
- 68 gregm@sound.net
- 69 glover@texas.net
- 70 deckers@ziplink.net
- 71 phamrin@sunny.bahnhof.se
- 72 russellpearston@ns.svmpatico.ca
- 73 phill@valcit.wa.com
- 74 MuzleFlash@aol.com
- 75 pearce@txcc.net

Moltke. built by its mold maker, Ron Horbul jr.



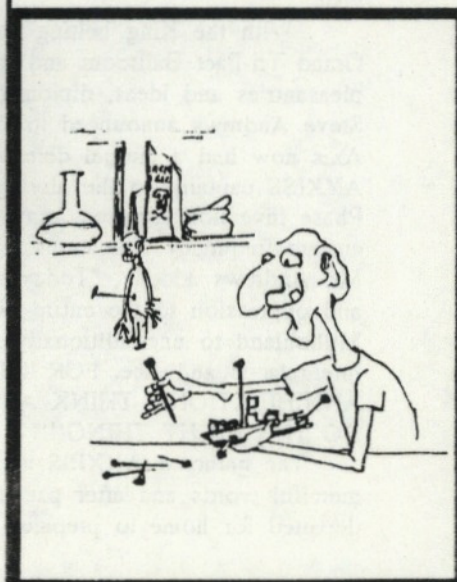
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ALIENS LAND IN ANNAPOLIS MD VISITORS PLEDGE TO JOIN AXIS AT 1998 NATS.

History was made in Annapolis, Maryland last week when an alien intergalactic ship from the planet AXXISS landed near the Severn River and its occupants asked stunned local officials to "Take them to the Leader." More surprising to the officials than the landing itself was the "Leader" with which these visitors wanted to meet. It wasn't Hillary, or even Maryland Governor Paris Glendenning, but our own IR/CWCC President and Axis captain Frank Petelli.

In an exclusive interview with this reporter, the Alien Publicity Director Pgmi Xijger explained that his planet has been monitoring Earth communications for the last twelve years and have been particularly interested in IR/CWCC web pages and the chatroom. Unfortunately the Alien computer language is based on a Trinary rather than Binary code and while able to monitor our communications, they have been unable to join in on the rabble.

Mr Pgmi Xijger went on to explain that their home planets history seems to parallel Earth's history and in their 20th century they too fought two horrible World Wars. Their wars were fought between the Axxiss(the good guys) and the Awfuls. (you know) Now long after the wars have been settled , groups of Axxian history buffs gather at local shallow lakes and ponds and recreate great maritime battles between the Axxiss(yea) and Awful(boo) fleets. Apparently we on Earth are not alone in our growing pains as a club. Mr Pgmi Xijger shared with me the challenges their Home World club has experienced such as Freq Czar duties, Official Web Sites, Moss and whether the Great Axxiss ship "Batten" was built at 590 or 623 festers (feet) long.

It was at this point in the interview when the motorcade carrying myself and the Axxiss delegation stopped at Tri-Pact Institutes Research and Development Center and home of Frank and Linda Petelli. Seeing as I was now familiar with the Aliens, I was asked to make formal introductions between the Earth IR/CWCC Team of IR/CWCC President Frank Petelli, MAG President Marty Hayes and Axis Admiral Steve Andrews and the four AXXISS Delegates, AR/CMBBA (AXXISS R/C Maritime Battlers Association) President Rjxk Afogp, Admiral Uxgj Xuuxw , Captain Xijgeb Pfcen and Publicity Director Pgmi Xijger. The humans and aliens embraced and Frank led the new found friends on an exclusive tour of the Tri-Pact secret research labs where President Afogp and his companions marveled at the many technological advances being developed to secure Axis supremacy through the next millineium.

The tour concluded and the parties were able to sit down and enjoy a banquet dinner of earth delicacies. Served were huge portions of pizza, chips, soda and beer with entertainment provided by none other than Elvis, who was brought back to earth by the aliens for a brief visit.

With the King belting out the last few bars of "Burning Love", the two sides left the Grand Tri-Pact Ballroom and retired to a quiet conference room where after exchanging more pleasantries and ideas, diplomacy took over and not long after, Axis Admiral the Exhausted Steve Andrews announced to the waiting press that a alliance had been formed and AXXISS and Axis now had a mutual defence treaty. According to Mr. Andrews, this adds 72 experienced AXXISS captains to the already proud and dangerous Axis fleet and because of the aliens use a Phase inversion reversed array transmitter system, their frequencies will not interfere with the current frequency allocations.

Mr. Andrews added , "Today marks the begining of a new alliance, one which shall bring peace and oppression to the entire IR/CWCC community. I hearby ask Allied Admiral Steve Milhouland to unconditionally surrender and not risk embarrassing his fleet in front of an intergalactic audience. **FOR THE LOVE OF GOD MAN ! SURRENDER OR FACE ANNIHILATION ! THINK ABOUT ALL THOSE YOUNG ROOKIES IN YOUR CARE AND DO THE RIGHT THING!!!**"

The gathered AXXISS and Axis captains cheered and applauded Admiral Andrews noble and merciful words and after pausing for one last photo op, the aliens boarded their ship and departed for home to prepared their ships for the upcoming battle this summer.

