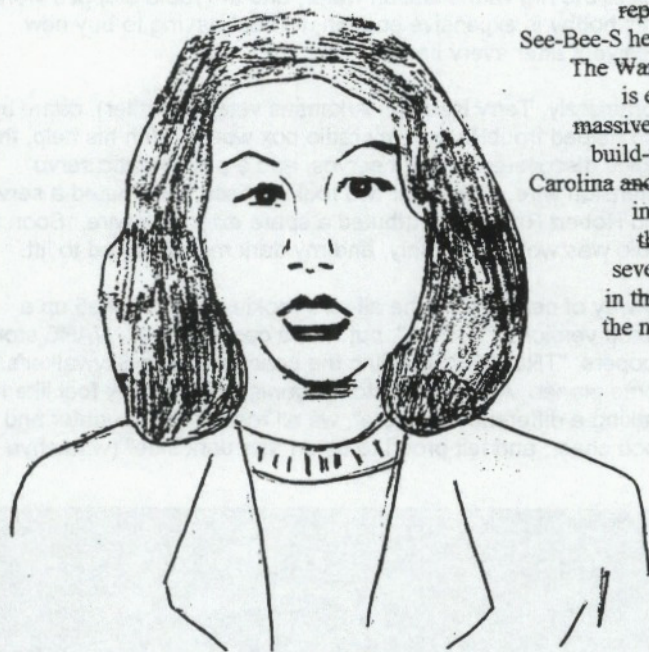


HULL BUSTERS

JUNE 1999



"I'm Connie Chung, reporting from See-Bee-S headquarters. The War in Kosovo is ending, but massive equipment build-up in North Carolina and Oklahoma indicates that there may be severe conflicts in these areas in the near future!"

By Jeff to Lutz 6/6/99

Announcing the

"TEXAS TRIPLE CROWN HOUSTON REGIONAL",

A fall MWC regional on September 4-5 (Labor Day Weekend) in Houston, TX. All battlers must have valid NAMBA card and MWC card to participate. Ships must be built according to the MWC safety and construction rules. Speed testing will be Saturday morning. Battles will be all day Saturday and also Sunday morning. Suggest you contact Steve Reichenbach for details at 281-550-5423. No fee, Free CO2.

Allies vs Axis (unless we don't get enough allies!)

AXIS SHIPS:

Nagato
Bismark
Scharnhorst
Gneisenau
Lutzow
Lutzow

ALLIED SHIPS:

Invincible
North Carolina
Houston



Anyone not allergic to cats can stay at my place (we are still working on plans for non-meow lodging). It will be a very fun event! Announcement has been submitted to hullbusters. Steve Reichenbach
Houston, TX

Bart Purvis wrote: NATS AND TEES

Work on the 1999 MWC National Championships to be held July 25-30, 1999, is progressing nicely. Thankfully the destruction and devastation visited on the Oklahoma City area missed our friends there. The motel and battle sites escaped damage and our plans are unchanged.

I encourage all of our Nats attendees to make their motel reservations as soon as possible. There may be a large influx of disaster relief people and construction workers into the affected areas and housing will be at a premium. To make your Oklahoma City Courtesy Inn reservations, call (405) 722-8694. Tell them you are with MWC and that the confirmation code is 30494. They will then give you your personal confirmation code. Aaron is the Courtesy Inn contact person and Robert Rucker is the MWC site host. Contact either of these guys if there is a problem. A location map will be mailed with the Nats package.

And now, I am pleased to announce that each MWC Nats attendee paying the full fee for the event will receive, at no extra charge, a 1999 Oklahoma National Championships tee-shirt.

Simply contact me before June 21, 1999, and give me your shirt size. That's all! Your MWC 1999 tee-shirt will be waiting for you at the captain's meeting on Sunday. This June 21, deadline is absolutely firm because of the lead time necessary to process our order, so don't forget. Send me your size information - now!

If you wish to purchase extra shirts and also for those attending only a day or two at Nats, the price per shirt is \$16.00. Add \$1.50 for XXL and \$2.50 for XXXL. Again, I will need your shirt size along with your check, made out to Model Warship Combat, by June 21, 1999.

And for those really radical few who want to ask, "Can I delete the shirt and knock \$16.00 off my Nats fee?" Don't even bother to go there.

I would like to remind everyone that all Construction, Battling and Safety Rule proposals must be submitted in writing to Lars Dahl, MWC Secretary, no later than 11:59 PM on Sunday, July 25, 1999. You might wish to review Article XVI of the Bylaws and plan your rule proposals accordingly. Our "rules meeting" will be held on Friday afternoon, thereby freeing up the evening for the Awards Banquet and for one final night of fun and fellowship.

See you in Oklahoma City,
Bart Purvis
1512 Highway 15 South
Baxley, GA 31513

Tel (912) 367-7306
Fax (912) 367-6713
e-mail purv@altamaha.net



The Rookie Room by Steve Reichenbach

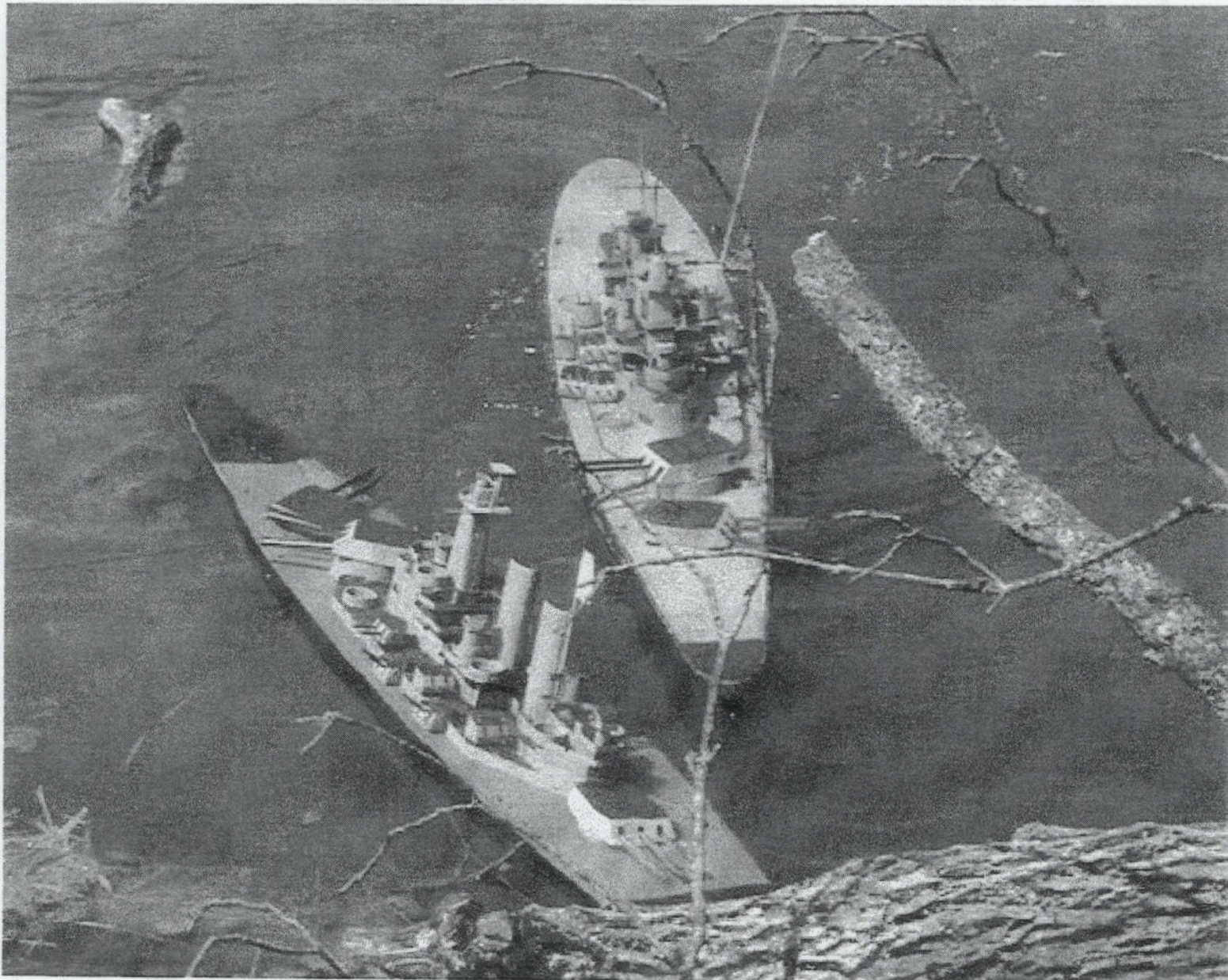
Dateline: Room 111, Motel 6, Springfield,
Missouri, May 29, 1999

