

many of the general public as we possibly can. As some of you have stated in earlier posts, we have done well recently with mass media exposure such as CNN, AP and Paul Harvey. This is good. Other sources of exposure that we have, and are doing extremely well with, are the Web Pages and the dedicated R/C hobby magazines. All of these are worthwhile for the purposes of spreading the word about what we do but some of them are more effective than others in actually attracting people who are serious about giving our hobby a try.

Using mass media such as TV is great for grabbing attention and spreading the word, but care must be used as to timing of the exposure and regard to local facilities. For example, the high banks of the lake at Green Briar State Park, MD is excellent for giving spectators a view of the battling and at the same time protecting them from stray BBs. It's relative seclusion from metro traffic is also a plus in holding down the crowds to only those that are seriously interested in driving to the site for a look-see.

On the flip side, the site we once used here in Springfield MO, Sequiota Lake, is totally unsuited to crowds of spectators. The viewing area is totally flat, giving no protection from BB's for 50 yards in any direction from the lake. In addition, being in the middle of town, after seeing a couple of local TV news spots early in the week of Nats, hordes of people come out to watch. Crowd control and safety become MAJOR problems. It is estimated that during the Night Battle at the '86 Nats there were over 250 people crowded into the pit area. Three quarters of them had no safety goggles. It truly was a nightmare. Since then, we have not notified TV stations of our events in Springfield, much as we'd like the exposure.

TV news exposure is great..... just be prepared for any and all circumstances that may arise from it. There can be bad along with the good.

The WWW exposure that the IR/CWCC has is good and getting better. More and more people are putting up their own personal web pages to proclaim our hobby on a local level. I think this is great. I think that every one of the local groups, or even any one person who WANTS to start one should have a web page up and running. Just be sure to get it cross linked to as many of the bigger, flashier "IR/CWCC GENERAL" pages as you can. This will help insure that the new person from your area who stumbles across one IR/CWCC related web site will find ALL of them, including yours.

Now for the what I consider to be the "biggie" of the three major sources of new battlers, magazines. As nice as our modern mass media and electronic communications are, print media, i.e. R/C hobby magazines are still where the vast majority of new people come from who actually do end up pulling a safety pin and launching a ship into battle.

How do I know this??? Very simple. Numbers, numbers, and more numbers. On each and every phone call, e-mail, and letter that SWAMPWORKS receives, I track very closely exactly where it comes from. With a little massaging of the database I can even tell where my customers who purchase kits originally found out about the hobby. By far, the greatest percentage still come from those who saw a SWAMPWORKS ad or read an article about the hobby in a print magazine.

Now I know that not all people who join our sport come to SWAMPY for goods. Many will elect to scratch build or buy a used ship from someone. This is OK. No problem. Even with this, the largerst percentage of interested parties will still contact me at one point or another to investigate the availability and prices of kits, parts, plans, etc., whether they end up buying from me or not. Over all, more people who actually do get involved to the point of having a ship will find out about this hobby through articles in R/C hobby magazines like R/C Boat Modeler and Scale Ship Modeler.

Some of you reading this were at the meeting at this years (1997) Nats when I repeated my long standing offer regarding magazine articles to anyone who is willing to pick up on it.

News from

**SWAMPWORKS**



To All,

At this point in time I'd like to stick my two cents worth into the discussion on recruitment of new battlers for the hobby.

As most of you know, I've been in this hobby for 17 years now. As a matter of fact, I think that our two beloved Founders, Fluegel and Stan are the only two active members of IR/CWCC who have me on seniority. In this length of time I've seen a lot with regard to how new people get involved with our sport and either "make the grade" and stick with it for a number of years, or build a ship, show up to one contest and then are never seen or heard from again. There are all sorts of stages in between too, of course. Also, never forget that those who actually do hold a transmitter in their hands and hear a CD announce, "Let the battle begin", at least once are but a miniscule fraction of those who learn of the hobby's existence and find a consuming interest in what they see.

As well as having 17 years of experience watching new people coming into the hobby, I also have a very distinct and unique perspective as the owner of SWAMPWORKS. Because attracting new people to this hobby goes hand in hand with the furtherance of my livelihood, I pay very close attention to any and all things that have to do with this subject. I also do everything I can to promote the hobby of R/C warship combat in general and the IR/CWCC in particular. When you get right down to brass tacks folks, what is good for the IR/CWCC is good for SWAMPWORKS, and vice-versa. What helps one helps the other.

The key to getting new members is to proclaim what we do as



The magazines usually pay between \$150 and \$250 for a decent article with photos. Any person who contacts me about a desired subject and is willing to write an article for submission to a mag will receive (if it is printed) not only the pay from the magazine, but SWAMPY will match whatever the magazine pays with an equal amount of SWAMPWORKS credit.

When I announced this in the meeting at Nats I got all sorts of OOOHH's and AAAHHHH's and could see dollar signs flashing in the eyes of many people. To this point in time there have been a couple of daring guys who have taken me up on it, and the door is still wide open to all comers. Since I am a contributor to their advertising, the mags are particularly interested in articles written about the construction of some of SWAMPY's kits (all of you new guys putting together a kit, take note). Other subjects are acceptable too, as long as it directly relates to R/C Combat and the IR/CWCC. Contact me directly for more information on this offer.

Enough on that for now.....

In addition to attracting the attention of new people, we must all be aware of what is necessary to keep a new person's interest AFTER you have their attention. A newly interested person usually has a list of questions that goes something like this:

"Where can I get a ship, or kit"?

"Where does the local club have their meetings"?

"When & where does the local club battle"?

The first question is where SWAMPWORKS comes in. Most people want to build a kit. I do my best to supply kits and

hardware that makes this as simple as possible for the new person. A fair percentage of new people are hardy enough to want to scratch build their first ship. This is as it should be. A few want to find and purchase a used ship. Whatever their desires, the means are there for them to obtain a model for our game.

Where things get dicey, and where the majority of potential new battlers are lost to us, is when they get the answers to the last two questions.

We live in a society that is geared to instant gratification, with anything a person wants, either physical or sensory, just a few minutes away. Instant potatoes, instant coffee, instant photographs, fast food, and convenience stores. We also have drive through pharmacies, banks, laundries, liquor stores, car washes, wedding chapels, even mortuaries for cryin' out loud.

Joe Public wants what he wants..... NOW !!!!!!!

When you tell him that he must build a ship to compete in our game, he says, "Where can I get a kit"?

He is told (I hope), "SWAMPWORKS MFG".

This is OK. That is what he expects. A place where he can "Instantly" purchase a kit to assemble.

When he asks about the local club and is told, "Well, we don't really have a club. There are a few of us within a two hour driving radius. We don't have club meetings or anything like that, but we get together at the lake once in a while to battle. There is no set schedule. When I want to battle in a big event I go to Regionals or Nationals which is about a 6 to 20 hour drive away".

## How to: Quick-Mount Gun Mounts. By Lars

Over the years, the one thing I have learned that is the first thing you glue to your ship is the first thing that starts to malfunction (except for your fingers). Therefore I always try to build things that can be easily removed, but are fairly secure when mounted on the ship.

Back at my second Nats, I noticed Billy Gainer had a neat system where his guns just slid out of their mounts, a kind of sliding, drop-in system. The slide-in shaft appeared to swivel in such a manner that allowed one to easily change the elevation of the gun barrel. While I didn't look closely at his system, I liked it enough to attempt to copy it. What follows is the system I currently use.

In describing the system, I don't give a lot of measurements, for when building it I generally placed things where they looked "right". I'll try to point out where measurements are important. Otherwise, use your common sense.

I use the compression elbows for my breech on my home-made guns. I look for the kind that have a nice little grooves on the inside of the elbow. This makes a good point to solder a hollow piece of brass tubing to the elbow. Use a torch to get a good fitting. After you have soldered the tubing onto the elbow, use your dremel to grind down the brass tubing to the same width as the elbow. (See Fig. 1)

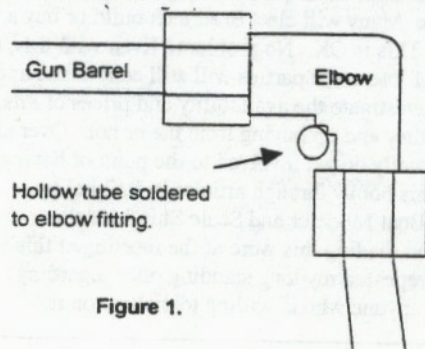


Figure 1.

To make the swivel joint, take a 1/2 inch or 3/4 inch strip of brass, cut to approximately 2 inches or so. Now you want to bend the strip into a squarish U shape. You want the bottom of the U to be the same width as your compression elbow (or your tubing soldered to your breech). If you have a smaller gun turret, it is important to have the U be as close to the width of the breech as possible, otherwise the gun will not fit within the upper barbette where you need it.