WHAT THE WORD, NEEDS NOW, IS AXIS,

MORE AXIS.

By Fluegel

Bart said it, and he is wright, "what the hobby needs now, is more Axis". He surprised me by this honest remark. We are a bit rare for the good of the hobby. If you have no preference, consider my team. I think only Axis have won the highly coveted "best dressed" award, or did Baker, a British, win it? Whatever, build the ship you want, but if you don't care, the Derflinger, or Hindinburg are good ship kits.

1-1/2	4	35
1-1/2	4	27
1-3/4	4	35
1-3/4	4	27

These are all of the conventional "Exact Miniatures" fat blade design. All will have a 1/8th inch bore and a 4-40 setscrew.

As predicted earlier, prices for these props are going to be considerably higher than what we were getting from EM. Unlike the owner of EM, who was basically a retired machinest who made props as a hobby, I have to make a living and recoup tooling and inventory charges as well as labor. With the current diameters offered, 3 blade designs will be \$8.25 each, 4 blades will be \$8.75 each.

I do have the capability of making special order designs in these same diameters with from 2 to 5 blades, 5/32nd inch bore, and any blade pitch desired. If any one style comes into steady demand, I'll start stocking it with the rest. If a different diameter prop seems to be in demand, say 1 inch or 2 inch, I may get tooling for those size blades as well.

At this point in time, I am ready to begin taking orders for new props.....

Regards to all.....

Steve SWAMPY Milholland

News from

SWAMPWORKS



Hey guys,

After a long wait, while there were none to be had, PROPELLERS for model warships are now being produced in Springfield MO by SWAMPWORKS MFG.

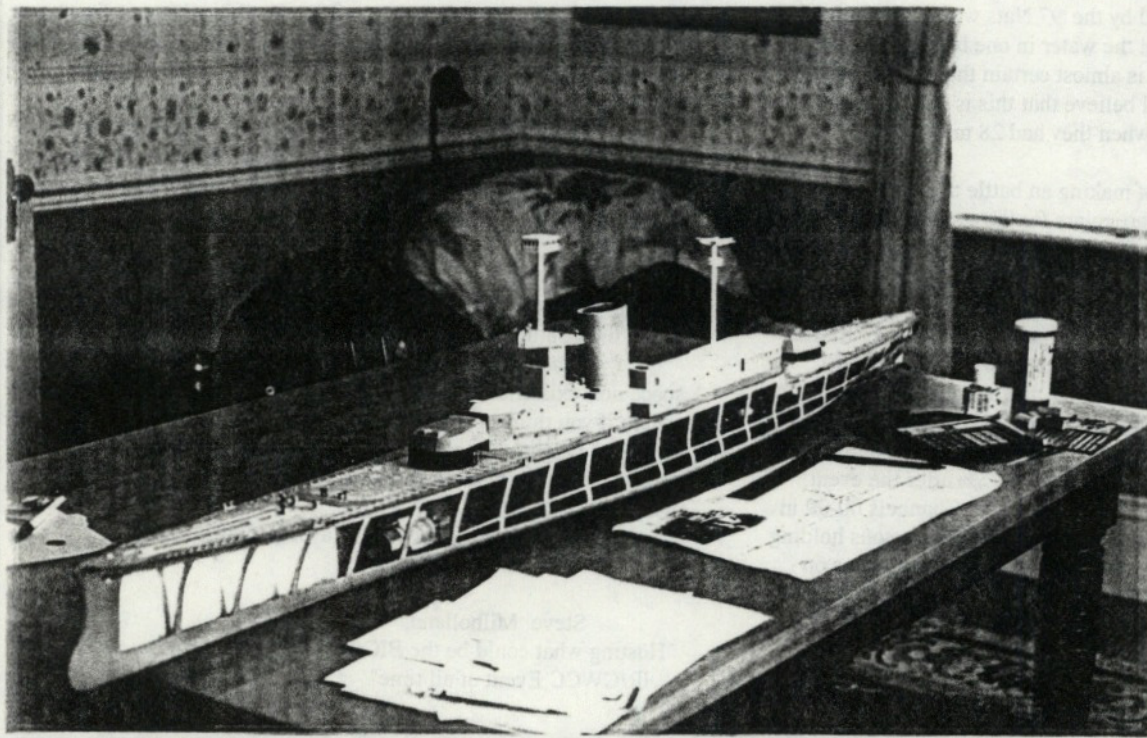
I am right now in the primary stages of building an inventory of new props. The final piece of tooling arrived yesterday and it's "Full Speed Ahead" for propellers.

Initially, I'll be building and stocking the following sizes:

Diameter	Blades	Pitch
1-1/4 inch	3	35 degrees

HMS Courageous, under construction by Bob Pottle

6328 Duncan St. Malifax NS B3L 1K3 Canada.



NATS
Authors
Needed.

Every year Hull Busters is looking for volunteers to perform the vital task of "war corespondent".

I will take photos for your article, and provide you with a tape recorder to "take notes" with. What I need from you is a article that was fun to write, good natured and on time.

Hoping to hear from both Axis and Alies! Thanks Fluegel

Something I noticed.