As the drama unfolds, we see three rookies staying up late at night, after the first day of battle. For one rookie, the air is thick with fears of broken radios, regrets of poorly executed plans, and dashed hopes after so many sinkings. For another rookie, there is sympathy but an air of accomplishment, as his ship has done rather well in stark contrast to the last time he battled in Springfield. The third rookie eagerly awaits the coming day, and is full of good cheer, knowing his mighty ship will be ready for next spring's battle! We drove up to Springfield together, and now the three of us were sharing a small motel room, late at night, with a half-finished YAMATO, a wet HOUSTON, and a brand new GNEISENAU.

After charging up the transmitter and receiver batteries during dinner, I was half-scared and half-hopeful, preparing to test out my formerly-wet radio-box components. One thing led to another, as a tight radio box caused the guns to malfunction from lack of venting. A quick fix at lake-side got the guns working by popping the top cover from the radio box, but the following sink filled the box to the rim with Missouri water, and the radio stopped working. This hobby is expensive enough, without having to buy new receivers after every battle!

Fortunately, Terry Keef (an Arkansas veteran battler), came by and helped troubleshoot my radio box woes. With his help, this rookie discovered two wet servos, and a problematic servo extension wire. The other two rookies each contributed a servo, and Robert Rucker contributed a spare extension wire. Soon the radio was working reliably, and my dark mood started to lift.

By way of celebration, the all-axis rookie room cranked up a laptop version of "COPS", but with a cast of STAR WARS stormtroopers, "TROOPS", keeping the peace on Luke Skywalker's home planet. As the lead stormtrooper said "I really feel like I'm making a difference out here", we all roared with laughter and good cheer, and felt proud to be on "the dark side" (whatchya



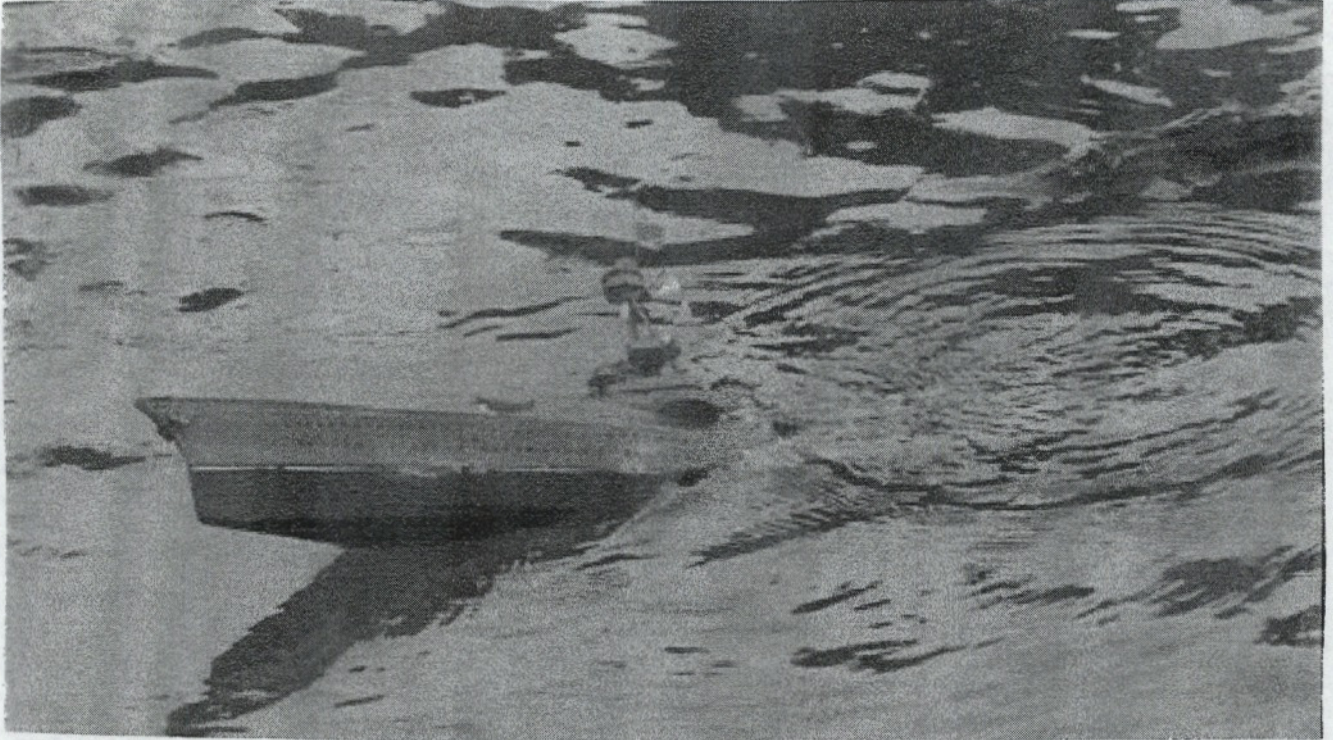
gonna do when they come for you!?).

While I started installing the rebuilt radio box, my comrades went about building a bottle suitable for storing bbs. Someone found some oil, and using a nice clean motel towel, they screened out the bad bbs, cleaned the good ones, and filled up the bottle.

In the middle of all this action was Tim, a fellow from Missouri,

who just happened to come down to watch the battle. He asked lots of questions, and kept struggling with the decision of how to get his first boat on the water.