Once you have the U shaped strip, you need to drill a hole for the interior swivel axle. Find the next size smaller brass tubing (next size smaller than that you soldered to the elbow), and drill holes near the top of the two arms of the U strip. I usually put a piece of wood into the U, and then flip the U on its side and drill through it that way. Try to keep the holes as square to the rest of the U strip as you can, otherwise your swivel will end up canted and difficult to use.

Now you want to shape the U strip a bit more, achieving a shape as indicated in the figure (Fig. 2).

Grind away, and test fit using a brass tube to check for clearances with the rest of the assembled portions of the gun.

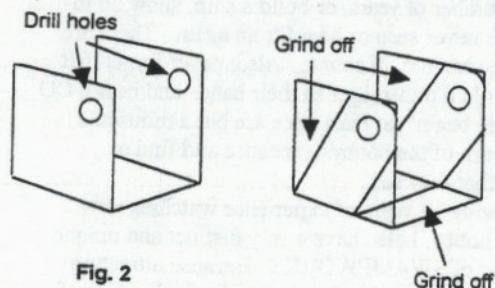


Fig. 2

Once you have the shape you need, you need to convert the U strip into a Y shape. For the bottom leg of the Y, I use a square piece of brass tubing (to prevent the gun from swiveling within the mount). The length of this leg may differ according to the different locations you may need to mount the gun, I'd start with at least 1.5 inches, you can always shorten it later. At the top where the Y leg joins the U strip, use a dremel cut-off wheel to cut a groove half way through the Y leg, about 1/8 inch from the



KER CHUNK !!!!!!! With that one statement the light in the eyes of 90% of the interested parties goes out like a light switch and he's outta' there.

What he expected to hear, what he WANTED to hear, what would have gotten him hooked completely is the following answer, or one similar:

"Yes, we have a small club here in this area. Yes, we have monthly (bi-monthly?) meetings over at Bob's place (or sometimes Bill's or Sam's) where we talk ships and help new guys. Yes, we battle "X" number of times each year".

The LAST thing he wanted to hear was that if he built a ship he'd be on his own throughout the process, and then he'd have to drive "Y" number of hours and stay in a motel each time he battles.

This does not hold true for all new people of course. Many of you reading this were not deterred by the knowledge that there was travel involved with this sport. Some of you are in an area where there IS a local group that is holding regular meetings. Maybe this was a factor for you getting involved ????. Maybe not. The point is that today we'd have mega quantities of more battlers if only they'd heard what they needed to hear with regard to local help and events.

In any case, at this time there are very few "local" branch clubs of the IR/CWCC that are doing and offering these things to the new guy, but those that are are reaping major benefits from it.

I for one DO NOT think it is a coincidence that the Maryland Attack Group, which has been holding regular meetings for years, is the single largest local branch of the IR/CWCC.

I DO NOT think it is a coincidence that until a little over a year ago the Great Lakes Attack Squadron consisted of the Au brothers and Andy Ray. Since they started holding regular meetings and battles in the Southern Michigan area their membership of battlers and those building is now almost 20 people.

I DO NOT think that it is a coincidence that the Front Range Battle Group is growing the way it is since they started battling regularly last Spring.

I DO NOT think that it is a coincidence that the New England Dreadnought Flotilla has gotten all the new people it has since they started battling and holding meetings.

I DO NOT think it coincidence that the Port Polar Bear battlers just started holding meetings a couple of months ago and already have several new people in the group.

Regular scheduled meetings and events on the local level are where it's at when it comes to getting new people to become involved with and STAY involved with this hobby.

NO OTHER LOCAL AREAS in the US are growing like the ones I just mentioned, all of which are doing SOMETHING on a regular basis. Areas where I KNOW that the interest is there to maintain a local group, because of the mass quantities of phone calls and catlog requests that I receive from it, just are not growing or getting new people. Why? Because there is not enough knowledge about what is needed, or the commitment or dedication among the

top. Then, using the dremel cut-off wheel again, cut out a squarish hole equal in width and half as deep as your Y leg into the U strip. Now you should be able to fit the Y leg into the U strip. (See Fig. 3) Once you get a good fit, solder it. For me, a good fit is when the Y leg points straight down when you hold the gun barrel level. Once soldered, you now have a Y swivel.

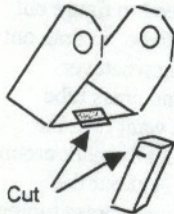


Fig. 3

At this point, you're almost done with the swivel joint. Get your smaller round brass tubing, the one just smaller than the bit you soldered to the breech. I used to solder this smaller tubing to the Y swivel, but it was difficult to get a good joint since at times while heating the joint the outer brass tubing would come loose from the breech. So I changed to a different method, where I cut the smaller inner tubing to just a tad (1/16 inch or so) longer than the Y swivel, then assemble the fitting and use a nail punch to spread out the smaller hollow brass tubing to the point where it keeps the Y swivel bracket secure. As yet, I have not had this fail.

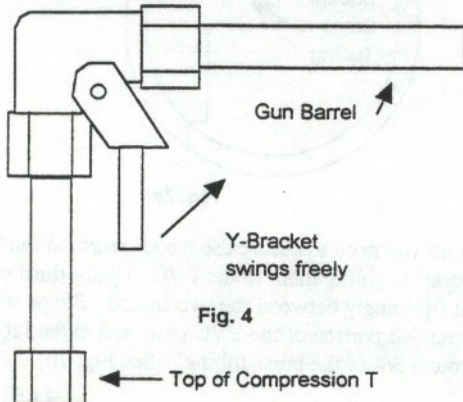


Fig. 4

Now that the Y swivel is attached to your breech (and the rest of your gun), you just need to build the gun mount. I build the gun mount out of PVC pipe and it's corresponding connector fitting. Pick the connector fitting that comes closest to the size of your ship's barbettes, then get the corresponding PVC pipe. The lower portion of your ship's barbette is made from the connector fitting, while the gun turret is made from the PVC which rotates freely but snugly within the barbette (see Fig. 5). As you can see in the drawing the upper barbette also has an additional 1/4 to 3/16 inch of the connector fitting, to keep the upper portion from 'sliding' all the way through the lower. I call this the 'cap'.

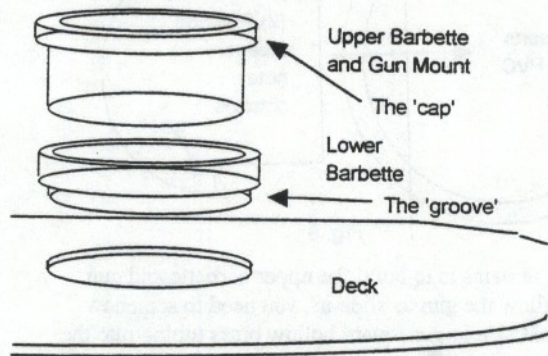


Fig. 5

The lower barbette is glued to deck of your ship, and I like to cut it to size using my table saw. Hopefully you have one also, otherwise I suppose you could use a dremel to do so, but I expect it would be difficult to get a clean even cut, which you want so that the upper barbette fits nicely and rotates freely. I also like to use the table saw to shave a groove all the way around the barbette. Shave no more than half the thickness of connector, this will allow you to make a slightly smaller hole in your deck, and hopefully cover any minor mistakes you made in making the circle. The height of the lower barbette is the scale height of the actual barbette minus a 1/4 to 3/16 inch cap (glued to the upper barbette), plus the width of your deck. I usually use the SuperJet type glue to glue the lower barbette to the deck.



established local battlers to do what it takes to show the new guys that they are willing to help them and battle with them if they do get involved.

Some of the above groups have taken advantage of the offer I have of making names from my customer base available to those that are willing to do what is necessary to start and MAINTAIN a local group. There are many cities or small regions of the US that right now could have a list of 30, 40, 70 or more names to send a nice post card to, inviting them to the first ever regularly scheduled meeting of a local chapter of the IR/CWCC.

I don't want to name places, but right now, based on my customer listings and the percentages of responses gotten from the clubs mentioned above, I could name at least 4 different regions or metro areas with a large population base (and experienced battlers) that have the potential for attracting more new members than the club overall currently has. All that is necessary is one experienced person in an area to want it bad enough to do what it takes to make it work.

I invite members from some of the groups mentioned above to make comment on the help I've offered and given to get them going, and what effect they think it has had on their membership of late.

I'll summarize what I believe to be true on this subject.

\*\*\*\*\* We have a GREAT hobby and sport that has lots of appeal to the general public.

\*\*\*\*\* All of the current methods of proclaiming our sport are effective in gaining attention if dedicated people are willing to do their part to maintain the exposure.

\*\*\*\*\* Accelerating the growth of our sport, i.e. gaining new active members, lies not so much with a corresponding increase in public exposure over what we are doing now, but with increased involvement of experienced battlers in the organization of this hobby

on a LOCAL level.