By D.W.Fluegel

Last year at Nats, I successfully broke into the back areas where hordes of delicious Allied rookies hide. For years I have enjoyed tasty rookies, not as the main course, more like an after meal meant. Well, this year was different. I got shot up! Rookies have never had equipment that worked!. I would slip right behind there triple stern mounts, only to hear a bunch of hisses, and see some slow bee bees bounce off there deck, hit my ship, and bounce off, embarrassingly limp. Then I would show them some real guns, and watch there toy pumps, not come on. It was taking candy from a baby. I defined rookies as "slightly mobile targets".

Something has changed! The rockies were on the attack!. Hordes of them, and

my pump, not theirs was at work. I would have 50+ holes, and some of them I had to, well....stay away from!. Im talking about rookies hear! What has changed?

Stan came down for his annual Christmas vacation, and he had a set of Swampworks guns. We counted the number of Bee Bees the magazine held, 61. Then he shot and I counted, 61 shots, no "hisses", just 61 shots. My guns were not as good, like 49 shots out of 55 BB magazines, and a couple of "hiss's" now and then. My new, slow, big ship will "gun like a Fluegel" or sink like an Ali. So I swallowed my pride and ordered 4 swampworks guns. I was prepared to wait a year, remembering Swampworks past history. But they came in about 2 or 3 weeks! That's reasonable! I tested the new guns out in comparison to my *prison crafted, by the master, one at a time, spared no expense, used stuff*

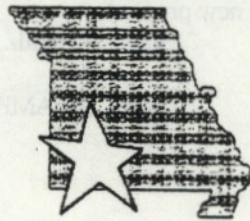
nobody else had guns. The best gun was mine!. The next three were Swampworks guns, so out went my junk, in went Steves guns. I will "gun like a fluegel", or at least as good as those Swampworks rookies.

A few observations, the guns tend to spurt if tweaked for much power, so you have to shoot a bit soft- hard compared to the balsa your blasting through. Also, the magazine was 61 Bee Bees long, so I shortened them to 51. This is so I can fill each gun each sortie, to see that there all empty..that means working. I would have to fire 11 shots out of each gun before each sortie which is something I don't want to do. I like firing a few shots out of each gun, to see that they are working, and listing to my pump come on, and check my rudder and propulsion, but not count our 11 shots from every magazine.

Now two things have changed, the rockies have competitive guns, and so do the founders.

MO Notes:

by Steve Milholland



The Spring BB Fest is really shaping up nicely guys. As of April 6, I have had 39, yes, you read right, THIRTY NINE guys say that they are coming to Springfield MO on the weekend of May 16-17 of this year.

This battle has the potential of becoming the largest sanctioned IR/CWCC event EVER HELD !!!!! If memory serves me, the previous record is held by the '97 Nats with 42 (?) entries and a maximum of 36 ships on the water in one battle. Even if we don't break the Nats record, it is almost certain that we'll break the record for a Non-Nats event. I believe that this is held by an event in Decatur Alabama back in '90 when they had 28 members in attendance.

If you are thinking of making a battle this spring, this is one you don't want to miss. Particulars for the event are as follows:

SANCTIONING. This is a sanctioned event. All participants MUST have current IR/CWCC and NAMBA membership. Cards will be checked.

ENTRY FEE. \$12.00 per person in advance. Entries must be postmarked before May 4 and include your CHANNEL NUMBER, not frequency. Late entries and at lakeside will be \$18.00 per person. We need paid entries ASAP so that we can work out any frequency conflicts and notify the concerned Captains. No-shows who send entry fees will be refunded 75% after the event.

**** A note about frequencies **** Channels 00-09 in the 50 & 53 mhz bands are reserved for use only by persons holding the appropriate FCC Amateur License. Captains using radios on licensable frequencies must have an FCC license in order to legally operate. A valid license must be shown by any Captain operating a licensable frequency at this event.

For your refreshment needs, the hosts will be providing Co2, soft drinks and ice at lakeside.

ACCOMODATIONS. BB Fest HQ is Motel 6 North, at 3114 N. Kentwood, just off Exit 80 on the North side of I-44, (417) 833-0880.

I've recently been getting calls about the Motel 6 North being filled to capacity already in double rooms, with only singles still available. If you run into this problem, there are two other places literally next door to M6-North to check out.

Right across the street is a place called Microtel INN. You can call them and check out the rooms at (417) 833-1500. This little place looks new & clean and is only 50 yards away from all the folks at BB Fest Headquarters (Motel 6).

Next door but a little further walking distance (75-100 yds?) is a Quality INN. Call (417) 833-3108 for room info here.

Neither of these alternates have external access, but a central hallway layout. Of the two, the Microtel INN is closest to Motel 6 and is much smaller and more compact. Walking distance from your room to the outside door is guaranteed to be short. The Quality INN is a BIG place. You could get stuck with a real trek to the door while loading & unloading.

Our third alternate is Motel 6 South. This is just across the Interstate interchange about 3/4 mile away from Motel 6 North (BB Fest HQ). If you insist on outside access and don't mind being that far away from "where the boys are", give them a call at (417) 869-4343.

THE LAKE. Ritter Springs Park. Just Northwest of the city out in the country. To find it, just follow the caravan from the Motel 6 on Saturday morning.

