Tactical Notes

July 2025

So many kits... So little time...

To Contact MMCL:

President:
Rich Guetig
Email: wolfandgang@twc.com
Phone: 502-931-0302

Vice President:
Alex Restrepo
Email: alexrest@aol.com

Treasurer:
Randy Fuller
Email: srandfuller@gmail.com

Secretary/ Tactical Notes Editor:
Jason Sizemore
Email: sizemj@gmail.com
Phone: 502-377-4330

Show Chairman:
Joe Betz
Email: jbetz2970@gmail.com

Member At Large:
Julia Evelsizer
Email:
juliaevelsizer@yahoo.com

Member At Large:
Randy Fuller
Email: srandfuller@gmail.com

Hey MMCL Members,

I want to tell everyone I am in the process of redoing the MMCL.org website. I have moved it a new hosting company and am updating the theme a little bit. I hope you like it. If there are some suggestions you have for the club website please shoot me an email: sizemj@gmail.com.

Also I want to thank everyone for the content you have sent for the Tactical Notes, please keep it coming.

Model On!

Jason

President's Page

Dear MMCL Members,

Our extremely hot and humid summer is upon us. I hope everyone is staying cool and building models. Don't forget, the "Truckmania" Smackdown will be next month at our August meeting (If you haven't started your truck, you still have plenty of time). We will also be finalizing everything for our invitational. With that stated, please go through your stash and bring in some raffle donations.

Our "All Day Build Session" on June 21, 2025 was another big hit! It was well attended throughout the day. Next, we will discuss a "Friday Night Fights" date for the fall.

The Huntington, WV model show was held on June 28, 2025 by the Tri-State Modelers Club. It was the clubs first show and I have to say, I was impressed. There were a few issues but that is expected with any show. It was refreshing to attend and enter a contest. I haven't entered in an invitational in about two years but did enter the 2024 Nationals. Going to a show (and entering) is all day event. You get to see awesome models by other modelers and shop the vendors. I go through the vendors several times so that I make sure that I don't miss out on any deals. Seeing the creativity and compositions of dioramas, figures, and vignettes, always inspires me. The other plus of attending modeling contests is that you get to converse and spend time with your friends from other states. Even though it ends up being a long day, going to a contest motivates me to build and brainstorm possible projects.I encourage everyone to plan on attending a model show. The fall campaign will have plenty of shows. Be sure to check the IPMS Events page for upcoming contests.

Reminders;

- Donate a kit or two for our monthly raffle at the July meeting.
- Bring your recent show winners and completed model(s) for Show-N-Tell.
- Keep working on your Truck for the August Smackdown. Any kit, any scale, anything goes!

As always, relieve your stress level and build a model!

See you at the meeting

Rich

Building an Engine Room: Part 2

Creating a 1:48 scale model of Engine Room #3 of
the Battleship New Jersey BB62

By: Myles Marcovitch

Part 1 I discussed the preliminary planning of the project, drawing and printing some of the critical main propulsion components. In this Part 2, I'll delve deeper into the design challenges and printing about 95% of all the parts.

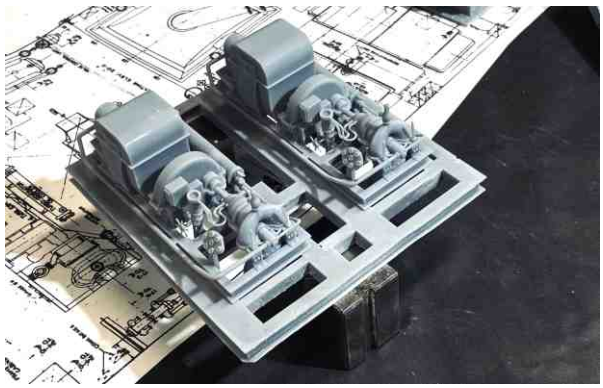
It's becoming quite clear that what I have is a massive amount of parts with some very critical assembly relationships all without any instruction book. It's the ying and yang of building entirely scratch-built. It's exciting and frightening at the same time. The level of intensity and creativity needed is engrossing and tends to dampen the joy of kit building. I have an F35B,1:32 Trumpeter kit started, and frankly, with the involvement in the engine room project, it's just not exciting me.