The things I've said here are not just my "off the wall" ideas. The opinions that I have are based on literally THOUSANDS of phone conversations, letters, and e-mails that I've gotten in the last 17 years of participation in this sport and in 9 years of making my living from people who were thinking of giving our game a try. What I've related to you as being what the "new guy" is looking for is exactly what I've been told, time after time after time after time, ad nauseum..... for years.

I, as the owner of SWAMPWORKS, can only directly advance our sport by advertising on a mass level. I do have the resources as a by-product of my business to help local IR/CWCC clubs tremendously, but someone(s) in the local area must be willing to do their part or any effort on my part that is spent in that area is wasted.

Announce your club..... and they will come !!!

Steve SWAMPY Milholland

Additional note: Since this original text was written and published on the internet last November, three gentlemen have taken me up on the offer to help them get a local club underway. The clubs in question are in Oklahoma City, Dallas, and Tampa. All three have taken my suggestions on how to get a club off the ground and all three had very good turnouts for their first meetings. The Tampa area club had an astounding 16 people in attendance, plus 3 experienced battlers to help get things started.

The people are there. Let's get them on the water.

Steve SWAMPY Milholland

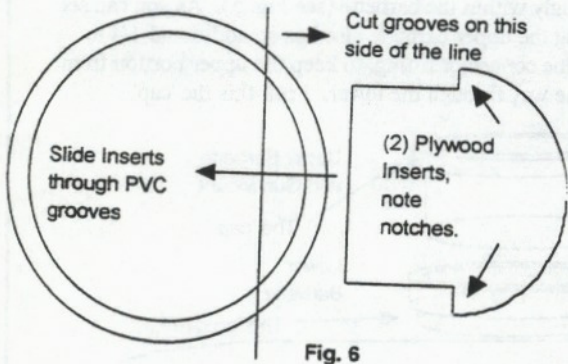
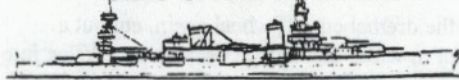


Fig. 6

Now all that remains is to build the upper barbette and gun mount. To allow the gun to 'slide in', you need to somehow mount the next size larger square hollow brass tubing into the barbette. Since it is difficult to get things to glue well to PVC, I decided that the plywood I wanted to use had to somehow grip the outer portion of the PVC pipe without interfering with the free but snug rotation of the barbette. Tough order? Not really. The trick is to cut two grooves through the PVC pipe as pictured above in Fig. 6. Since I use the 1/8 inch aircraft plywood for the wooden inserts, I cut the grooves 1/8" thick, using a dremel tool and a cut-off wheel after I have marked the measurements. You want two such grooves, one about 1/2 inch or so below the top of barbette, and the other about 3/8 inch below that. Now you need to make the wooden inserts. (Again, see Fig. 6) The part of the insert that slides into the PVC pipe should be cut so that it fits snugly into the hole. The key part of the inserts is the notches, so cut the outer portion of the insert larger than the PVC pipe,

you can sand it down to fit with your dremel later.

Once you have the rough inserts cut out, you need to figure out where your larger hollow brass tube will need to be, so drag out your gun with the attached Y-bracket, and using whatever scheme you want, determine where the matching brass tube needs to be so that the gun fits well where you want it in the barbette. Once I determine where I like it, I usually mark around the end of the Y leg on the wood insert. Now I cut out the square hole in the insert such that the larger square brass tubing fits snugly through the wood insert. Do the same to the second wood insert. After you have cut the square holes, you can trim some of the excess wood off of the wood inserts (see Fig. 7a). By trimming the excess you give yourself more room to maneuver the gun into and out of the barbette when the mount is finished.

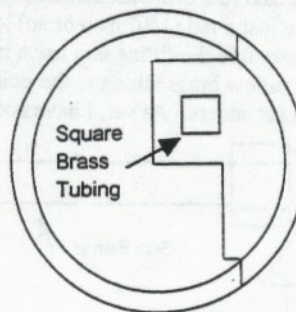


Fig. 7a

At this point you need to secure the wood inserts to the PVC pipe. Instead of gluing them to the PVC, I get a third piece of wood that fits snugly between the two inserts. Shape it to fit into the rounded portion of the PVC pipe, and extend it to wrap snugly around 3/4 of the brass tubing. (See Fig. 7b) I cut and



OPEN INVITATION TO RATS (Rookie Allied Target Squadron) Battle /Swim meet.

At 10 am on Sunday March 29th the Maryland Attack Group will sponsor a battle near Manchester Maryland at the Brunner Farm on Backlums Valley Road. Battlers are invited out to this first battle of the year in Maryland to break in new ships and check out improvements and upgrades made during the winter building season. Highlight of this one day battle will be the synchronized swimming demonstration as veteran Axis captains will attempted the never before feat of sinking all Allied ships *simultaneously*. EMT Tom Tanner will be on hand to conduct rescue operations. This will also be a chance to check out all the latest technological advances in the hobby as the Tri-Pact Institute of Technology will have it's Axis Mobile Command center open to all APPROVED Axis captains. For more information and directions please call Steve Pavlosky at 410.285.5239 or 410.285.7792

**Batteries.**  
By fuegel  
I found a good place to buy batteries. There out on shelfs, and I can take my ship into the store and play which battery fits best. If this one is to long, well, here is one a bit shorter. Its kind of like cheating, its to easy. The prices are competitive, at least locally. I asked if they could ship batteries by mail? He said "90% of our sales are by phone or mail". I would check their web site to check for current prices. EVS Supply, 1350 E. Arapaho, Suit # 126, Richardson Texas, 75081. E-mail: batmen@sprinmail.com Website: evsupply.com 1-800-776-5267 Fax: 972-231-2269

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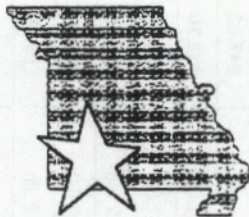
Item No.	Description & Termination	Dimensions Length Width Height & Weight	Sale Price
PS445	4 Volt 4.5AH - Fast-On	1.93" x 2.09" x 3.70" 1.5lb	\$14.25
PS490	4 Volt 9.0AH - Fast-On	4.02" x 1.73" x 3.70" 2.4lb	\$17.70
PS605	6 Volt 0.5AH - Wire Leads	2.24" x 0.55" x 1.97" 0.2lb	\$9.26
PS610	6 Volt 1.0AH - Fast-On	2.00" x 1.65" x 2.00" 0.6lb	\$10.50
PS612	6 Volt 1.2AH - Fast-On	3.82" x 0.94" x 2.00" 0.6lb	\$9.35
PS620	6 Volt 2.0AH - Fast-On	2.95" x 2.00" x 2.09" 1.1lb	\$15.85
PS630	6 Volt 3.0AH - Fast-On	5.28" x 1.34" x 2.35" 1.5lb	\$12.95
PS632	6 Volt 3.2AH - Fast-On	2.60" x 1.30" x 4.65" 1.5lb	\$15.25
PS640	6 Volt 4.5AH - F/O or W/L	2.76" x 1.89" x 4.02" 1.95lb	\$15.40
PS650L	6 Volt 5.0AH - Spring Term.	2.63" x 2.63" x 3.78" 2.0lb	\$14.99
SA660	6 Volt 6.0AH - with leads	2.63" x 2.63" x 3.78" 2.0lb	\$17.85
PS665	6 Volt 6.5AH - Polarized F/O	3.86" x 2.20" x 4.05" 3.0lb	\$21.28
PS670	6 Volt 7.0AH - Fast-ON	5.95" x 1.34" x 3.70" 3.0lb	\$16.40
PS682	6 Volt 8.0AH - F/O or W/L	3.86" x 2.20" x 4.65" 3.3lb	\$15.65
PS695	6 Volt 9.5AH - Polarized F/O	4.26" x 2.75" x 5.54" 4.9lb	\$25.77
PS6100	6 Volt 10.0AH - Fast-On	5.95" x 2.00" x 3.70" 4.6lb	\$18.00
PS6120	6 Volt 12.0AH - Polarized F/O	4.26" x 2.75" x 5.54" 5.2lb	\$25.77
PSC-6500-A	6 Volt Charger 500mA for batteries 4AH to 10AH .60 to .75 Amp Output	Smart Charger - Auto switch from Fast Charge to Float Charge	\$45.30