Shade has always been limited in the pit here and table space non-existent. Bring your own work table and chairs and shade source if you think you need it. Don't plan to work out of a mini-van or pickup tailgate. The vehicles will have to be parked some distance from the pit area and all ships and battlers must be in the marked pit.

Here's looking forward to a Great Battle.

See ya' there,

Steve Milholland,

"Hosting what could be the BIGGEST IR/CWCC Event of all time"

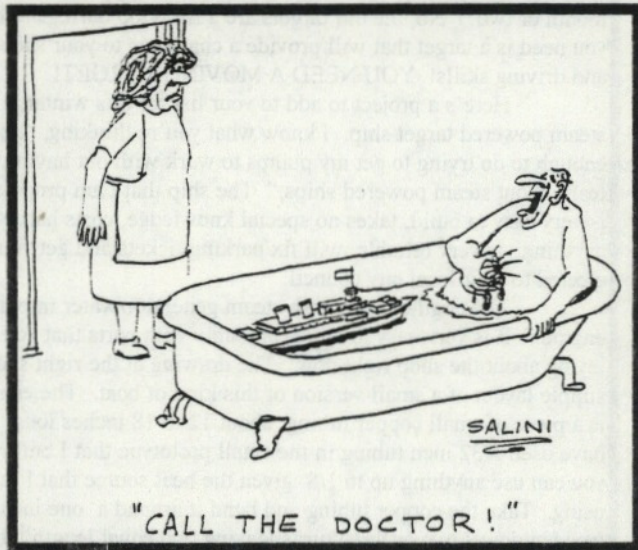
To: The Honorable Admiral Steve Milholland
From: The Slightly Less-Honorable Curly Barrett,
 Axis Vice-Admiral In Command
 of the Springfield, Mo Squadron.
Re: Unconditional Allied Surrender

Whereas: This being the 11th day of March, in the Year of Our Lord, 1998, and:
 Whereas: I, being the duly appointed Vice-Admiral of the Mo Axis Squadron, and:
 Whereas: You, being the Allied Commander-In-Chief of the Mo Allied forces, and:
 Whereas: The gallant-yet-soggy Allied forces continue their hostile activities, and:
 Whereas: We seek "World Peace Through Total Global Domination," and:
 Whereas: The final outcome of a complete Axis victory is undeniable, and:
 Whereas: I am getting a hefty commission for every "Whereas" I use, and:
 Whereas: The Axis seek the speedy and humane cessation of hostilities...

The Axis fleet demands the complete and full unconditional surrender of the Allied forces-to be effective immediately. In compliance with this unconditional surrender, you must immediately cease all building and battling of Allied vessels, report to the nearest Axis command center and leave the keys to your boat on the desk. At this time, the Axis fleet graciously accepts your full and unconditional surrender, while reminding you that, should you continue your aggressions or fail to comply, the Axis fleet will use any means available to bring about the complete destruction of the Allied fleet. Your swift reply will help prevent many gallant Allied captains from going to their watery graves...

Allied Admiral: X _____

Miss R.C WarshipCombat! Miss Mike Torda



Winter Time Projects

By Mike Torda

(I am just now getting around to publishing this, so its really not that cold. D.F.)

Winter is fast approaching and our work shops are busily humming with the sound of drill presses and Dremel tools. Yes, 'tis the building season. When other people are seated around the Yule time log enjoying friends and families we are tucked away in our shops, covered with sawdust and splattering ourselves with paint and molten solder. It's a shame about those other people. They don't know what they are missing. I understand that, even as you read this with one hand, you've got the other clutched around some nefarious new device. I myself am working on improving my gun systems. It is my hope that come spring when I trigger my guns, the correct number will fire. I also hope that the ones that are shooting are the ones that I had intended to fire! When January rolls around and we need to test our guns, what are you going to test them on?

Assuming that you have chipped through the ice on your practice lake, are you just going to drop an aluminum can in the water or do you want something a little more interesting??? (The Ice on the lake doesn't apply to Don, of course. He will still be napping in the lawn chair, shading his eyes from the hot glare of the Florida sunshine with the latest copy of Boat Modeler magazine. Don, how would you like some house guests for a month or two?) No, the old targets are a little too boring! What you need is a target that will provide a challenge to your shooting and driving skills! YOU NEED A MOVING TARGET!

Here's a project to add to your list for this winter, a steam powered target ship. I know what you're thinking, "I got enough to do trying to get my pumps to work with out having to learn about steam powered ships." The ship that I am proposing is very easy to build, takes no special knowledge, costs hardly anything, is very reliable, will fix parking tickets and get you elected to your local city council.

The engine is a "Flash steam generator/water impulse engine." It is very easy to build, probably with parts that you have laying about the shop right now! The drawing at the right shows a simple layout of a small version of this kind of boat. The engine is a piece of small copper tubing about 12 to 18 inches long. I have used 3/32 inch tubing in the small prototype that I built. But you can use anything up to 1/8 given the heat source that I'm using. Take the copper tubing and bend it around a one inch wooden dowel two or three turns leaving two equal length tubes coming off the coil. This is your engine. Mount the tubing so that both ends of the tubing stick out the back end of your boat. They must be submerged the entire time the boat is running. The heat source is a small flame from either a candle or alcohol lamp.