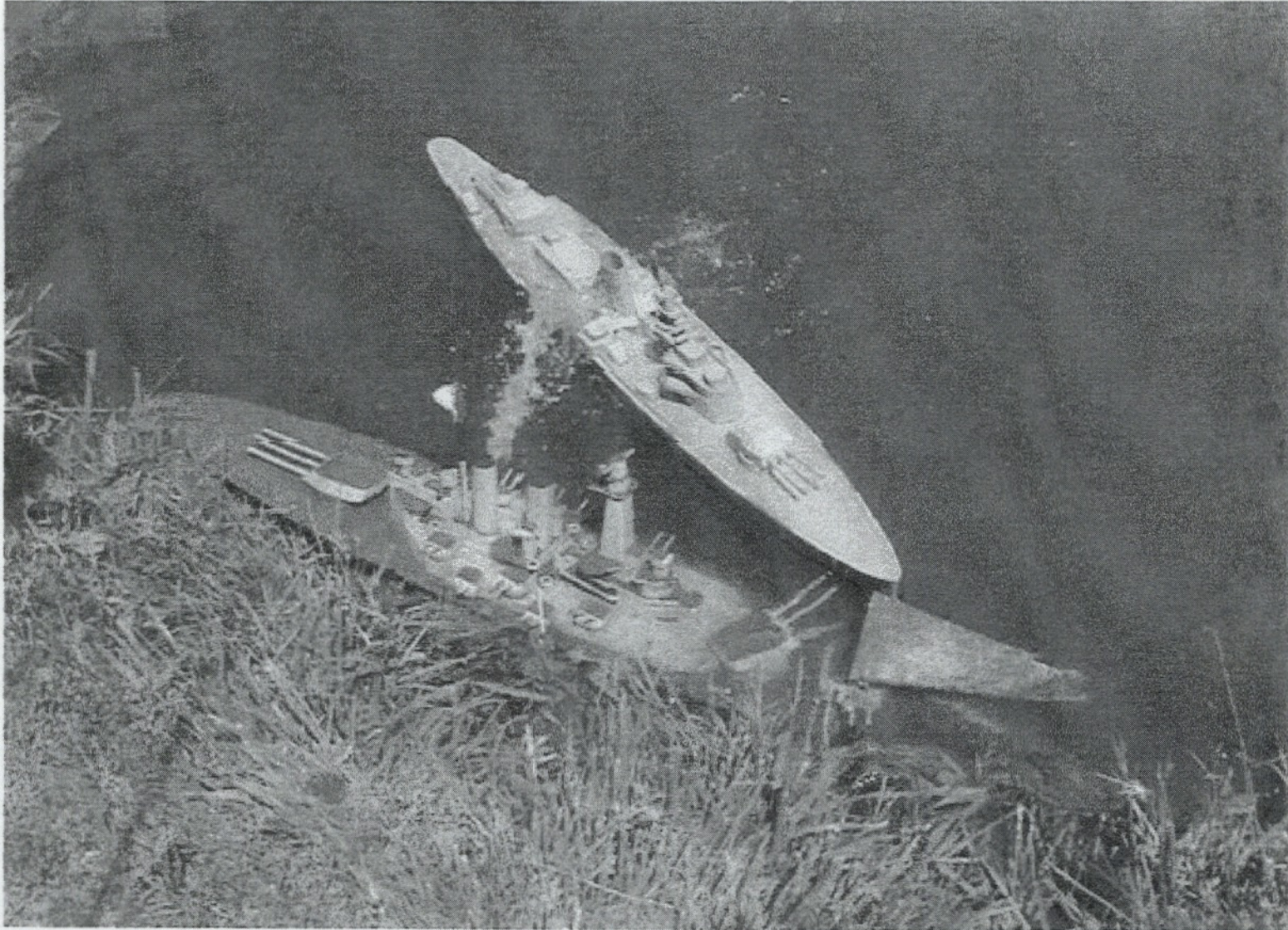
We all shared moral support, soft drinks, and allergy medicine that night. From 8 to midnight, we encouraged one another, and focused on getting that radio box put back together. It meant a lot to me, and is a prelude to the rookie room at NATS, of which I will



1556 be a part.

The following day my radio box was perfect. Unfortunately, other rookie problems cropped up, like the rudders that got stuck backwards, the fuse that melted down and shut down my bilge pump at that critical moment, and the plexiglass armor that just splintered and shattered (another case of rookie-itis). Then there was this seemingly magnetic attraction between my boat and the shore... why oh why did I stay so close to shore, where all the sharks could easily feed on my 5-unit ship with only 2 stern guns installed.

It's days like these that it's hard to be a rookie. Still, I'm glad that there is room for rookies in this great hobby. Some day I may just learn how to avoid the temptation to allow my ship to get trapped against the shore. Some day I may just learn how to keep my guns pointed towards the enemy. Some day I'll get those rudders set up correctly. Some day, MY boat will be awarded the "MOST FEARED" (but definitely not anytime soon). And that's how it was, realizing how far we still have to go, but seeing the potential to do better next time, in the rookie room.



AXIS ADMIRAL'S GRAB BAG

Starting at 1998 NATS Curly Barret started a new Axis tradition of fun, and world peace through global nomination. Also known as the AXIS ADMIRAL'S GRAB BAG.

The Grab Bag works like this. Starting Saturday, and Sunday, and through out the week, I, Wade Koehn, will be taking donations in my room and putting them in four different bags. Donations can be

almost anything. From building supplies, motors, pumps, guns, servo's, paint, sandpaper, to unusual/mundane things like ex-superstructure from old ship, a picture/name association list so Fluegel can get your name right, gag gifts, or whatever floats your boat. Please donate something that you would like to get, or make you laugh. Either way, it'll be fun. I plan to donate two or three good things for each day myself.

Then on Monday, Tuesday, Thursday, and Friday the Axis will meet before the

first sortie, or between battles, depending on readiness of our fleet, and draw a name for the winner that day. If your name is drawn you will be will the winner of everything in that days bag. Once you have won your name will not be included in the following days drawing. Please come to my and Dirty David Haynes room and donate an object for fun and laughs. Thanks!
Seig Heil!!

Wade Koehn
wwkoehn@juno.com

The Fray at Bray's

April 17, 1999

Axis and Allied forces clashed in Tulsa, Oklahoma this spring, resulting in a stunning and overwhelming victory for the Axis. The Axis forces were led by Admiral Chris Pearce in his captured North Carolina class battleship, and Admiral Fluegel in his Baden. As a rookie, I asked for help with patching my sunken USS Houston after the first battle. Fluegel suggested I coat the silkspan with mayonaise, to prepare for yet another yummy b at tleshi p sandwi ch.

As a rookie, I was very excited about bringing my new USS Houston to my first battle. It was proudly displayed at the entrance to the pit area, and other battlers made many comments about it before the battle. While I thought they were admiring the new cruiser, I now imagine that they were in fact taking a good look at the one ship that must be baptised at the event.

With ships made ready, and Steve Milholland appointed the Contest Director, battle was called for at 10am. After the Houston posed for a few cheesecake photos, the fleet was assembled in the shallows of the pond. Lots of people mentioned how great it was to walk just a few feet from the lovely home of our gracious host to the pond. Unfortunately, the Lutzow was unable to compete in the first sortie. As the fleets separated, the Axis appeared to be underdogs. Here are the scores from the first battle:

ALLIES:

Bob Eakin	USS Washington	53a, 15o, 18b, plus sink
Robert Rucker	USS North Carolina	75a, 10o, 22b, plus sink
Ted Brogden	HMS Invincible	44a, 3o, 15b, plus sink
Steve Reichenbach	USS Houston	13a, 1o, 21b, plus sink
Jim Ewers	HMS Exeter	9a, 3o, 5b

AXIS:

Chris Pearce	USS North Carolina	15a, 2o, 2b
Fluegel	SMS Baden	28a, 4o, 1b
Scott Bene	SMS Van der Tann	20a, 2o, 0b
Kevin Bray	DKM Lutzow	2a, 2o, 0b

Total Points: Allied 1,050, Axis 11,190

I was very excited during the first sortie, accelerating in a turn to bring my dual stern guns to bear on the Axis SMS Baden. It seems that Der Fuerer himself was commanding the venerable Baden to pursue my cruiser! I was even more excited to have the Baden between myself and the shore. Just when I began to fire my first rounds, the Baden spun around, and I discovered what a hay maker can do. I would have been better off just poking my thumb into my bow before the battle, as the Baden punished me for getting in close. Perhaps this looked like fun, because Chris Pearce decided to bring his North Carolina over, making meat of my cruiser in a battleship sandwich. I accelerated out of that predicament, only to find I was rushing towards shore, with a North Carolina lining up sidemounts. Rather than push a bad position, I kicked into reverse, and managed to punch a few holes into the bow of Chris Pearce.

That was a mistake.

After hearing the sound of my guns striking balsa for the first time, Chris turned the North Carolina (wow, do they turn!) and put several triple stern shots into my port side. As I chugged away, my swampy cruiser pump started to labor, shooting a stream 7 feet high as I began to settle. Chris smiled, and said let you go, as I settled deeper. I called my five, and made slow circles as the swampy pump kept me afloat. It was during this time that Invincible sank.