Item No.	Description & Termination	Dimensions Length Width Height & Weight	Sale Price
PS1212	12 Volt 1.2AH - Fast-On	3.82" x 1.65" x 2.00" 1.3lb	\$16.60
PS1220	12 Volt 2.0AH - Fast-On	7.01" x 1.34" x 2.36" 1.9lb	\$18.65
PS1226	12 Volt 2.6AH - Fast-On	7.01" x 1.34" x 2.36" 2.2lb	\$19.67
PS1230	12 Volt 3.0AH - Fast-On	5.23" x 2.64" x 2.36" 2.6lb	\$22.90
PS1232	12 Volt 3.2AH - Fast-On	7.68" x 1.85" x 2.76" 3.1lb	\$26.74
PS1242	12 Volt 4.0AH - Fast-On	3.54" x 2.76" x 3.98" 3.8lb	\$29.00
PS1270	12 Volt 7.0AH - Fast-On	5.95" x 2.56" x 3.70" 5.7lb	\$27.50
PS1270PBR	12 Volt As Above w/Charger	5.95" x 2.56" x 3.70" 5.7lb	\$67.50
PS1282	12 Volt 8.0AH - Fast-On	3.86" x 4.40" x 4.65" 6.7lb	\$37.50
PS1282L	12 Volt 8.0AH - Fast-On	7.72" x 2.20" x 4.65" 6.6lb	\$43.93
PS12120	12 Volt 12.0AH - Fast-On	5.94" x 3.86" x 3.70" 9.0lb	\$47.90
PS12120L	12 Volt 12 AH F/O Polarized	8.38" x 2.75" x 5.50" 11.0lb	\$32.70
PS12170F	12 Volt 17.0AH - Fast-ON	7.13" x 2.99" x 6.57" 12.8lb	\$55.00
PS12170NB	12 Volt 17.0AH - Nut & Bolt	7.13" x 2.99" x 6.57" 12.8lb	\$55.00
PS12100F	12 Volt 18.0AH - Fast-On	7.13" x 2.99" x 6.57" 12.8lb	\$55.00
PS12100NB	12 Volt 18.0AH - Nut & Bolt	7.13" x 2.99" x 6.57" 13.0lb	\$55.00
PS12260F	12 Volt 26.0AH - Fast-On	6.89" x 6.54" x 4.92" 18.7lb	\$70.50
PS12260NB	12 Volt 26.0AH - Nut & Bolt	6.89" x 6.54" x 4.92" 18.7lb	\$70.50
PS12330	12 Volt 3.0 AH - Nut & Bolt	7.68" x 5.19" x 6.38" 26.5lb	\$75.00
PS12400	12 Volt 40AH - Nut & Bolt	7.75" x 6.5" x 6.69 30.9lb	\$75.00
PS12600	12 Volt 60AH - Nut & bolt	10.25" x 6.6" x 8.2" 52.3lb	\$115.60
PS12800	12 Volt 80AH - Nut & bolt	12.0" x 6.6" x 8.2" 62.4lb	\$147.50
PSC-12250-A	GEL CELL SMART CHARGER	For 1 to 5 AH batt. .40amp	\$34.40
PSC-12500-A	GEL CELL SMART CHARGER	For 2 to 10 AH batt. .60amp	\$45.30
PSC-12400-A	GEL CELL SMART CHARGER	For 10 to 40AH batt. 4.75amp	\$104.70



# MO Notes:

by Steve Milholland



## Battle Announcement.

Once again a new year is upon us, and it is time here in the Ozarks to begin preparations for our Spring BB Fest. This year we are planning the event for the weekend of May 16th and 17th. This is the weekend just AFTER Mothers Day and just BEFORE Memorial Day.

As in past years, we are planning to use the lake at Ritter Springs Park which is just a couple of miles outside the NW corner of Springfield. A nice, shallow battling area, good pits, and relative seclusion from mass quantities of the public make this a pretty good site for a contest.

Entry fee will be \$12 at least two weeks in advance of the contest. Late and lakeside entries will be \$18. Mail entrie fees to Steve Milholland, 1810 Farm Rd. 197 North, Springfield, MO 65802.

Please be sure to include your radios Channel Number, NOT FREQUENCY, with your entry fee. We want to rectify all conflicts before the contest. Prepaid entries will have priority on Channels.

This will be an IR/CWCC sanctioned event, so all entries must show a current IR/CWCC card and current NAMBA card. NO EXCEPTIONS.

We will be using the Motel 6 at 3114 N. Kentwood, in Springfield. Phone for reservations at (417) 833-0880. Be advised to make your reservations early, as there is usually a street rod convention in town this same weekend (motel rooms go fast), and call back just before the event to confirm.

Our weekend battles here have gone from being almost washouts due to non-attendance three years ago, to "THE" Spring and Fall events in the middle of the country. Battlers have been showing up from as far away as Texas, Georgia, Michigan, Minnesota, Colorado, and California. This Spring looks like we'll be seeing the addition of quite a few rookies coming in from not only the states mentioned, but also from "closer to home" areas such as Arkansas, Kansas, Oklahoma, Iowa, and Missouri itself.

I hope that this first event of the year will be the biggest ever.

See ya on the water,  
Steve Milholland  
swampy@ncsi.net  
(417) 831-2309

# Battle Announcement.

There will be a battle in Michigan on May 2-3. Location will be in East Lansing, MI, White Memorial Park.

Battle to be sanctioned. So NAMBA and IRCWCC memberships required.

CD will be David Au.

For more information, contact me (Chris Au) at [au@pilot.msu.edu](mailto:au@pilot.msu.edu) or (517) 351-5364

Also stuff posted at <http://www.msu.edu/user/au/>

BTW- lake here is a 300'x100' egg shaped, with a bottom that while somewhat goopy is no more than chest deep.

Thanks-  
Chris Au

# Proud to be Axis!

By Curly Barrett  
Prime Minister of Axis Propaganda

As we prepare for another year of battling, the strong smell of glue fixes with the crisp sounds of gunfire, bringing glorious memories of decisive Axis victories that play over and over in my cheerful Axis brain! In my 12 years of Axis service, I've been led-and joined-by a steady stream of well-decorated captains....the premier battlers in the hobby! The Axis have a long and glorious history of battling victoriously as nderdogs against a numerically superior Allied fleet of captains who would fight feebly for their quaint democratic lives. The Axis have banded together, time and time again to vanquish the Allied uprisings! We have bested the odds, defied the Fates and surpassed even our own expectations. This fleet of elite warriors sails again, fighting nobly and obliterating all foes! We will follow our admirals to victory, helping each other to become better battlers. Our growing numbers will swell to new dimensions as we blast the Allied scum off the waters we love! We have some new captains. We have some new boats. And we have some new plans. But our roots of world domination date back to beginning, when the USS Ardmore was totally annihilated but our spiritual leader, Herr Fluegel, in an unprecedented score of 3250-0. The Axis are a proud group, fired with the determination and conviction of World Peace Through Total Global Domination. We are ready, once again, to heroically engage our foes and return triumphantly to our loved ones back home. There has never been a better fleet than the present Axis war machine. There has never been a better time to be Axis! Sail On!

## Wanted

Used ship and equipment  
Preferably a class 3-4 ship good  
for a beginner.  
Axis or Allied OK

Mike  
Email: [wmj3@airmail.net](mailto:wmj3@airmail.net)  
(214)321-1648

Please feel free to change this ad to fit your format  
if necessary.

Thanks and hope to see you at the next meeting!

Mike Boyles



## The Engineering of Ronny Hunts

Invincible, at the 97 Nats.

By Fluegel.

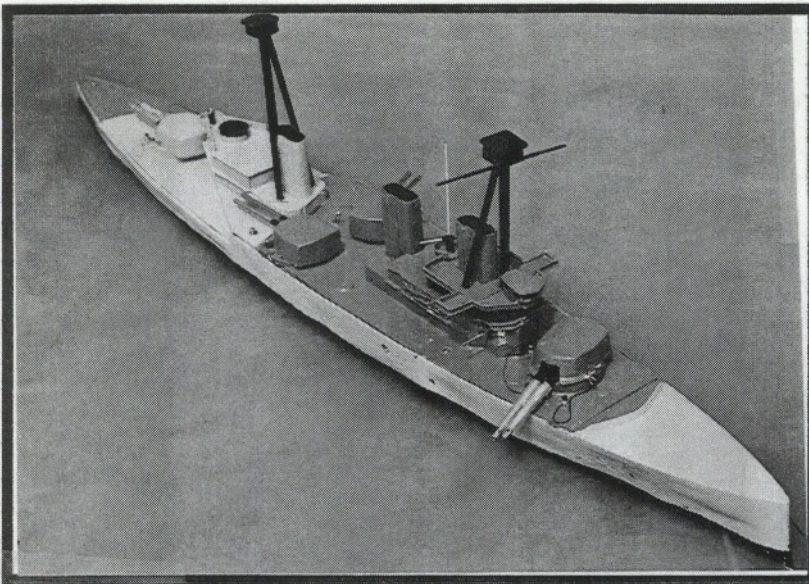
Hull.