How does it work? Before putting the boat in the water you must fill the tubing with water. When you put the boat in the water the ends stay under the surface and the water will not run out of the tubing. The flame from the candle heats the tubing and turns the water to steam. The steam forces the water column out the ends of the tubing. Some of the steam condenses back into water creating a partial vacuum which draws water back into the tubing until it reaches the now "super heated" portion of the tubing where it flashes back into steam. It takes just a few seconds (20 or 30) for this cycle to really get cooking. When the cycle is in full tilt the engine will produce 2 to 5 cycles per second. As you can see there are no moving parts. As long as there is fuel for the flame source, the boat will continue to putter around the lake.

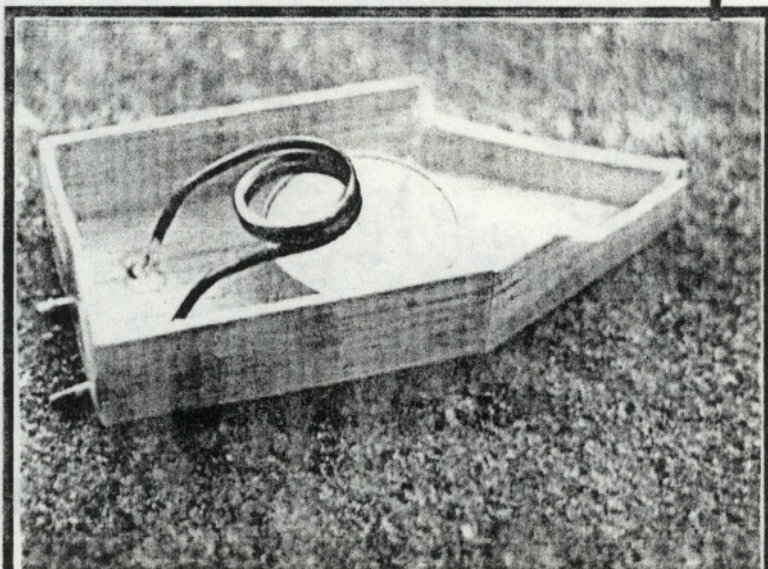
How fast will one of these ships go? The amount of thrust that I have generated by my prototype ship (3 inches x 1.5 inches) is enough to scoot it about at a scale speed of 40 - 50. The

speed is fully dependent upon the amount of heat that you are able to impart to the coil. At first I was running about 70-90 scale speeds with no audible sounds. When you build up enough heat this type of motor makes a pop-pop or a phsst-phsst noise. It is hard to screw this type of motor up. Almost anything like the coil described above will make it run. The trick is to build it so that it will run fast. My modification was to build a small (1/2 inch diam.) chimney for the flame to travel up. The coil is situated inside the chimney which is made of 36 gauge aluminum. The heat is trapped in the chimney and is reflected on the coil. The velocity of the flame traveling in the chimney cuts down on the amount of soot build-up on the coil. The soot tends to insulate the coil and slows it down. To produce enough usable power to push a Cruiser type ship around you would need: 1. a hotter flame source, 2. multiple engines, and 3. bigger tubing than 3/32. Below is a drawing of an alcohol flame source that I'm working on and a drawing for a proposed cruiser target ship.

The burner to the left is made up of a one and a half inch copper end cap fitting with the end covered over and soldered shut, this is the reservoir for the alcohol. Then you drill a couple of holes around the periphery and insert 1/8 inch tubes down into the reservoir with some pieces of wicking material. these wicks will be under a large portion of the coil as it bends above the holes you drilled. You now have a device that will deliver 4 times the amount of heat and less soot than a regular candle. Use larger diameter copper tubing for the coil when you are able to produce more heat. Now, we get to the crux of the whole thing, the drawing of the target ship. The five coil units and their associated alcohol flame units will push this baby around the lake like nobody's business. Another interesting feature of the tubes is that they act like a jet ski's outlet. By bending the outlets of the tubes you can control the way that the ship turns, you can make slow turns or with multiple engines you can have it spin in place! If you have only two motor units in the back of your ship, they will out-put different amounts of energy at different time so the ship will steer about randomly.

I hope I've given you some good ideas for making a more enjoyable and useful target ship. I know that some of you will come up with some good modifications to this, write to Fluegel so that he can let the rest of us know via a hullbusters article.

Looking forward to seeing you on the lake next spring
 Mike Torda Capt. DKM Lutzow
 Capt. DKM Bismarck
 Capt. DKM Put-Put



Proud to be Axis

By Curly Barrett
Axis Propaganda Prime Minister

Built on a long history of fellowship and tradition, the great Axis fleet sails again on another glorious chapter in the annals of hobby history. A chapter that will be written with the sweat and ingenuity of industrious Axis dockyard workers. A chapter that will be written with the blood and valor of honorable captains battling on the waves of conflict, for the hope of freedom. A chapter that will end in victory!

And as predictable as the ending is, it is the driving force behind our fellowship and traditions-traditions that date back to the beginning of the Axis fleet.

Perhaps the best known and oldest tradition in the Axis fleet was the ceremonial "Baptism by Fire" during speed trials on Sunday. Our Founding

Father and Gross Admiral, Herr Fluegel, makes a special Axis-Effort to be on the pond every Sunday with loaded guns, waiting to welcome the unarmed rookie captains as they finished their speed trials. It is considered a great honor to be anointed by the one and only Fluegel in this manner.