Before the second sortie began, Invincible was out with too many holes to patch, and Houston had to patch the bow. Even after patching what the haymaker had done, my cruiser looked in big trouble at the beginning of battle. Not wanting to surrender, with the pump streaming, I positioned my cruiser in the middle of my fleet and prepared my strategy (empty my guns fast and call five). Unfortunately, my first target of opportunity was Chris Pearce's North Carolina. Most of my rounds missed, but with my guns empty, Chris pounded me with his triple stern guns and sidemounts with impunity. The Houston assumed a very pretty list to port, and two minutes into my five, slowly sank in shallow water after making a graceful turn to port up to shore. As I looked around, cameras flashed, and folks actually congratulated me on being baptised into this magnificent obsession.

While in the pits, I learned that I was not the only one to sink. Bob Eakin (Allied Admiral) and Robert Rucker both suffered propulsion woes and sank (spun prop and damaged gears). This added up to four sunken Allied ships, with the Axis escaping with relatively few holes to show for it.

Because of the one-sided nature of the first battle, it was decided to battle red-black. Here are the teams and scores for the second battle:

BLACK:

Chris Pearce	USS North Carolina	91a, 8o, 10b
Scott Bene	SMS Von der Tann	39a, 4o, 4b, sink
Ted Brogden	HMS Invincible	47a, 7o, 13b
Steve Reichenbach	USS Houston	7a, 0o, 2b
Kevin Bray	DKM Lutzow	9a, 1o, 0b

RED:

Bob Eakin	USS Washington	20a, 4o, 14b
Robert Rucker	USS North Carolina	68a, 8o, 24b
Fluegel	SMS Baden	23a, 4o, 6b
Jim Ewers	HMS Exeter	8a, 0o, 0b (and an ugly bow!)

ROBERT RUCKER THINKS AXIES!



As I prepared for battle, I knew that my recently sunk cruiser was in trouble. The not-yet-water-proofed rudder servo was chattering badly. As soon as the CD called battle, the cruisers took off in high speed towards deep waters, with the battleships behind in the shallows. I went into a hard turn to port, which I was unable to change. My rudder was frozen hard to port. I sullenly called my five, deciding to bring in my ship and dry it out. Meanwhile, Kevin did a wonderful job of staying ahead of Jim's maneuverable Exeter. As my five ran out, Fluegel came across my cruiser up against shore. I smiled as my stopwatch beeped and I lifted my cruiser out of the Baden-infested waters.

After drying out the rudder servo, the Houston was better prepared for the second sortie. Kevin and I played a fun game of tag with the Exeter. As Jim had learned to ignore my rookie ship and bad aim, Kevin led him into my stern guns, and I popped shots into the Exeter bow, tearing up those two inches of hard area on the port side. Later, I was able to lead the Exeter into range of Kevin's dual stern guns, which punished the starport bow. Kevin and I were elated later that day when someone asked Jim if a triple stern had done that damage!

While we brought our ships onto five, we noticed that Kevin's friend (a Navy SEAL) was suiting up. Scotts Von der Tann had gone down in four feet of water, which was a good enough reason for a dive. Afterwards, it was discovered that Red fleet had won the contest by a Von der Tann.

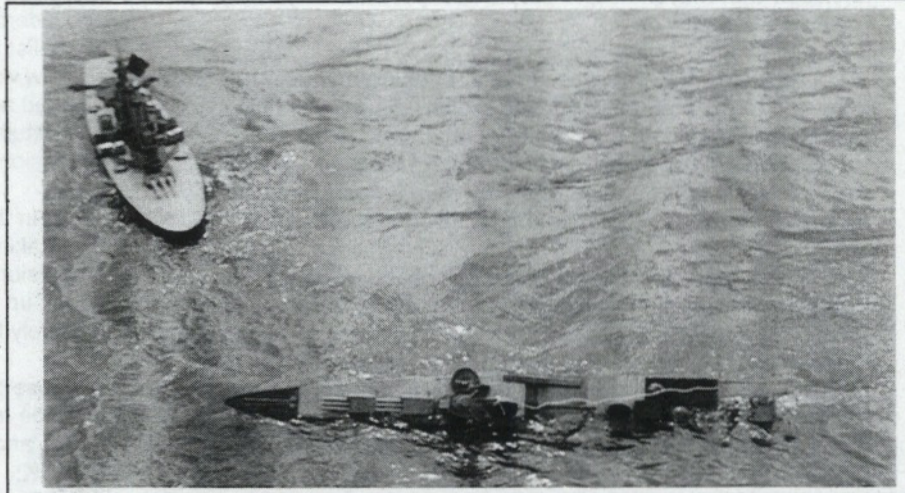
After the battles, the group went to dinner, and exchanged memories of the battle. Fluegel got everyone at the table to tell their best five seconds of battle, and their worst five seconds. Sure enough, Fluegel's favorite 5 seconds with his Baden was the same as Ted Brogdens worst 5 seconds with the Invincible. My favorite was hearing my shots enter the bow of Chris Pearce's North Carolina, and hearing Steve Milholland yelling there you go, Steve!

I am very grateful to everybody for their great advice, and for friendships that will last a very long time. Foremost, I must thank Kevin Bray for hosting a great event. It would be wonderful if every event was located a few feet away from a well-equipped garage, a shower, a kitchen, and sleeping quarters! I would also like to recognize those who travelled to the event, making it very special for me. Especially Chris Pearce who practically sank me in his sleep, and Troy Cormier who drove up from Louisiana to video tape the battles. I'd also like to recognize Steve Milholland for doing a great job as CD, reminding everyone to follow the safety rules, and keeping us on track, and for opening up the Swampworks store later that day (I personally recommend the

Swampworks pump).

Steve also added humor to the event, as dusk found Kevin and I going one-on-one with our cruisers, and Steve offered to take the controls while I cleaned my glasses for at least 2 minutes. Kevin was a good sport, as he glanced back and realized that he had been battling Swampy! Still, the Lutzow is an excellent ship, and performed very well, giving more damage than it received.

As I drove home from Tulsa to Houston I realized that I had lived



The Houston just wont go down....well, it's slowly going down.



one of the best experiences of my life. I built my first radio-controlled ship, battled, learned volumes about how to make it more effective, and formed new friendships that may last a lifetime.

Steve Reichenbach
Houston, Texas

Apples to Apples Comparing Your Boat to the Competition

by Curly Barrett

You ask, "How's your ship doing?" The wily veteran responds, "Works

great...turns awesome and the guns are unbeatable!" But what is he really saying? How great is "great?" It's time we start comparing apples to apples and develop standard performance testing—not mandatory, but for information purposes. I have gathered eight basic tests used by three seasoned veterans who represent a combined total of 53 years of battling experience. These tests are designed to provide

information that will help battlers improve their ships, while also allowing accurate comparisons of ship performance.

Stationary Targeting

Build a penetrable target that is 2' long, with 1-1/2" above the waterline and 1" below the waterline. Give it 5 ribs (not counting the leading and trailing edge of the target) and cover it in balsa or just silk

span. The leading edge and trailing edge should be made with longer pieces of wood which will serve as stakes for positioning the target in the water. Place the target in the water—then go at it! See how much damage you can inflict on it if you have 5 minutes of time (simulating a ship that has gone dead in the water). Try the same test with a more hurried approach and see what you can do with 1 minute. Results: In 5 minutes, one battler was able to put 77 above, 11 on and 32 below. In one minute—35 above, 3 on and 6 below.

The Course

anyone miss from that close? Try this experiment. Place a sheet of cardboard, foam core or paper 2' away from the tip of your gun. Fire a magazine into the target and see how accurate your BBs and barrel are. Then try the experiment again with the target at 4'. The spread, if you're using standard brass barrels, is pretty amazing. Results: A certain German captain reported a spread of 2" wide x 3" high @2'. It was 7" wide x 9" high at 4'. Aha! THAT'S how people miss from that close.