The name of the ship in the "Invincible class". Ronny Hunt, the captain and chief engineer has no preference which ship in the class it is called. The Hull is a Swampworks hull, the rest is fabricated by Ronny.

Internal armor is made by "Skycraft" (the same that Lief uses).

When asked why he had so many water tight Boxes, he said that when he put the ship in the water, last week (he laughs at himself for waiting so late), he found out that the ship was about one inch down by the bow, so he moved some of the radio and water tight box back, then he moved the CO<sub>2</sub> bottle and batteries back towards the stern.

The decking is 1/8" aircraft wood, with a lot of lines drawn on it with an ink pen, time 1.5 days. This is coated with epoxy to



test fit all three wood pieces along with the brass tubing to ensure they fit together before I glue the wood pieces together. I normally have the brass tubing inserted when I glue the wood pieces to each other, but be careful not to glue the brass tube just yet. Make those wood pieces snug, so that they don't jiggle around after the glue is set. Once the wood pieces have set, then you want to test fit the brass tubing along with the gun with the Y fitting, inserting the gun, and sliding both pieces of brass tubing up and down until you determine the height you'd like to have the larger brass tubing set permanently at. You want the gun to rest high enough so that you can get a decent down angle on it if you so chose. Mark it, and then glue the large brass tubing to the wood. Again, I normally use the SuperJet type glue here.

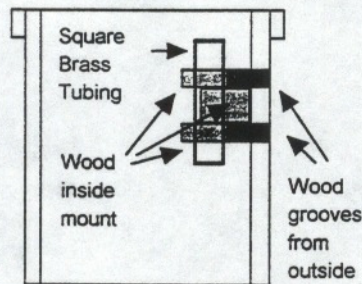


Fig. 7b

Once the glues have set, you can take your dremel and sand down the excess wood, both inside and outside the PVC pipe. Then, you can attach the 1/4 inch 'cap' that we saw back in figure 5. Use the PVC primer and glue that is designed for the PVC pipe, SuperJet type glues won't stand up over time. With one of my guns, I dropped the upper barbette once, and the 'cap' split in one place. I tried regluing this several times but it kept breaking. If this happens to you, I suggest cutting a new cap and replacing it immediately. After gluing on the cap, sand away the excess glue, and test fit the upper barbette inside the lower barbette. It should fit snugly, but still rotate fairly easily. After you have the entire gun mount completed, remember to seal the wood portions with epoxy, and sand down the exterior again as needed.

At this point, the gun mount is basically finished. The gun should slip easily into and out of the gun mount (See Fig. 8), and the gun mount itself (the upper barbette) should mesh cleanly with the lower.

Now, to set the guns elevation, you can use two different methods depending on your gun configuration. For guns with straight magazines, I usually have some sort of hook or rest

near the very end of the magazine (where one loads the bbs). This 'rest' can be mounted to the deck (I usually use this for bow guns or bow sidemounts), or to the ships hull (for the sternmost gun). Bending the copper tubing of the gun, usually between the compression T fitting (where the piston resides) and the breech, will allow you to change elevation.

For guns with more circular type magazines (all my guns are hand-made, I have never used the Swampworks tight-circled magazines, so I don't know if they would work with this mount), they are usually 'free-standing' in that the end of the magazine does not have a 'rest', so the elevation 'rest' is added just below wood inserts inside the PVC pipe (see Fig. 8 again). The copper tubing of the gun should rest against the elevation spacer, and again, by bending the copper tubing of the gun slightly you can alter the elevation of the gun.

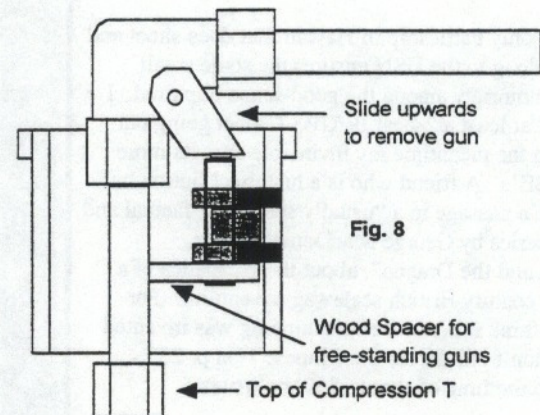


Fig. 8

As I said before, each gun mount has different requirements, and unless you have a six unit battleship with turrets with three or more barrels each, the size you need for your vessel will probably be cramped, and so you will want to keep your fittings as compact as you can. On some guns I have had to grind away either a bit of the corner on the Y bracket or an area of the upper barbette. On some guns I need to remove the gun barrel from the breech before it will fit through the barbette, others will slide through with no problem. Also, I have never tried this system on a multiple gunned turret, so I don't know if it would work well there. In all of my single-gunned turrets I am quite happy with the system. As far as building turret tops and attaching them on top of these gun barbette mounts, I'm afraid I'm still experimenting with different methods of doing so. So feel free to experiment in this area, and pass it on if you come up with a good system.



maintain the lines and protect the wood

#### Propulsion.

32 tooth gear on the drive shaft, and a 29 tooth gear on the WaMing motor. Traxx's gear box support the motor and gears. The props are home made, each blade is brazed to the hub.

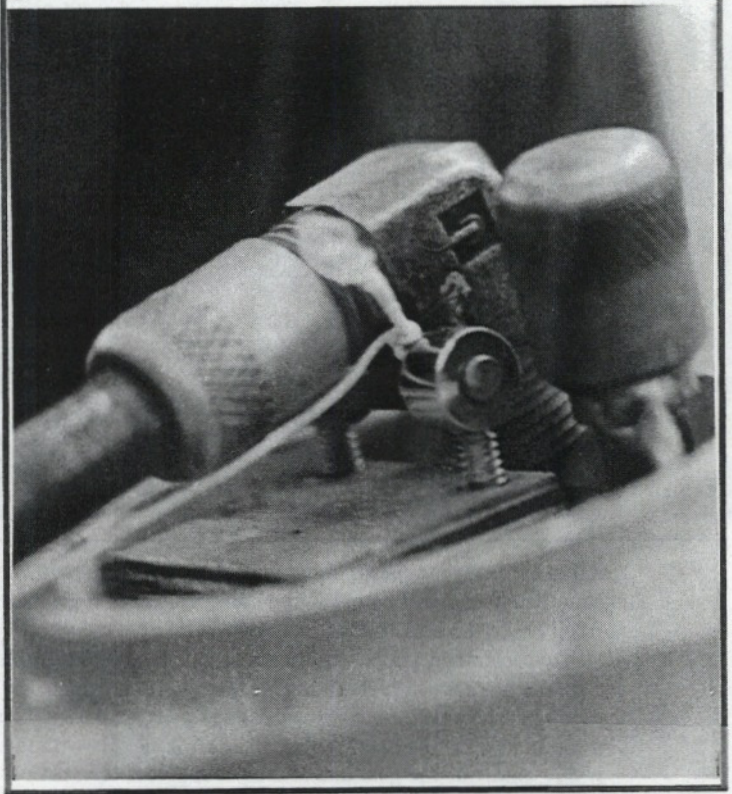
#### Guns.

Gun mount; the gun hangs by the elbow. The elbow is soldered to a 1/8" brass rod that is secured to two collars with set screws. There is a bolt that screws through the wood and pushes against the bottom of the elbow. This bolt is screwed in or out to change the elevation of the guns.

The popet valve mounted directly to the gun tee (interrupter) is novel to me. This is the second year Ronny has done this. "My guns are gas eaters" because of this system, along with a larger diameter supply hose that provides for ample air flow to the gun's breach. Ronny said his CO<sub>2</sub> tank is 3.5 oz., but he puts 4.5 oz's in the tank (doesn't this blow the "burst" disk?). This system fires 3 guns per sortie. The tee (interrupter) uses a stainless steel "cleaves Pin" for its piston, -same as Swampworks, but Ronny drills a small hole directly through the pen. This allows gas to flow through the piston's tee, to the breech (around the cleaves pin). This drilling required four drill bits. The tee's spring is a full spring, which is best obtained from Swampworks. Ronny noted that both the spring and the cleaves pin were used by him before Swampworks used them.