Another tradition is battle-readiness! The Axis have a long history of going the extra mile to be on the water for each and every battle. I can honestly say that at every NATS I have attended, an Axis Admiral has stayed up all night long-without any sleep-to be ready for the next day's battle! I have seen Axis captain's help out Axis and Allied captains alike. I have seen a gun given away to a needy captain, an entire Jap destroyer given away...a pump, a servo...hours and hours of veteran assistance...all to help others get on the water and be reliable. We pride ourselves on our reliability and enjoy encouraging each other to

improve.

One tradition that we will certainly continue this year is total domination in the dark! The Axis own the night-having never "Officially" lost a Night Battle in the history of the event. Our superior eyesight and enhanced training facilities have given us the edge in this most-demanding of events. There can be doubt of the outcome here.

A relatively new tradition that we plan to continue is our fellowship and support of those Axis captains who could not be in attendance with us at NATS. As we have done in the past, the Axis captains will assemble in the morning and share a moment of silence for the fallen and absent captains. This is followed by a thought-for-the-day and a heart-felt unification yell!

This is just a few of the wonderfulnesses (Fluegel's words) that make the Axis fleet great. And some of the many reasons why we are so proud to be Axis. Battle on!

Air-powered BB and pellet guns aren't toys,

New York Times

BB and pellet guns are popular. But they're not toys, notes a recent report analyzing 101 cases of children who were seriously injured or killed by projectiles from air-powered guns.

Dr. Susan Bratton of Children's Hospital and Medical Center in Seattle and her collaborators reported in the journal *Pediatrics* that the victims,

whose ages averaged 10.9 years, had most commonly been shot by a friend or sibling, usually at the home of the victim or a friend or relative. In 71

doctors warn

percent of the cases, the shootings were accidental, but in five instances they were assaults and one case was a suicide.

The most common injury, afflicting 38 children, involved the eyes; 25 children suffered permanent visual loss,

including 15 who became blind. Ten children were shot in the head; three of them died, and two suffered permanent neurological deficits.

Other injuries involved the neck,

chest, abdomen, arms and legs. Three children each suffered a collapsed lung and one was shot through the heart. The study reviewed all air-gun injuries among those 18 and younger over an eight-year period at four med-

ical centers. Air guns are firearms that use air or another compressed gas, not gunpowder, to propel a projectile such as a BB or pellet.

The Centers for Disease Control and Prevention estimate that 33,000 people are treated each year in emergency rooms for air gun injuries, with the most frequent victims being boys 10 to 14.

CONCLUSION

Thanks to so many generous authors, including President Frank, Pate, Poindexter

for both the logo (he sent me 2 more for next issues) and his ship update with a photo, Milholland for two articles (big battle coming soon!), Amend, Horbul (with a

photo), the unknown Aliens land reporter, Bob Pottle's ship photo, Curly, Stan, Torda with 2 photos and the New York Times! Gentleman, thank you!

The First Battle,

(Historically Speaking, 20 years ago)

By Stan Watkins, 4/13/98

Although Stan's USS Ardmore was launched with first firing of an R/C Mini-BB gun on October 23, 1977, the first ship battle did not

occur for month after that. You see Stan had no viable enemy. But take heart the hobby would be born and Fluegel would actually be fired on first. While Jeff Poindexter was completing his USS Missouri (1/160 scale) Fluegel was challenging the Amarillo First Fleet with his R/C Airplane (Yep Fluegel was the hobby's first airhead). Fluegel challenged Stan's USS Ardmore to an air/sea

battle. This was the prelude to the annual Micro-mini-Nats that traditionally occur in Dallas over the Christmas holidays. Fluegel's MEN trainer flew over Stan's USS Ardmore (fictitious light cruiser). Stan's light cruiser was equipped with a Mk I gun firing from her stack. Fluegel used his "pendulum bomb" hanging from a string. He attempted to drag the bomb across the path of the Ardmore hoping to snag it as with a grappling hook. As Stan fired at Fluegel's plane on one pass, the magazine hose blew off of one of the fittings. The force blew a lengthy hole in the Ardmore's hull. The hole was about an inch and a half above the water line and there was little wind that day so the waves were not a threat. The Ardmore had no pump so there was a risk. Fluegel asked if Stan wanted to surrender. Stan said the Ardmore was still full of fight and wanted to continue. Shortly thereafter the MEN trainer connected with a tree and appeared to explode in the branches. There is some actual 8mm movie footage of the battle but the film ran out (about 3 minutes per reel, oh the good old days) before the crash occurred. Fluegel's demonstration proved what us old battleship admirals had known all along, the Billy Mitchell demonstration was a staged hoax.