Battery Drain

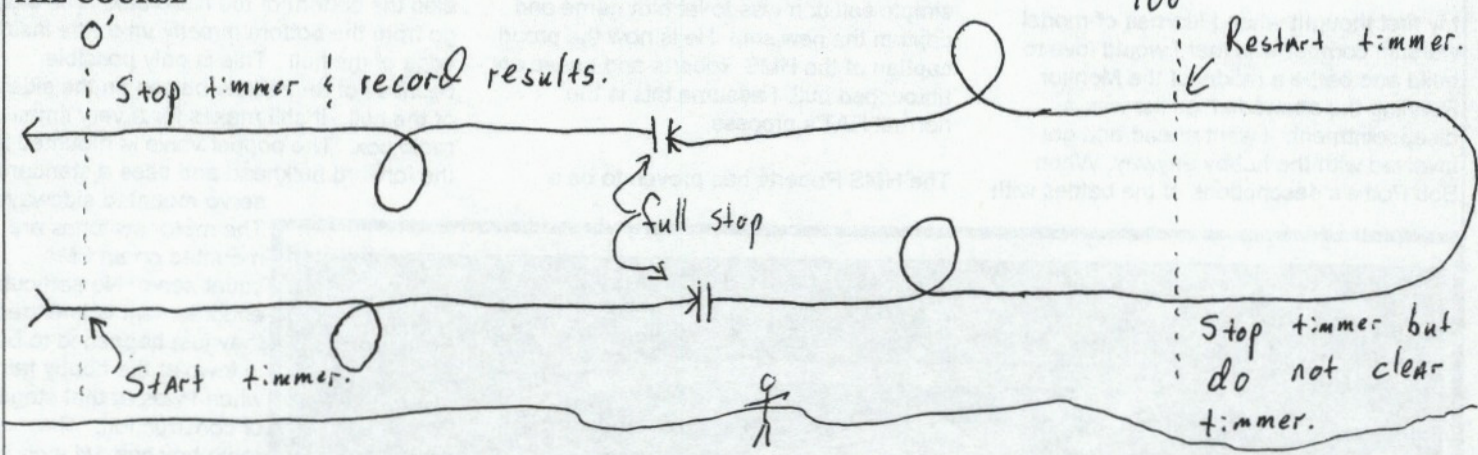
This is a simple measure of the 100' run

running start. Results: You'll probably notice much wider turns with a running start. One Texas battler reports a standing turn of 12.5 to port and 11.2 to starboard; running turn of 11.6 to port and 11.1 to starboard.

Standing 50'/Running 50'

This is a very simple test but it allows you to measure your boat's acceleration...particularly helpful when trying out new propellers. Results: A battleship sporting a 12.2-second running 50' turned in a 14.9-second standing 50'. The difference—2.7 seconds—is a measure of acceleration.

THE COURSE



This is an old standby that was developed by an overzealous German who happens to be one of the hobby's founders. The basic course is 100' long. You start the course as if doing a speed trial, with a running start. As you near the middle of the course, do a hard 360° turn to port, straightening out and hitting top speed again. At that point hit full reverse until you cease forward motion, then hit full forward and get back to top speed. Throw the rudder hard and turn a 360° to starboard, then race across the end line. Try this in both directions to compensate for wind. Results: A famous German ship did the course in 1:44.10, and did it one hour later in 1:54.39.

Gun Dumping

This exercise is simply to measure how long it takes you to unload all 50 BBs in your magazine. Try to count how many stick movements it takes, too. Results: One battler has recorded dumping 50 rounds in 15.0 seconds with a sidemount; 14.2 seconds with the other sidemount; 18.8 seconds with the stern gun. Gun Accuracy 2'14" Range Our battling has been described as "a knife fight in a phone booth!" So how can

at 5-minute intervals, running constantly in between. See how fast the speed drops off with each set of batteries. This is a great way to test batteries that have a few years of service on them. Faithful batteries can turn against you with amazing speed. This gives you a glimpse of the batteries faithfulness.

Pump Output

The widely accepted measure for pump output is a measurement of Gallons Per Minute (GPM). In addition to that basic test, fill your entire hull to the rim and see how long it takes to pump it dry. Also, measure how much water is actually left in your hull after the pump runs dry. Results: One Kraut-made pump moved 1.75 GPM @ 12 volts and could pump his battleship dry in 78 seconds. One captain reported two ships and found that his new ship left only a few table spoons of water in the hull, while his older battleship left 3.5 cups of water in the hull.

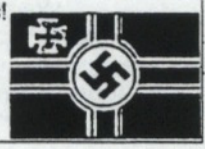
Standing 360°/Running 360°

Start with your boat facing out to sea and hit full forward while holding the rudder over to port. Time how long it takes to spin 360°. Try the same thing turning to starboard. Then try the same tests with a

1" Square Hole Standing Sink/Running Sink

Right before you resheet, try this one—it's a bit sadistic. Cut a 1" square hole, centered on the waterline, in the bow of your ship. Time how long it takes to sink. Then recover the ship and try again while running forward at full speed, time the sink again, try the same experiment with the pump running. Results: A Lutzow sank in 18.5 seconds standing still; 8.1 seconds running. With the pump on, it didn't sink; running, it sank in 22 seconds. If you are really bored, patch the bow hole and try it all again with a hole amidship...the difference is impressive: 19.9 standing, 15.3 running, no sink with pump running!

Now not everyone is going to do all of these, but this gives you an idea of how some veterans test their ship and have benchmarks to measure improvements. And if you want to compare apples to apples when you get together with the veterans, these are the tests to use. Good luck improving your ships!



"BUILDING SMALL SHIPS"

The HMS ROBERTS

By Phill Lowe

I became interested in the Monitor after learning of her historic battle with the Merrimack while I was in sixth grade. The innovation of the design, speed of construction and short life fueled my imagination. Many years later, her rediscovery by divers and their photographs in the National Geographic rekindled my interest in armored ships.

My first thought when I learned of model warship combat was that I would love to build and battle a model of the Monitor. Reading the allowed ships list was a disappointment. I went ahead and got involved with the hobby anyway. When Bob Pottle's descriptions of the battles with

his HMS Terror showed up on the newsgroup, I read with interest. Soon after, he started talking about the HMS Abercrombie design. A short, wide ship with dual props and rudders is a perfect combination for turning! I had just spent a frustrating year of trying to turn a very long narrow cruiser.

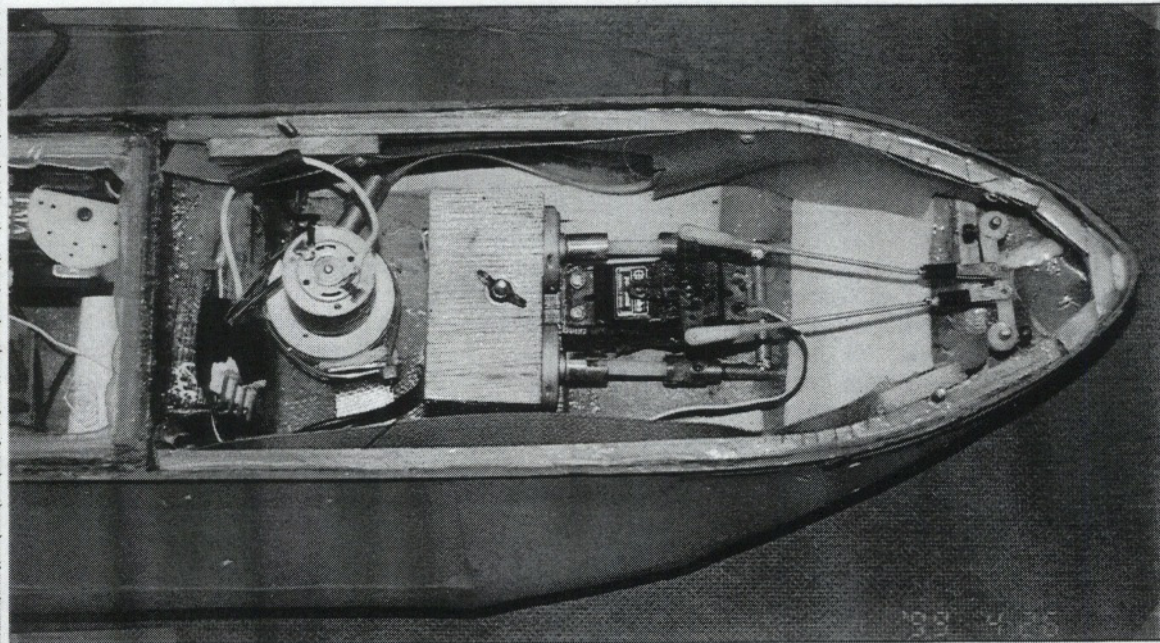
Bob was busy with molds for larger ships and I had to wait several months. During the wait I gave in to the dark side and purchased another hull for a large (class 6) ship. They both arrived together in late November. Another minor problem also developed in the form of my six year old son who now wanted a ship to battle. The simple solution was to let him name and captain the new ship. He is now the proud captain of the HMS Roberts and I have an untouched hull. I assume this is the normal RAT's process.