The gun barrel's are cut from a "Crossman 66 power master". They are rifled and have ~5/16" OD. "They do not ding at all", (they do not need to be replaced do to battle damage), as other stainless steel barrel's do, and for that matter every other type of barrel.

gun



## The Peking Conspiracy

By George Losey  
Kaneohe Hawaii

Losey@zoogate.hawaii.edu

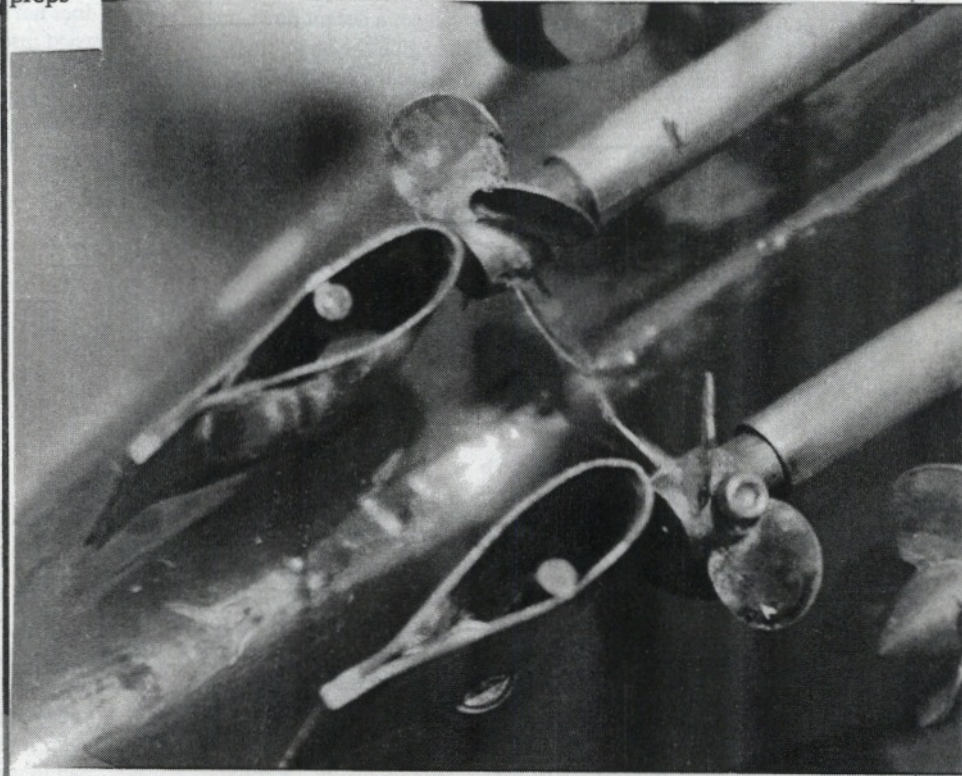
Having the only battleship in Hawaii that does shoot and does not belong to the USN ensures me some small amount of notoriety among the good-sense-impaired. I hope to get at least a 2-boat IR/CWCC fleet going out here, but in the meantime my Invincible attracts more awe than BB's. A friend who is a historical fiction buff showed me a passage in a "usually somewhat factual and accurate" series by George MacDonald Fraser, "Flashman and the Dragon", about the escapades of a nineteenth century British scalawag adventurer. For those who think miniature battleshipping was invented in Texas, don't tell that to the Chinese. On p. 233, referring to the time of about 1860, he writes:

"In a Gazette article entitled 'The Fate of the Peiping Captives in the Late War', you may read how Col. Sir H. Flashman 'endured a captivity little better than slavery at the hands of his tormentors', who treated him 'in the most degrading and insulting manner'..."

"I was fourteen memorable days (and nights) in the Summer Palace of Peking, held thrall by the notorious Yi Concubine, ..." "...and the deck of a pleasure barge on the Jade Fountain Lake, which was her most extraordinary choice of all, I think. We'd been cruising about, watching a battle between little model gunboats blazing away at each other with tiny brass cannon, when my lady becomes bored, and consequently amorous, and ...."

From my reading of Hull Busters, I gather things happen

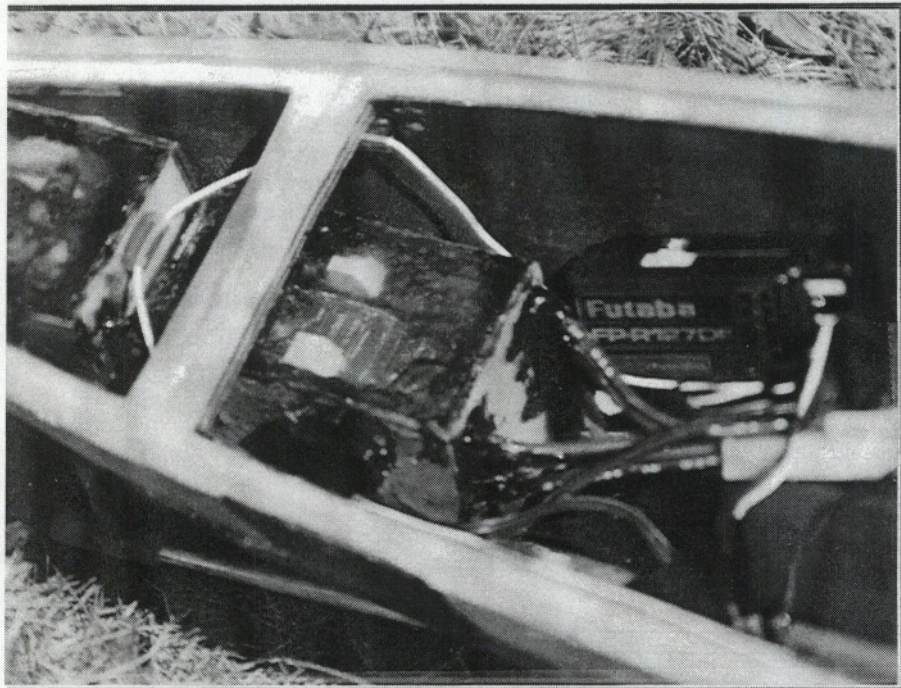
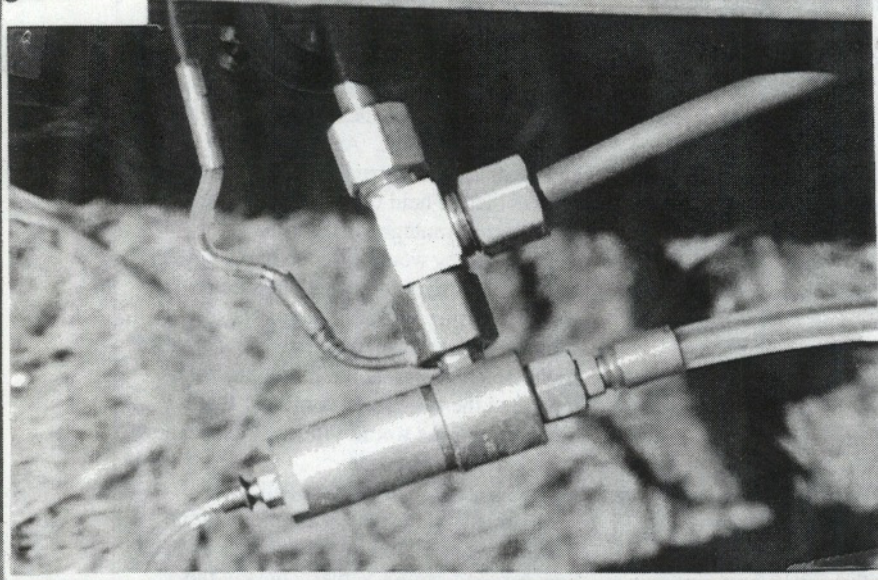
props



a bit differently at today's competitions? I hope to join in one of these days, perhaps while visiting my daughter in Dallas or brother-in-law in New Hampshire. If you folks welcome some fresh balsa from abroad, it would be nice to have the upcoming season published in Hull Busters with travel in mind. Now if I could just get everything working at the same time ...



gun tee



### Radio installation.

The radio receiver is very interesting.

It's seen casually lying on the bottom of the hull, this is an abomination to every captain, (a water tight box for the receiver is often built as if there were no option). Ronny can do this because he drills a hole in the top of the receiver container and injected molding silicon into the receiver (with a syringe). All the servos were plugged in during this process so that the "plug-block" is also contained in the silicon. Ronny believes one can remove the silicon for serves if one would need to send a receiver back to Futaba for repairs.

### Pump.

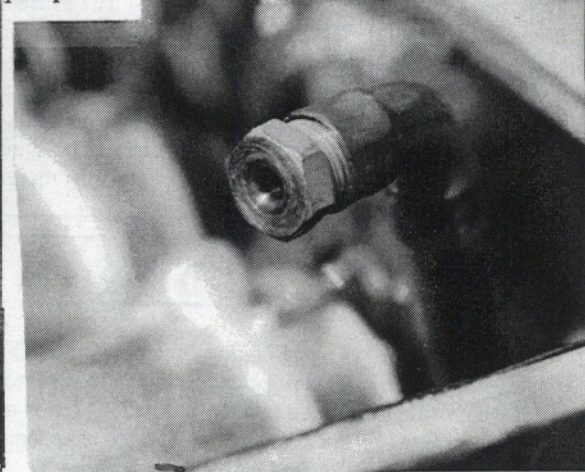
The pump motor has a 540 case, but Ronny does not know what exactly the motor is. It pumps a hearty 2 gallon per minute. It's impeller is 15/16" in diameter (I am impressed with Ronny's attention to designs. such measurements show forethought). The impeller has four blades and is secured by a hub that has two set screws. All set screws are "lock tight" (which by the way is a very good idea, and also, this prevents rusting and makes it easier to remove the set screw). The impeller is also a press fit (has Ronny sank a couple of time from slipping impellers?).