But Fluegel still wanted to try "Fluegelization" on the airplane idea so it would be up to Jeff Poindexter to be the oponent for the first R/C Warship Combat battle. Jeff continued to prepare the Missouri and Stan armed the USS Arizona with MkII guns (surface type). In an attempt to get more participants a demonstration was arranged for the local wargaming (board game) club. Surely dynamic model wargaming would lure away some of the static token guys. So, on March 18, 1978 Stan's Arizona was on shore with the gun pointed at the USS Ardmore which was stationary offshore. As Stan worked the lever on the transmitter of his old F&M Matador "Reed" type radio control unit, the MkII barked repeatedly and small black spots (holes) could be seen "magically" appearing in the 1/32 hull skin of the USS Ardmore. The Wargamers were impressed and several were heard to comment about wanting to get into the game. But this was not a battle, only a staged demonstration. One surprise faced Stan as he waded out and retrieved the stricken combatant. The Ardmore seemed much heavier than normal. The reason for this became apparent as Stan observed water running out of a BB hole that was about 1/2 inch "below" the waterline. This had not been observed during the demonstration. Stan knew now that a ship could sink another one with the new R/C operated mini-BB gun.

Gun progress continued and Jeff fitted out the

Missouri with a new MkIII while Stan chose the even newer MkIV for his Arizona. On March 30, 1978 they would finally go to war! As they met they repeatedly hit each other but only dents were scored. That is why that battle is not called the first battle. Then on April 20, 1978 they met again. Stan had been writing hobby "Progress Reports" notes in 6 inch by 3 1/2 inch "Memo Book"s since January 21, 1978 to preserve the history for posterity (you're welcome !). The entries are as follows "April 20, 1978 Thursday.

1. Had short Naval Battle Arizona versus Missouri. After repeated early problems with a new magazine line in Arizona, Managed to achieve first wartime hull penetration. Missouri hull was pierced in one place and dented in two more places. Southwestern Fleet thereby claimed the Lake dominance, since the USS Arizona had damaged the missouri's hull. Admiral Poindexter claimed that possession of the lake was contested based on the large number of problems that the Arizona had encountered. Problems were:

1. Ship sailed without radio reciever turned on.
2. Magazine exploded at o ring valve
3. Magazine exploded at base of gun mount.
4. Pressure vessel was not properly filled.
5. Pressure leaked by the BB's in gun barrel.

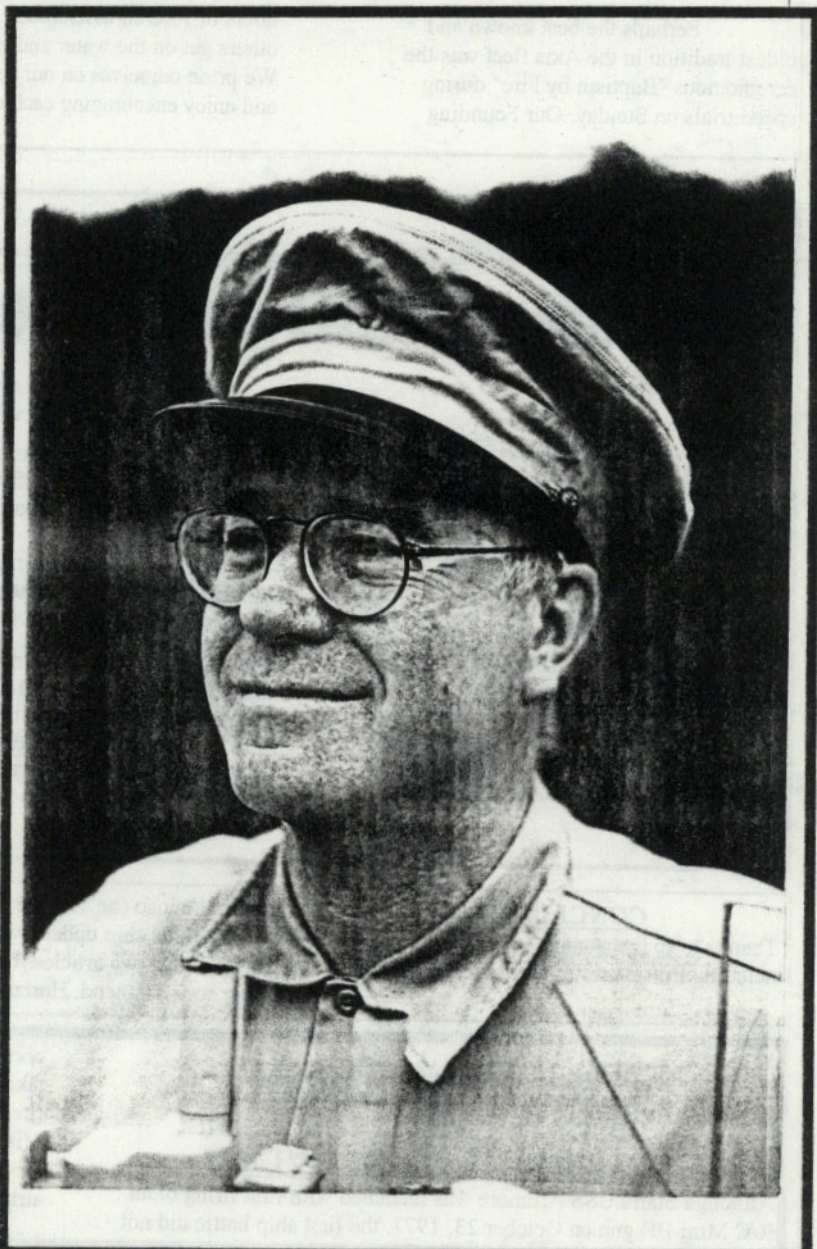
But in the end it was the trouble plagued Arizona that inflicted the first ever hull penetration during actual combat. The Missouri took on some water from this

penetration.