The HMS Roberts has proven to be a

fairly straight forward ship to build. I started by putting in the props, dogbones and motor mount. Going with the mansfield mount after hearing it's praises on the mailist turned out to be a real winner. The rudder servo goes in between the propshafts and as close to the bottom of the hull as possible. The vertical space in this hull is very limited. Next, I left a small space for the pump and then filled the remainder of the space between the pump and the bottom of the turret with radio box.

I have run my cruiser with a combination of radio boxes and sealed servos and I would rather have everything except rudder servos in boxes. The bottom of the hull is also the bottom of the radio box. The sides go from the bottom directly up to the inside edge of the hull. This is only possible because of the radical bulges on the sides of the hull. It still makes for a very small radio box. The poppet valve is mounted in the forward bulkhead and uses a standard servo mounted sideways.

The motor switches are mounted on an FMA squat servo. No particular endorsement is intended, they just happened to be in town at the hobby fair when I was at that stage of construction. The radio box has 1/4 inch square spruce strips all around the inside lip. The lexan top is sealed and held on with clear RTV. There is not enough vertical space in the hull to put in hold down bolts. I also take care to remove excess RTV that can prevent the deck from setting down correctly. There is NO clearance between the radio box top and the bottom of the deck.



MO Notes:

by Steve Milholland



The Ozarks Spring BB Fest for 1999 here in beautiful Springfield MO was Great..... My sympathies for those that missed it.

We had a couple of last minute "no shows" due to automobile problems and last minute work conflict, but we still managed to get 20 battlers on to the water this weekend. Two fleet battles on each day with Yellow & Blue Fleets. LOTS of sinks. I count 19 on the score sheets.

The weather cooperated fairly well. It was very nice on Saturday, partly cloudy & warm. Things were a little rainy and damp during the first battle on Sunday morning, but just before the second battle the sun came out and things really warmed up. This is par for the course here in Springfield. It seems that there is always rain on at least one day of the Memorial Day Weekend. Fortunately, it did not interfere with either the spirits of the battlers or the festivities for which they were here.

One really nice thing about using the Holiday Weekend for a contest was that everyone had a "freebie" day on Monday to drive home. Because of this, no-one had to leave early on Sunday and everyone stuck around for a second Fleet, giving us 4 battles for the weekend instead of our usual 3. While this was a nice benefit, I don't really know if we'll do this again. I think that having a contest on a holiday weekend costs us in numbers of

The space forward of the radio box is pretty simple. The resistor is screwed into the deck rail on one side and the batteries sit on the bottom. There is a 6 cell battery for the motor and a 7 cell battery for the pump. The Palmer Pursuit "Rock-the-Boat" regulator and it's 16g CO2 cartridge sit between the batteries.

The British Coastal Monitors have a high barbette that the turret sits on. Swampy's short 50 round gun fits inside the fiberglass barbette with about a half an inch of clearance. Only the bottom of the interrupter sticks out of the bottom of the barbette. I soldered a brass strap to the coils of the magazine and bolted it to the top of the barbette.

Initially the forward section had no armor. After the Grandpa's "Warspite" shot a hole in the hose between the regulator and the poppet valve, I armored the hoses. The batteries and regulator are still unprotected but this may change during the next major refit.

A critical part of this ship is careful attention to water channeling. The HMS Roberts is basically a flat bottomed barge. Getting the water to the pump is not easy. I have never seen it pump heavily even just before it sinks. Additional water channeling is also on the list for the next major refit.

The last design component of interest is modularity. Every wire that goes through the walls of the radio box has a connector that can easily be disconnected. In addition, the receiver battery wires are directed out of the box, through a switch and then back into the box. That means that I can charge the battery without opening the radio box. It is my hope that the radio box

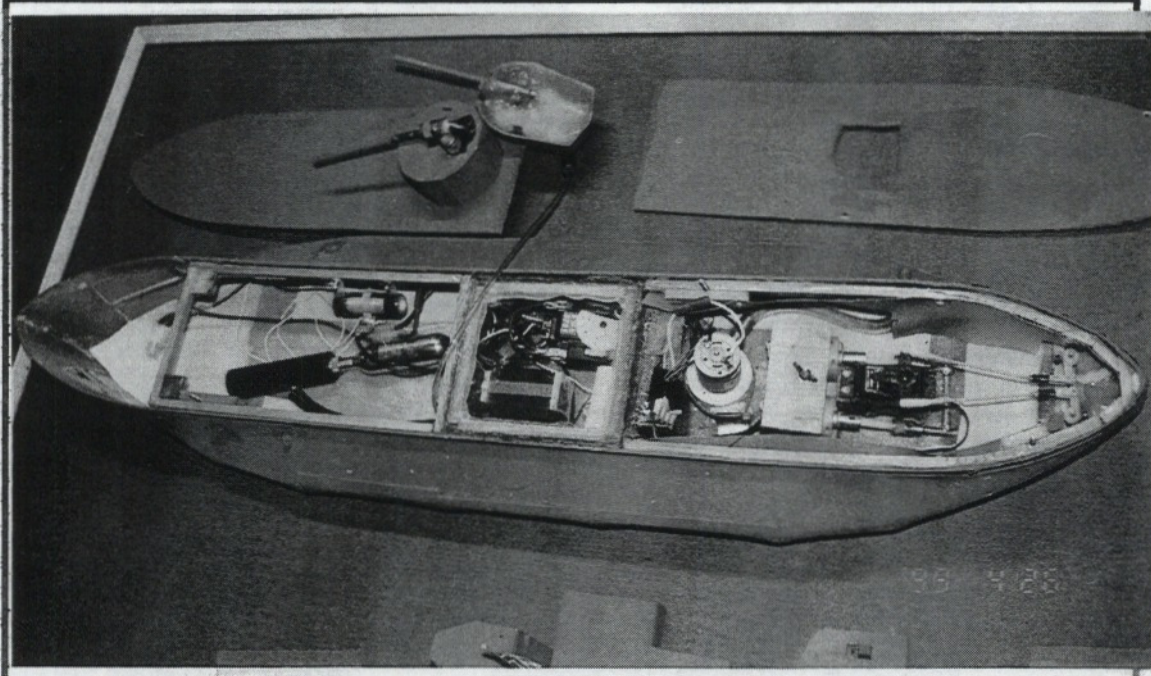
can be left sealed until the end of the battling season. I can easily disconnect the remainder of the parts and replace or repair them. The connectors are mostly from older computer systems except the power connectors for the motors which are the bullet connectors from Radio Shack.

On the water, the HMS Roberts has performed quite well. She has only seen battle four times and has yet to take part in a large battle. What we have seen is impressive.

She is a fairly light-weight boat so has better acceleration than many larger ships. She can turn very quickly. Oddly, I find I am still trying to get a bead on the target, because I turn too quickly and only get off a shot or two before I have turned too far! Quick turning was expected from

allow the forward pointing gun to be depressed about 15 degrees with no effort. This little 2 unit ship can put holes 1/2 an inch below the waterline! The club's 2.5 to 3.5 unit cruisers are not capable of below waterline hits. In addition, this small ungainly little craft is unusual and gets far more than her share of attention at the pond.