The pump water exits through 3/8's inch tubing, with a 3/8" elbow. The exit itself is a 1/8" "plate plug".

### Conclusion.

This ship he rated as good, but it had problems with gun tees. Next year Ronny is planing on building a Sharnhorst (another Allie who has returned to the side that has more fun, and dresses better).

pump exit



**Battle announcement.** Savannah Regionals, April 4th and 5th. 10:AM. Hotels at I-95 & hwy. 204 ((912-925-2770) Holiday Inn) ((Days Inn(912-925-2770)), ((Shoney's Inn (912-925-7050) and others.. Sanctioned (?). Ali is CD, I don't Know who the site host is, Ali Zinat's address is 5312 Cickens Rd. Rickens Rd. Richmond VA 23230.

### Group Forms in Garland, TX By Doug Torda

The Texas Attack Groups held its first meeting on 1/17/98 and everyone who attended agreed that it was a success. There were 8 captains in attendance. We had 5 ships on display, the H.M.S. Liverpool (Charles Jerden), H.M.S. Invincible (Allen and Kathy Torda), S.M.S. Baden (Fluegel), S.M.S. Derflinger (Doug Torda) and an "Old Blue Devil Kit" (Travis

Jerden's). None are battle worthy yet. But... Fluegel's S.M.S. Baden is very close to being a serious threat to the allied fleet! There was a great deal of discussion concerning the hobby in general and what we will do as a club. TAG will concentrate on building and battling. Everyone agreed to meet on the second Saturday of each month with additional building sessions every Friday night. Postcards inviting potential members will be sent to the mailing list for the next few months. TAG will meet at Doug Torda's

house and use the lake (wide creek) in his backyard for sea trials and 'Bang Bang'. I'm not sure how deep the lake is; a detailed survey of the depth will be done in the spring. Some great pictures from the meeting including the SMS Baden, HMS Liverpool and "Blue Devil". Special thanks to Greg Keck for the pictures on the TAG web page, Greg used his digital camera to get some great shots. The URL is 'http://www.ircwcc.com/chapters/TAG'. Here is a picture of Charles Jerden's H.M.S. Liverpool.



## I Remember

I remember when it happened, when I knew I was on the wrong side of the war. It was in the opening days of the Great War of '97, though like most wars it was just a continuation of the last one. The same prejudices, the same issues, many of the same antagonists, just the place had changed. And I was there...

I'd joined the Allies just after the last one, the Ninety-Sixer, mainly because of my grandfather. An old war-horse himself, I'd learned a lot about war and battle and what men need to know to survive. I learned about duty, honor, and how to have respect for a gallant foe, even one that had lost.

I'd seen war before this, a little skirmish that happened to occur near my home. I went to see, curiosity filling me, and what I saw, from the safety of the sidelines that Fall of '96 in the Northeast, was impressive. How little did I know it was all a game, those two days of comradeship and fun, nothing like the real battles I'd see later. But I enjoyed watching, and dreamed of being could in the game. My Grandfather, still alive at the time but his time short, was from Massachusetts, and the Allies dear to my heart for they had to be better than the Axis, didn't they?? They had won in '96, and if they had won, their cause must have been just. So I worked and toiled and from the shores of Annapolis rose a new vessel of war, the South Dakota class super-dreadnought USS Massachusetts.

But even then I knew something was wrong. I was finding that the best sources for information and assistance in my task was being provided by the local squadron of the Axis Fleet, the Maryland Attack Group or MAG for short. They told me about tactics and gun placement and damage control.

Usually my queries to the Allied fleet on these subjects seemed to be vague and not quite forth-coming. I felt out of the loop. But I figured that it would all be corrected when I MAG actually met the fleet, when we fought together in the just cause of defeating the Axis threat we knew was rising. I watched as created monster Yamato class battlewagons, each mounting six guns and two pumps that and faster than my supposed "super-dreadnought." I saw them practice in preparation for the coming war, even had an accidental encounter with a Axis squadron while I was running un-armed on engineering trials that I was lucky to survive (thankfully I was still running a little fast at that point). It made me think, maybe I'm on the right side after all. Then came the war.

I was at an intelligence posting on that first day, far from the scene of the confrontation. I missed the trials and the meetings of fateful Sunday in July, arriving late in the evening, immediately beginning the final preparations I knew were necessary for the fighting that would begin in the morning. I met some fellow allies, who seemed nice enough but didn't know me (or did, and that I was from an area deep in Axis territory), referring my questions of tactics and strategy for next day's battle to the Admiral. When I found him early Monday morning he was immersed in the preparations for the day ahead and spare me no time. I later learned, however, that I had been assigned to a four ship squadron. The war started.

The battles raged back and forth across the lake, mighty warships inflicting deadly punishment upon one another. I don't remember many of the details but I do remember this - I liked it. We pressed our attack, bolstered by a 3:2 advantage in ships, probably more in actual number of guns on

the water. The Axis wazzu fell back to the opposite shore of the lake to regroup. And I noticed something then. The Axis, though being pushed back, were having fun. They taunted us, cajoled us, goaded us into bringing the fight to them. We worried about conserving our ships. And we hesitated. We had the numbers to crush them, but the powers that be held our forces back, refused to use our advantage to finish the job, concerned they would lose too many points. I was there to fight, to bring the battle to the enemy, to bring Armageddon on those opposed to me. I ordered "Full Steam Ahead" and charged across the no-man's land that separated the two fleets, confident that my brothers-in-arms would follow. Then I knew I was on the wrong side...

As I steamed into that furball I was surprised by two events, the actions of the fleets. I was cheered by my enemies even as they surged forth for actually having the courage to fight, meanwhile my erstwhile "allies" cried for me to return, waiting on their side of the lake with their mighty armada, not willing to risk a fight on less than favorable terms. I knew then I was on the wrong side. For the true warrior, it is not so much the fight that is important, but how he fights. My grandfather taught me that, too. And the Allies were lacking something that day.

That was when I knew I was on the wrong side.

Tom Tanner

Former CO,

USS Massachusetts

Pre-Comm CO,

SMS Hindenburg

## Nats to U! (The 20th Year!)

Well, this years NATS will be again held at Green Briar State Park near Hagerstown, Maryland. This is located in the narrow western section of Maryland which might be called a pan handle, but is not. The area is green woods, and small mountains, located near some of the most bloodiest battle areas of the Civil War (appropriate?) Hagerstown is a small to medium sized town with some historical significance and Gettysburg is only a short distance away. The metropolitan areas of Baltimore and Washington are about 1.5 hours drive away for wives and Wed. sightseers.

Green Briar State Park is very well kept and supports camping, fishing and swimming. There are dozens of hiking trails, picnic areas, paddle boats, canoes and a lakeside beach area that we or any of our families can use. The park usually charges \$2 per car per day for admission but we have made arrangements to provide free entry to anyone holding an IR/CWCC membership card. There is on-site RV camping available at the park and they take reservations starting in the Spring. The camping sites provide electrical hookups, but not water and sewage (there is a

community washroom). We can coordinate such arrangements with anyone who wants to bring an RV.

The lake itself is quite large and we will be using a shallow portion of the lake that is easily secured and is still quite large. The bottom looks to be some sort of sandy gravel or stone. There was some concern about Moss, algae and shoreline weeds last year but the weather (if nothing else) ended that. At worst, I think we could expect to be limited to ~30 foot out from the lee shore. In this case we may be able to extend the line along the length of the shore even further than last year. The side chosen for the pit area is almost completely free of all lakeside vegetation. The week being one week earlier ought to help also.

The pit area will be covered by one or more large tents, with plenty of room for additional smaller tents. There are no large trees in that area for shade, so please bring a tent for shade if you have it. We will be renting larger tents as well, but it is better to have too much shade, then not enough. Since the park is secured at night, we can leave everything set up throughout the week. We also plan on renting some tables/chairs again if the price isn't too.



There are many hotels located nearby but we have again chosen Days Inn as the official hotel for the 1997 Nats. (\$48.00 nite/double occupancy) Their phone number is 301-739-9050. When you call mention "The Model Boating Group" to get the group discount. Call before June 21st!, our block on the rooms is off by then. Also we have reserved a block of 20 rooms, so they could run out if you wait too long to call in. Be sure to mention that you want Ground Floor Rooms! Our contract has been negotiated with Cathy Zombro (in case there is a problem getting the discounted room rate). There are no large airports located nearby, so if you are flying in, I suggest BWI (Baltimore) and a rental car.