It appears that the Southwestern fleet has become somewhat over confident because of passed problems that have always plagued the Southcentral fleet. The Arizona several times sailed broadside of the Missouri not fearing the Missouri's flawlessly firing guns. Missouri's gunnery was poor. Arizona's very limited gunnery was not bad." But the Missouri was to be retired. On April 22, 1978 Jeff launched his new USS Texas.

Then and now.

April 1998, Jeff Poindexter has once again launched a new USS Texas. Stan has launched a new USS Washington. Those ships are nearly the reverse of the oponents of April 20, 1978. Perhaps Stan and Jeff will have to battle a one-on-one at the 1998 Nats to commerate the first battle. Hope you enjoyed this little trip Back to the Past. Let's Battle in this 20th year !!!
Stan Watkins, Proud Founding Father of R/C Warship Combat !!!



1998
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This form MUST be used to apply for NAMBA International Membership.

Enclosed is \$ _____ to enroll _____ members listed below under the Modeler's Insurance Plan.

PLEASE NOTE: Print all names and addresses clearly. In the event of an accident, this form becomes a legal form. Please do not use it for personal notations. Where any doubt of spelling of the name and address occurs, the form will be returned to the maker, and membership held up. Please keep in mind that the member is not insured until the request and the fee for insurance have been properly filed with an authorized NAMBA official, and the insurance card issued.

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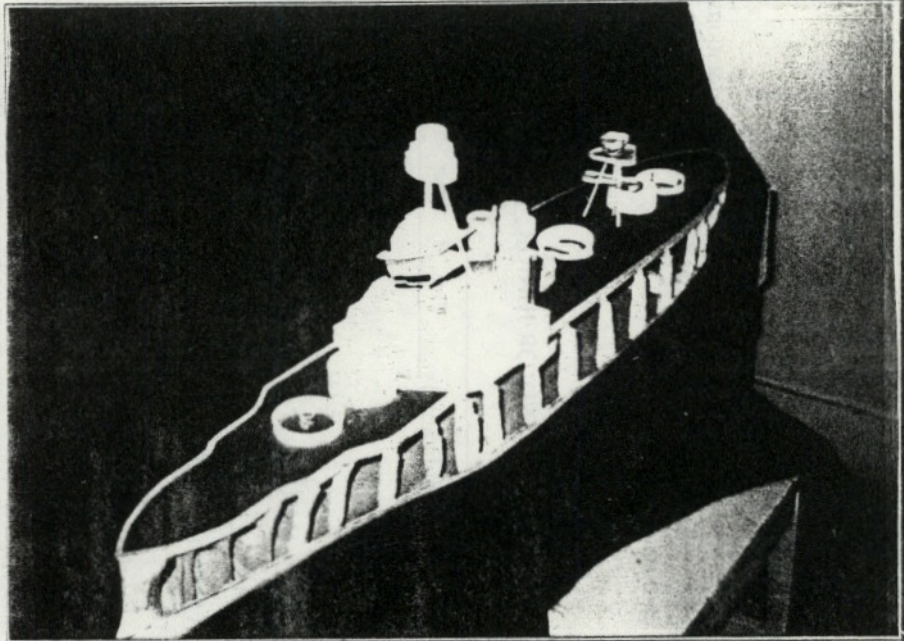
JUNIOR (Under 18 years of age)....\$25.00

Progress report on Jeff Poindexter's TEXAS.

Dateline: April 13, 1998; The USS Texas was launched at about 8:00 PM in a small tributary that branches off the stream that feeds Thompson Park Lake here in Amarillo, Texas. She was under radio control and was quite slow. The slowness was due in part, I think, to undercharged drive batteries. (I received them at the first of March and have not charged them yet!) The 'Texas', on this evening, was just a little over 17 pounds. I need another 7 pounds to bring her down to the proper waterline level. After the guns, CO2, BBs, and pump are installed I may still need a couple of pounds of lead to balance it out.

After getting the model home, I found about 1/10th of a teaspoonful of water in the stern. That was fixed with a little CA glue. Our battle scheduled for Friday, April 10 was postponed to Saturday, April 18 due to everybody not being as ready as they would like to be! Stan Watkins sent me an e-mail on the 15th saying that he had looked up in his records and found that my first 'Texas' had been launched on April 22, 1978. (Almost 20 years to the day!)

I want all you 'rookies and 'old timers' to know how good it felt to be back on the water again for the first time in 9 years. My last battle was in the Dallas Metroplex in April of 1989. The sight of the 'Old Girl', even through this is a new model, on the water brought back so many memories that I got 'goose-pimple' all over. The only other time I feel this way is when I kiss my wife, (I'll get therapy after Nationals!...for the feelings not the kissing!) I found myself wishing for an armed ship and an Axis ship to fire upon....to heck with an Axis ship...any ship to shoot would do!



May the Lord be with you all, and remember ...keep everything dry, loaded and charged.
Captian Jeff Poindexter

Hull Busters
917 Hudson dr.
Garland Texas 75043