If you are looking to be different and want an effective small ship I would strongly recommend the HMS Abercrombie / HMS Roberts hull. Her six and a half year old captain, victorious in one-on-one competition with larger ships with adult captains, proves she is easy to operate and dangerous. She will not turn the tide in a large battle but in a one-on-one battle or in a defensive role she can prove to be very effective and quite fun.
Phill Lowe



looking at the basics of the design. What has come as a nasty surprise is that the high barbette and the low riverboat bow

Builder, (not captain), HMS Roberts
Seattle, WA

Britain

attendance. There were several guys who would otherwise have attended the BB Fest, but could not escape family obligations-plans on a holiday. Next year I'm going to try real hard to get us back on our usual weekend of the one between Mothers Day and Memorial Day.

As usual at our battles here, the comradery was warm, the battling was hot. Nineteen sinks in 8 sorties kept everyone's "battle lust" at a fever pitch and the cameras snapping.

When all was said and done trophies were awarded as follows:

- | | | |
|------------------------|--------------|--------------|
| High Score Class 1-2-3 | James Foster | SS Sverige |
| High Score Class 4 | Chris Au | IJN Haruna |
| High Score Class 5 | Andy Ray | USS Maryland |



High Score Class 6-7 Chris Pearce USS North Carolina
Best of Scale Steve Reichenbach USS Houston

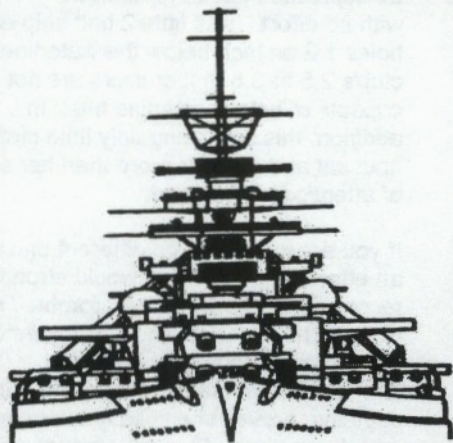
NOTE: A big THANKS to Bryan Finster, who scored the event on his laptop PC. This really takes a big load off of the CD, who normally has to do this chore with a tablet and a hand calculator. I would strongly advise anyone who holds an event to find someone with a laptop PC and a scoring program to help out this way.

Great fun was had by all. The Springfield Tradition continues.....

See you at Nats and at the Fall BB Fest.....

Steve SWAMPY Mitholland

"One Tired CD" P.S. Everyone missed you Barf !!!!!



C.C.A.S.

Central California Attack Squadron

Welcomes all captains (veteran and rookie) to attend the only IR/CWCC sanctioned R/C Warship club in central California. Located in the Santa Clara Valley area.

C.C.A.S. is a new chapter of the IR/CWCC (International Radio/Control Warship Combat Club) that has been formed to serve the central California area. It is the first small gun club in all the central California to be sanctioned by the IR/CWCC. We have our meetings on the second Tuesday or Saturday of every month. There are two types of meetings: Recruitment and Building meetings and Field meetings.

Recruitment and building meeting: The R & B meeting is on every second Tuesday (6:30 PM to 9:30 PM) of every month, (contact the address or number below for



exact dates). This time is also used to work on our ships and exchange building skills. And, to discuss and exchange experiences in battling our ships between captains old and new.

Field Meeting: Is held on every second Saturday (11:00 am to two hours before sunset) of every month, (contact the address of number below for exact dates). This meeting is at "Balsa Bottom Sound" is Coyote Park, near Morgan Hill, CA. It is at this meeting where we battle our R/C warships against each other, in accordance with the rules of the IR/CWCC. Important: only 75mhz

surface radios can be used at this pond!

If you would like information on meeting times and locations, R/C Warship Combat, IR/CWCC or NAMBA. Contact us at the address or number below. No dues are required to be a member of C.C.A.S. Membership in the IR/CWCC or NAMBA is also not required, unless you wish to attend a "sanctioned event".

E-Mail us at DasBuck@aol.com or, call us at (408) 249-6829 and leave a message. We hope to see you there! And remember..." aim below the waterline"!

CONSUMERS REPORT: RECEIVER BREAKTHROUGH!!

A friend of mine who is into planes gave me some information on a receiver. It sounded really good. I saw it on the Internet, called them, and read about it in FLYING MODELS magazine March '99, page 37. I ended up ordering it about the end of March. The company I ordered it from said it had 173 back orders for it, but they said they put in an order of 500 of each to try to cover demand. They plan to get them in about the 1st of April. I haven't received mine yet.

What is this receiver breakthrough you say? Jamara, a German company, of course, has built, and produced two really small, light, and cheap 4 channel receivers. They are only for 72 frequency (air) unfortunately, but have universal servo plugs. Futaba J servo will plug right in, and are Futaba receiver crystal replaceable. They said that the servo plugs were universal, but I didn't ask about other types of crystals for other types of radios since I have all Futaba. Call and ask them for details.

Here's the poop. You can get them from Multiplex, 14751 Calvert St., Vans Nuys, CA., 91411. Talk to Christie, at 818-785-2401, or 818-995-4156. The receivers are the FM that weighs 20 grams, is as big as a quarter, has a range of 1,000 feet, and is

only \$25.95!! The other receiver is the CB4FM, it has a range of 750 feet, weighs 6 grams, is the size of a quarter, and is only \$29.95!! The Jamara web site is <http://www.jamara.com>. Go to the receiver, or new products icon and click on it to see the specs and a picture.

Now the down side of these two receivers are that they are only for 72 (air), are only 4 channels, and go only 1,000 feet, and 750 feet. But most ships, except for five unit ships, and larger, need only 4 channels. Also we almost never go farther than 2.5 football fields away, even Fluegel when he's running, to battle. And its only on 72 frequency. But for 4 unit ships and smaller, small ships like heavy cruisers, light cruisers, destroyers, subs, and convoy ships these are an excellent size, weight, and value. Also these are great receivers for secondary ships, backup receivers, or multiple ships on the same channel for campaign ect. You can but TWO of these 4 channel receiver for the price of a normal 4 channel receiver replacement.

Once I get mine I'll test it out and give you an update. I hope this helps out the battlers of small ships, secondary ships, convoy ships, and those on a budget.

Good Hunting!!
Wade Koehn



ELECTRONS

By Fluegel

A rookie friend of mine was charging two six volt batteries with a twelve volt charger. This is not impossible, but it can, and was being done wrong.

In a nut shell, if batteries are hooked up in parallel, add the amps.

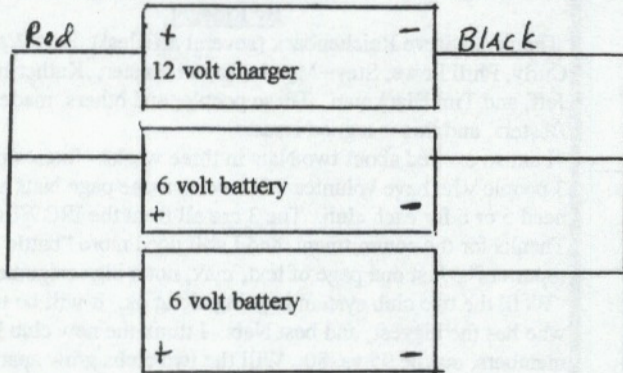
In a nut shell, if batteries are hooked up in series, add the voltages.

Parallel is: Red (+) wire to Red to motor (or batteries or charger, whatever thing you are powering).