The cost of Nats 1998 will be \$90.00 (based upon 35 combatants attending there is the chance of a rebate if more than 35 people attend and our expenses fall within the budget. A late fee of \$20.00 will be levied after May 31st. due to the requirements of re-negotiating some of the supply contracts after that date.(this proviso is still in there even if we didn't need to use it last year) Please send your name, address, phone number, name of ship(s) and intended frequency to me: Marty Hayes, 1113 Crestview Drive, Annapolis, MD 211401. Of course, your entry is not complete unless the money accompanies the paperwork!

Do not forget to bring your National membership card and your

What you get for your money is:

- Trophies
- Sunday Captains meeting room
- Lunch at the lake (Monday, Tuesday, Thursday, Friday)
- CO2 (included in the Nats fee this year!)
- Banquet on Friday nite, and meeting room for rules meeting and general use (not a boat workshop however!)

- Park entrance fees
- Cool drinks at the lake

The hotel will provide light refreshments for the Captains meeting and rules meeting and some sort of "included" breakfast each day.

Not included:

- Breakfast, Lunch (on Wednesday), Dinner (except Friday)

We had pretty great weather last year, and I can't promise that I can do it again, but I will try! Come prepared to face anything from sunny and hot, to rainy, cool and windy, and I'll try to order something in between.

Marty Hayes  
Capt. of the IJN Nagato

## The Umpteenth Winter 97-98 Dallas Micro-Mini-Nats

By Stan Watkins, 1/18/98

As per the established tradition of many years, ships of the Allied and Axisfleets gathered to exchange gifts (BBs) during the 1997 Christmas holidays. This year there were only two warships participating. Both of these ships were new la unched but not totally completed ships.

### USS Washington

For the Allies was Stan Watkins' new USS Washington. She had her 5 guns installed and somewhat functional. Her pump was installed (with screen) and operable on radio controlled switch only. Her motors gear boxes and shafts were functional. Her rudders were functional. Her speed was fast (20 to 22 seconds). Her hull skin was incomplete (still fiberglass).

### SMS Baden

Representing the flower of the Axis fleet was D.W. Fluegel's new SMS Baden. She had between one and 3 guns installed during the course of the armed speed trials that make up the Dallas micro-mini-Nats. She had pump installed (without screen), and her main drive and rudders functional. She had her hull skin installed.

In the Dallas armed speed trials there are no real rules but any ship going on the water is fair game for the guns of the other ship so it had better be armed.

Round 1 (USS Washington) (December 29, 1997)

Just prior to the trip to the lake Fluegel ran out of CO2 so the Washington would have

no guns (or so Fluegel thought). Stan made the conversion to 2 of 2 oz. disposable bottles by connecting up 2 regulators. But Stan still had only one cartridge and no BBs. Looking in the box of Stan's 1997 Nats goodies that had mistakenly gone to Fluegel's house Stan found numerous cartridges and a 5000 pack of BBs. While Fluegel was in the house Stan hurriedly loaded up and installed cartridges. Unlike Baden, the Washington would be armed which is always appropriate at a Dallas armed speed trials. Round one consisted of the unarmed Baden (Baden mistake) cruising with the armed (but not extremely dangerous) USS Washington playing with the Baden. The seas were heavy and the Washington and Baden took on some water. The Baden looked dangerously low in the stern at one point until Fluegel turned on the pump. The Washington was running about 22 seconds in the 100 feet while Baden was almost perfectly on her 28 seconds. The Baden did turn considerably better than the Washington (with 360 degree turns averaging about 9 seconds). The best the Washington could do was 11.25 seconds to starboard. On the few brief encounters when Stan chose to hit Baden rather than the water near the Baden he was successful. The Washington put two holes in the unarmed Baden coming out victorious 2 to 0. That was not too difficult a victory, but Fluegel learns quickly (Fluegelization). Washington had experienced intermittent problems with her new radio on-off switch and rudder linkage. So it was back to the

dockyards for lessons learned corrective actions.

Round 2 (USS Washington) (December 30, 1997 ?)

During round 2 the seas were more calm. The Baden had one Fluegel haymaker stern angle gun and a stern gun for round 2 but Fluegel was not optimistic about pouching holes in the USS Washington's fiberglass hull skin. During this battle the Baden fired some at Washington and even hit her once. It was later discovered that the fiberglass was discolored on the inside of the hull where the resin had shattered in a circle about 1/2 inch in diameter. The outer skin surface had only a small dent and there was no hole. The Washington was a bit less lenient and hit Baden for an additional 3 holes. The score again Washington 3 and Baden 0.

For changes in the dock yards Stan put new 11 tooth motor gears in the Washington but it did not seem to slow her down. He also installed a fixed pump outlet and with Fluegel's expert help fabricated a pump float system.

Round 3 (USS Washington?) (January 3, 1998)

Round three saw Fluegel trying to get 3 of Baden's guns working at once. The lake rippled only with small wavelets on January 3, 1998. The Washington's guns had been tweaked and a float had been added to automatically turn on the pump. Also three "rib sections" of fiberglass hull had been cut out of the Washington's hull amidships



(about 7 1/2 inches) on one side and some 30 holes (1/8") had been drilled in the hull as window corneres. Many of these holes were more than 1 inch below the waterline and should provide the Washington's pump with plenty of water during the battle. At last the Baden had a penetrable area to shoot at. At lakeside the Baden had problems with one of her guns jamming and Fluegel worked on it (including pouring the BBs out of the magazine into his hull to check for a out-of-round BB). While Fluegel worked with his guns on shore, Stan cruised the Washington around practice firing his guns and checking out his pump float. The pump would pump for 1 second and then go off for 30 seconds and then come on again for 1 second. Finally the pump could be heard to be running and no water was coming out. As the Washington got deeper Stan considered taking her out of the water. The pump must be cavitating. Finally the pump squirted water and the danger of sinking was delayed but not totally over. But the Baden was finally on the water and ready to fight. The Washington largely stayed out of the range of the Baden's guns but was able to hit the Baden with an occasional salvo from the triples. The beloved triples had already been fired alot before the Baden came out and ran out of BBs fairly (too) soon. Now it was side

mounts only. This is a dangerous time for a large battleship to be playing with a pig boat. Fluegel was maneuvering for a shot at the balsa section of the Washington's hull. Stan kept the soft starboard side of the Washington's hull away from the Baden using the port sidemount. Then the port sidemount was empty. Now there was only the starboard sidemount. To use it Stan would have to give the Baden a shot at the soft side. Finally even that gun was empty. Stan had hit the Baden several times and the Baden had only hit the Washington once so far. Stan considered taking the again victorious Washington out of the water since it was out of BBs, but decided to continue to practice maneuvers with the Baden. Bad mistake? Would the Washington's cavitation prone pump spell her doom? The Baden was frantically trying to bring the guns to bare on the now defenseless Washington. It was really fun maneuvering this way. Fluegel was also enjoying trying to hit the small target area of penetrable hull of an unarmed ship. Then a faint unusual noise (sort of like a small bell ringing) was heard from the Baden, but only briefly. What was it? We did not know but Fluegel was intent on shooting the Washington as long as Stan would leave her in the water unarmed. Soon the Baden's stern was noticed to be lower in

the water and no pump stream was seen. Now forgetting the temptation to shoot the Washington, Fluegel turned her toward shore and drove her at flank speed. Several feet before she got to shore the stern sank heavily and the bow rose high in the air. Fluegel quickly ran out into the cold water to recover her. The USS Washington victoriously returned to shore having scored her first sink of an enemy ship. Stan had earlier nicknamed her the "Baden Buster". So far she had lived up to her name. The Washington had hit Baden for 12 holes (4 starboard and 7 port above and 1 on the waterline on the port side). Incredibly the Baden had actually managed to hit the small target area (7 1/2 inches long) of the Washington's balsa skin for 1 hit above the waterline. Back in the shop Fluegel examined his screenless pump and found that it had sucked up BBs when it was pumping. The BBs had filled the outlet tube and eventually shattered the impellor. The pump failure had spelled the end for the Baden. The pump was not readily repairable so the Winter 1997-98 Dallas Mini-Micro-Nats were over. The Washington had clearly won the Lake back for the Allies. Fluegel later wrote in an E-mail to his brother-in-law Jeff Poindexter, "The year of Fluegel is over and the year of Stan has begun".

To subscribe to Hull Busters send \$9 to Hull Busters. If you are not a USA address the prise is \$15. I, Fluegel have a new e-mail address, fluegel7@juno.com that is my home address. I prefer my work e-mail system for handling articles, it is Fluegel@usa.net Next dead line March 25th. Big thanks to Lars, Steve, Marty, Dough, Stan, Currly, George L. Tom and me for this issue! Hope to hear form Frank and others next

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