Auxiliary Equipment

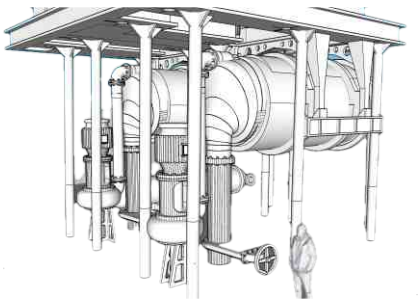
After the main propulsion system, the next most prominent units are the twin, 1,250 KVA Steam Turbogenerators (TGs). Each engine room has two of these providing all of the normal ship electrical needs. There are also two ALCo 2,500 KVA diesel generators located in the two emergency power rooms located at the fore and aft most portions in the armored citadel. But the normal running is from these steam powered units.

The TGs are small versions of all the parts found in the main propulsion system minus the huge gearbox. There are 600psi steam lines running to their individual throttles, a single stage high pressure turbine that exhausts to a large condenser located directly below, there's the a gear reduction assembly that's integral to unit leading into an AC generator. The condensers have condensation pumps with condensate and coolant lines running in and out, plus there's some exposed lubricating lines.

When designing main propulsion, my primary drawing challenges were the printable turbine blades and the massive helical gears in the main reduction gear. For the TGs, since they're not cutaway, the turbine blades weren't a concern, but the low pressure exhaust collector on the aft end of the unit was a particularly hard shape to draw and it took me several attempts to get it close. It's still not perfect, but it will do. It's a shape with constantly changing cross-sections that lead to a cylindrical large diameter outlet pipe directly into the condenser. The condensers are miniature versions of the big one, made of the same bronze alloy.



The individual TGs are support on steel frames which are, in turn, both sitting on a much larger, single structure supporting them plus the large condensers under each TG. I had good drawings of the turbines and the individual frames, but lacked clear drawings for the larger sub-frame and, more importantly, very little information about how the condensers were supported. In addition to lacking drawings, the photos were difficult to interpret. There were no good sight lines to photograph the condenser mounting. I had to fudge the design and Ryan agreed that it would work and no one could validate them on site.



The entire TG systems are support by 7” diameter steel columns that are welded to the hold floor. I’m using hollow brass tubing for some to permit LED light wiring to pass to below the base. All equipment in the engine room is ultimately supported on the hold floor. All of the walkways and catwalks are supported by much lighter angle iron weldments and I-beam frames of smaller cross-sections.

The condensers themselves were disruptively complicated due to their connection to the turbine discharge above. I printed one set with some failures due to some hidden layers in the drawings. I redrew and printed again successfully.

The flooring is of four types: The hold floor, where everything is fastened, is solid steel plate simulated with 0.030” styrene sheet. The next flooring, which is on angle iron framing and is the base working level, is 3D printed diamond plate sheeting. The third working layer is 3D printed steel grating, and the surfaces of the mezzanine decks holding all the electrical switch gear are linoleum over something, probably steel. The linoleum helps to insulate workers from grounding. I’ve developed some really nice diamond plate printed in 2’ X 4’ scale pieces. The grating was the biggest surprise. I drew it almost to scale just for fun, without expectations that the printer would replicate it. It did! The grating is marvelous and Ryan was very impressed. I printed a raft of various sized angle iron frames to support all of the elevated catwalks. If I need more flooring I will just print more of it.

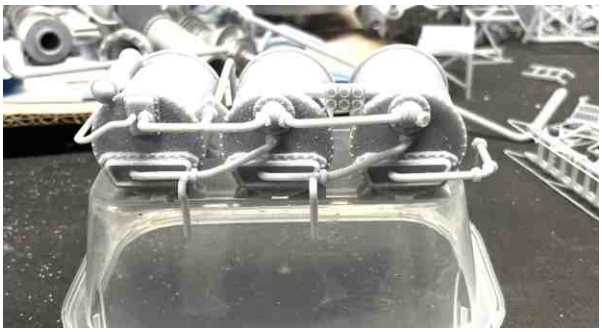
In addition to the turbogenerators, there are other pieces of auxiliary equipment that needed modeling. Included in these are:

Triple stage evaporator that converts seawater to drinking and boiler feed water
Main air ejector that draws vacuum on the main condenser and two auxiliary air ejectors that perform the same function for the turbo-generator’s condensers.
Steam & electrically driven lube oil pumps
Lube oil cooler
Lube oil purifier
Electrical control panel
Two levels of electrical distribution cabinets
Main Gauge Board

Each of the above had its share of challenges both in design and printing, the biggest of which was the lack of dimensioned and piping drawings. While I had

good details about the major equipment, all I had of the auxiliary equipment was the overall outlines and photos, some of which were dubious in their value.

A great example of just how difficult it is to interpret photos to draw equipment is this image of the evaporator front. Making sense of the piping, for me, is next to impossible.



I greatly simplified the piping to print the part. Additionally, all the ancillary piping would only confuse the viewer. It wouldn’t add to understanding. Seawater enters the left vessel and is boiled and distilled by boiler 800ºF steam. The distillate passes to vessel 2, is boiled again and some of this distillate is used a potable water for shipboard use. The remainder is passed to vessel 3, reboiled and distilled a third time and this highly purified distillate is used as boiler feed water.

Another example of ambiguous equipment are the two lubricating oil pumps. One pump, and the easier to model, is electric driven that was upgraded during the 1980s refit. The other is driven by a small steam turbine that dates back to WW2. The steam-driven pump had a mass of piping surrounding it that was difficult to decipher and obscured the machinery itself. I had a lot of photos, but none told the whole story. It was left up to my imagination to create the model.

I had a nice surprise creating the electrical and main gauge panels. Both of these had ample 3D details that would have been hard to print with earlier generation machines. With my new Elegoo Saturn 4 Ultra, printing was spectacular. I had excellent photos of the electrical controls, but didn't have any images of Engine Room 3's main gauge panel. I requested that Ryan take pictures of it for me and he complied. I was able to draw a good representation of this panel. I had good images of ER 2's panel, but it was not representative of the main panel. Engine Room 3 is the master engine room. On its panel are displayed operating parameters of its own equipment plus vitals from the other three rooms. It's the operating position of the Chief Engineer.

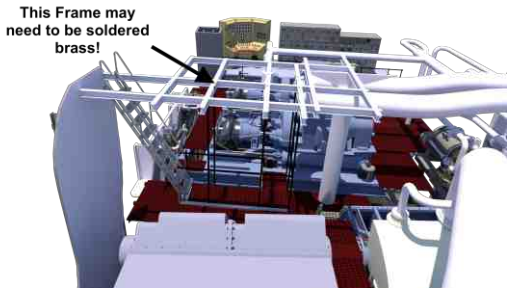
When printed every detail rendered. I had to reprint both due to structural drawing errors created by the artist (me). In the electrical panel there was some internal surfaces that confused the printer/slicer. In the main gauge panel, all of the little gauges failed as a result of them not actually being in contact with the back of the panel. When this happens, the printer attempts to print them, but they end up stuck to the teflon film at the vat bottom requiring a complete clean out.

I had good imagery of the main air ejection unit, and again, the real one has many more steam pipes surrounding it than needed for the model. The ejectors generate high vacuum using steam venturi ejectors. The vacuum keeps the main condenser at vacuum to help scavenge the last drop of steam energy from the low pressure turbine.

As good as the photos of the main air ejector was, the data on the auxiliary air ejectors was terrible. What I came up with was not as it is in 1:1 world, but conveys the correct impression. I simply reduced the size of the main ejector. Like other auxiliary steam appliances, the piping is confusing, and often completely wrapped with so much insulation that you can really see what's going on.

The lube oil purifier is a small centrifuge that separated any particulates from lube oil. Not having a flow schematic of the labyrinth of lube oil piping, I don't know where it's situated in the flow. For example: is it before the cooler or after, does it feed into the lube oil reservoir, and where does the lube oil settling tank fit into the scheme. Most of this piping lies under the crew floor panels and I'm not worrying about it. I'm not sure if I'm including the two storage tanks either since in the case of the settling tank, not having any side walls means there's nothing to support it. And regarding the storage tank, while it can be supported on the aft bulkhead, it will block viewing other parts of the model.