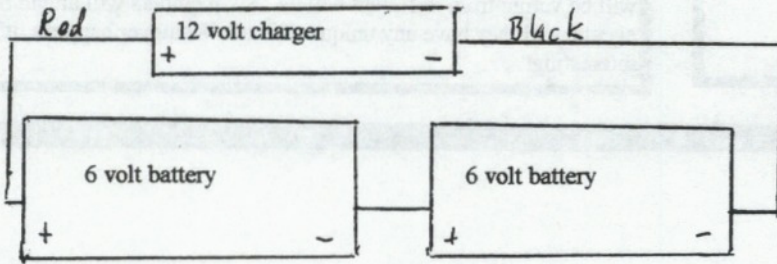
Series is: Red wire to Black (-)to motor (or batteries or charger, whatever thing you are powering).

If the two batteries (electrolytic cells) are 1.5 volts each, and 5 amps each, then wired in parallel, they would have 10 amps and 1.5 volts (good if you want something to run a long time). If they are wired in series, then they would have 3 volts and 5 amps each (good if you want to run something with a lot of power).

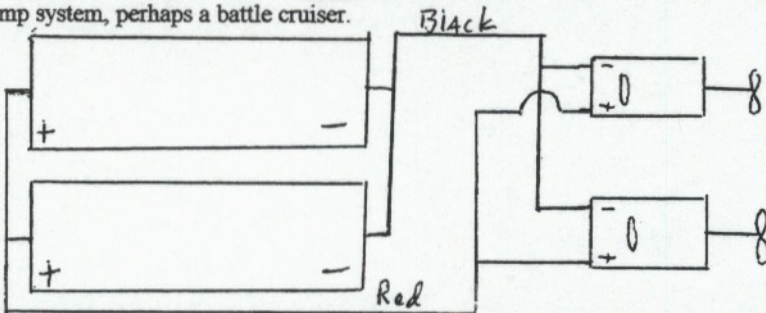
Parallel and wrong, too much voltage for a 12 volt charger and two 6 volt batteries.



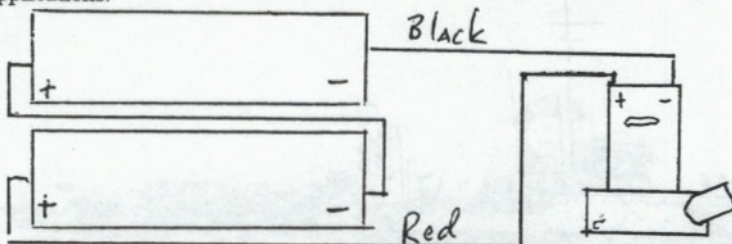
Series circuit and right for a 12 volt charger and two 6 volt batteries.



Two 6 volt, 10 amp batteries in parallel to two motors. This would be a 6 volt, 20 amp system, perhaps a battle cruiser.



Two 6 volt, 10 amp batteries, in series. This would be a 12 volt, 10 amp circuit. This would be a pump (?) who knows, this is a lot of voltage for most ship applications.



MEMBERSHIP/CHANNELS IN THE MWC

Rick Whitsell and I are in charge of the membership dues, and suggested channel use, respectively in the MWC. According to Rick we already have over 80 paid members. Suggested channels are filling up fast. To receive a suggested channel please contact Rick Whitsell 9820 North Highland Terrace, Kansas City, MO., 64155, pirate@planetkc.com. Send him \$15 for membership. Once a member, please E-mail me, Wade Koehn, at wwkoehn@juno.com, with your membership card number so i can suggest a frequency for you. If you are a member of the IRCWCC I will try to give you the same channel that you have already been using. Most of the MWC members who are members of both the IRCWCC, and MWC have the same channel in both. I'm a member of both clubs. I only have one week of vacation right now, but when get more maybe I'll have an opportunity to battle at a IRCWCC battle, or both NATS. Since both clubs have identical rules maybe someday we can hold a joint IRCWCC/MWC sanctioned battle. If your IRCWCC channel is open, I will give it to you. Anyway, contact Rick first for membership, than contact me for a suggested channel.

Thanks!
Wade

Doing What Rookies Do Best!

by: Steve Reichenbach

I've been told that I am a typical rookie. During my first year of battling, I've heard time and again, what rookies do. For the other rookies out there, read and learn. For the experienced captains, this will probably be useful for your enjoyment!

* During the night before my first battle, I had my first opportunity to get advice from the more seasoned battlers. After just a few minutes of advice, I had an additional 100 hours of work to do on my cruiser! I stayed up Until 2am, with another rookie who had also been given advice. These were fun times, and I realized that experienced captains are the ones who get to sleep. Rookies stay up all night before battle, working on their ship!

* While considering tactics for a new class 5 ship, I remembered a scene from a video showing an allied ship chasing an axis ship. It was then that I decided my ship should have triples mounted forward, to chase the stern of the enemy. When I shared my new found philosophy with an experienced captain, he accused me of "classic rookie thinking"! Later I realized that experienced captains keep their solid stern pointed towards the rookies, and rookies chase ships, and get a swiss-cheese bow!

* Coming to my first event, I was constantly warned to stay away from the shore until my boat started to sink. Over and over again I was told that experienced captains sink close to shore, while rookies sink in the deep water! Some rookies are even known to befriend professional scuba divers, to assist them with search-and-rescue operations!

* Just before my second sortie began, my ship was low in the water and pumping hard. I decided the best strategy was to pull alongside the enemy battleships, empty my guns, and call "five". After most (or possibly all) of my shots missed, my guns were empty, and I did call "five". Right after calling "five", the experienced captains calmly discussed who should finish me off, decided, and then did in fact put another 26 holes below my ship's waterline. After sinking, I realized that experienced cruiser captains stay outside of the fray and wait for damaged ships to come to them, while rookie cruisers try to slug it out with battleships!

* At my first battle, I was impressed with how the rookies talked about ships, and the experienced captains talk about strategy.

While the experienced captain is thinking about how to best use his fine-tuned model warship in combat, rookies are asking questions about how things should work. That's because rookies struggle just to get their ship working!

* Finally, I should recognize something that rookies just may do better. It seems like some of the more experienced captains allow the past to cast shadows on the hobby, while rookies have no past experiences to dampen their enthusiasm. Rookies know how to have fun! This will be a great year, with several great new rookie captains out there!

So if you see me doing any more of the silly things that rookies

CONCLUSION.

By Fluegel.

Thanks to Steve Reichenback (several articles!), Bart Wade, Kevin Curly, Phill Lowe, Steve M, Me, Bryan Finster, Katherine Torda, Jeff, and Tim Blackman. These people, and others, made this Hull Busters, and this is a good issue.

I am so excited about two Nats in three weeks. Interestingly, I have 3 people who have volunteered to write a one page Nats article. I need 5 or 6 for each club. The 3 are all from the IRCWCC club. Thanks for the commitment, and I still need more "battle site reporters". Just one page of text, max, not a big assignment.

Well, the two club system is going along ok. It will be interesting who has the biggest, and best Nats. I think the new club has more members, maybe 95 vs. 80. Will the two clubs grow apart or develop a sustainable working relationship? What do they want? I think the two sets of rules will only spread apart as each group of members will be voting from different ballots. Six members will attend both events, will they have any unique affects? Whatever happens, it's interesting!

Hi,

I'm interested in finding people interested in this hobby in my area that wish to join me in forming an affiliate club of either MWC ink or IRCWCC. Could you put a notice in an upcoming newsletter with my E-mail. Depending on how

much interest my group receives determines it's fate. I am a novice (read new) at this hobby, and can't sleep at night since I discovered it!

Tim Blackman
Director of Naval Operation
The Eleventh R/C Combat
Fleet
Albany, N.Y.

Hull Busters
917 Hudson
Garland TX
75043

CALANDER

IRCWCC Nats July 12-16th, sanctioned.

MWC Nats, July 26-30th, sanctioned.

MWC Texas Triple Crown,
unsanctioned? (page 1553).

Next Deadline for Hull Busters Aug 7th.

Send articles to Fluegel7@juno.com no attachments please.