The last work done during this project phase was designing and printing the massive quantity of floor support systems for all the crew platforms and catwalks. The large equipment frames have sufficient structural integrity to work, but I'm finding that the more frail, personnel flooring supports may be too flexible to work well. This is especially true for the frame supporting the entry stair. The stair and it's catwalk are suspended from the ceiling structure, not by the main reduction gear that lies below. I'm contemplating reinforcing the 3D printed frame with some brass bar stock epoxied to it. The suspension wires will be phos bronze and I'd like to solder to the supports. Fitting all the pieces into the model is going to be the most challenging as aspect of the entire build. I'm also planning on adding the entry hatch over the entry stair.



While everything was disassembled I took the time to engineer and install LED lighting to illuminate all the areas that will be in deep shadow. I'm using my tried and true, Soldering-LED Surface Mount-Chips-to-Adhesive-Copper-Foil method that I demonstrated a few years ago at one of our MMCL meetings. I did a test to see if I could solder foil directly adhered to the the cured resin. I could! The resin is a not a thermoplastic and does not melt. It also did not burn at soldering temperatures. This means that the actual LED lighting installation will blend beautifully into the model. I'm selectively using hollow brass columns for some framing supports so what wiring to provide an unobtrusive path to below the model for tie in to the driver circuits. The main steam pipe passes over the turbines so I'm also installing 3 LED chips there to better illuminate these essential units. After painting, the foil will be very hard to detect.

I obtained cool white LED chips from Amazon at a ridiculous price of $6.00 for 200. That's 3 cents apiece. The cool white will simulate the florescent lighting present in the engine room.

In conclusion, Part 2 has covered design and printing the secondary equipment that complicates the engine room. Coming up in Part 3 is painting all these parts and the assembly process to get it all together. Part 4 will cover all the finishing steps, punch list items and building the plexiglass enclosure and delivery to the boat.

Our new Challenge Coins in the wild: seen at the TRI-STATE SCALE MODEL EXPO on June 28, 2025

Pictures from our last “All Day Build Session” on June 21st

Military Modeling Club
Of Louisville
MMCL

June **2025** PNC Bank

Starting Cash Balance: **$9,066.10**

Cash Receipts	Date		Check Receipts	Date	
Workshop		$217.00			
Raffle		$220.00	Item		$0.00
			Item		$0.00
			Item		$0.00
			Item		$0.00
			Item		$0.00
			Item		$0.00
Item			Item		$0.00
Item			Item		$0.00
Item			Item		$0.00
Item			Item		$0.00
Total Cash Receipts		$437.00	Total Reimbursements		$0.00
TOTAL RECEIPTS					

1-Aug

Cash Or Debit Expenses:	Date		Cash Or Debit Expenses:	Date	
Kyana June	6/10/2025	225.00			
PNC Monthly Charge		6.95	Item		
Office Depot (Raffle Tickets)		80.52	Item		0.00
Kroger (Water and Softdrinks)		105.18	Item		0.00
IPMS (Award Sponsorship)		85.00	Item		0.00
			Item		0.00
			Item		0.00
			Item		0.00
			Item		0.00
			Item		0.00
Total Cash Expenses:		($502.65)		($502.65)	

Reimbursable Expenses:	Date		Reimbursable Expenses:	Date	
Item		0.00	Item		0.00
Total Reimbursements:			0.00		
TOTAL EXPENSES			**($502.65)**		

NET Monthly Increase(Decrease):

ENDING CASH BALANCE: **June** **2025** **$9,000.45**
($65.65)

Notes:

As of 7/14/2025 Balance = $9,183.50

2025 MMCL LOUISVILLE INVITATIONAL MODEL CONTEST AND SWAP MEET

SATURDAY SEPTEMBER 27TH 9:00 AM TO 3:30 PM

PAROQUET SPRINGS CONVENTION CENTER

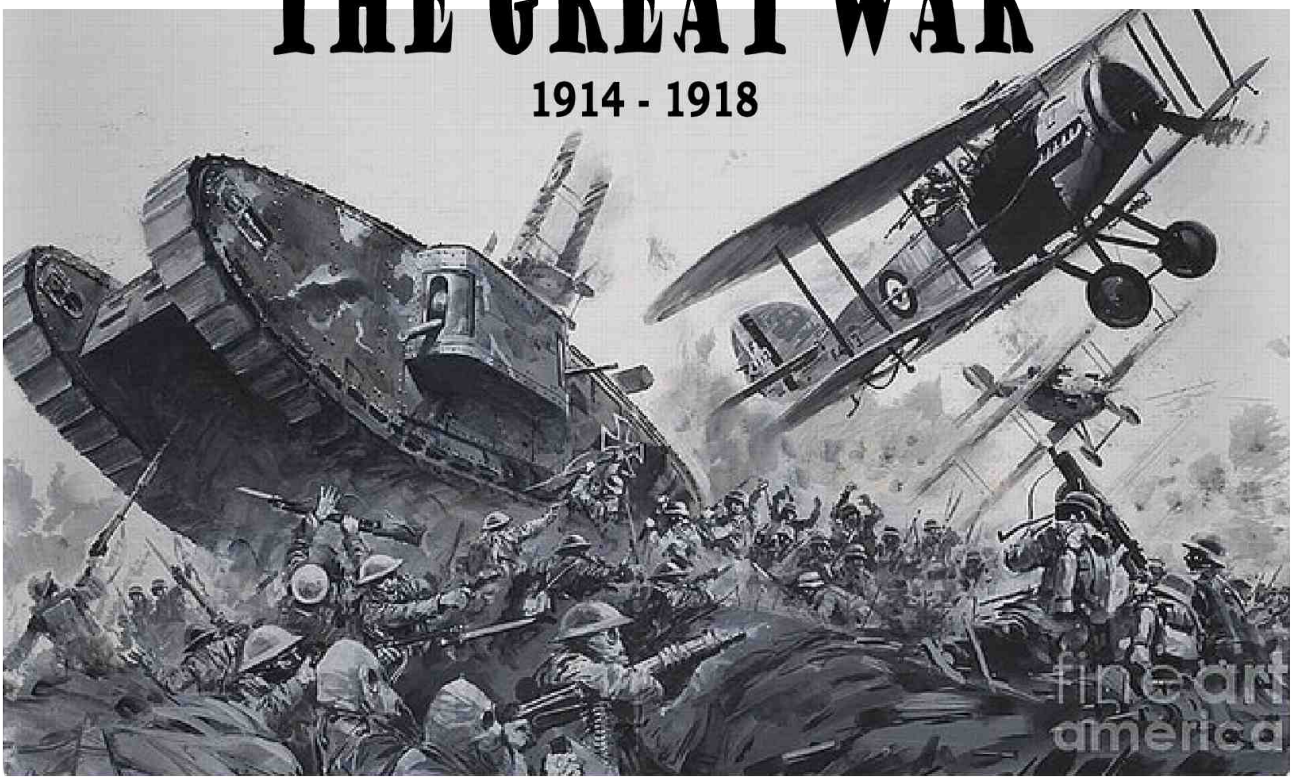
395 PAROQUET SPRINGS DRIVE

SHEPHERDSVILLE, KY 40156

SHOW THEME

THE GREAT WAR

1914 - 1918



SHOW CONTACT:
JOE BETZ
jbetz2970@gmail.com

VENDOR CONTACT:
DAVE CROUCH
dcrou@bellsouth.net

GENERAL ADMISSION : $5.00
CONTEST ENTRY FEE : $10.00
($ 8.00 FOR IPMS MEMBERS)
INCLUDES FIRST 2 MODELS
$1.00 PER ADDITIONAL MODELS
JUNIORS (UNDER 18) $5.00 UNLIMITED ENTRIES

LARGEST RAFFLE IN REGION 4

SEE MMCL.ORG FOR ENTRY FORMS AND CATEGORIES

ON SITE CONCESSIONS **RESTAURANTS & HOTELS NEARBY**