

# **31' RIVER PATROL BOAT (PBR)**

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## **Patrol Boat River Lethality in Vietnam**

– January 10, 2017

Posted in: “Naval Operations” of the USN Sextant, an online publication of the Naval History and Heritage Command.

<http://usnhistory.navylive.dodlive.mil/2017/01/10/patrol-boat-river-lethality-in-vietnam/>

By John Sherwood, *Historian*, Naval History & Heritage Command

During the Vietnam War, the Navy deployed a variety of small boats to South Vietnam ranging from Boston Whalers to modified World War II era landing craft. Perhaps the most iconic of them all was the Patrol Boat River or PBR as it was affectionately referred to by its crews. Adapted from a commercially manufactured 31-foot fiberglass pleasure craft, the Mark I PBR could achieve speeds of over 27 knots and featured a water jet propulsion system that allowed it to operate in the shallowest of waters, turn on a dime, and skid over sand bars. Its armament consisted of a twin .50-caliber machine guns in an armored turret forward and a .30-caliber gun (later replaced by a .50-caliber) aft. Generally, four Sailors crewed the PBR.

### **PBRs Mission**

The Navy deployed 140 PBRs to Vietnam as part of Task Force 116, Operation Game Warden. TF-116's area of operations included the 3,000 nautical miles of navigable waterways in the Mekong Delta. Over the course of the war, two-boat PBR patrols checked the cargo and identity papers of junks and sampans plying the waterways, set up night ambushes at suspected enemy crossing points, supported SEALs with gunfire and transportation, and enforced curfew restrictions in their sector. In a typical month in late 1966, TF-116 units engaged in over 70 firefights. During the Tet Offensive in 1968, TF-116 helped stave off enemy attacks at all major towns in the Mekong Delta, earning the Presidential Unit Citation for its actions.

### **PBRs Lethality**

Examples of this little boat's lethality are numerous. On October 31, 1966, BM1 James E. Williams, leading a patrol of two PBRs, surprised a large Viet Cong river crossing in the Mekong Delta near the town of My Tho. In the resulting fire fight, which included support from Navy light attack helicopters and other aviation assets, PBRs 105 and 107 systematically sank seven junks and 25 sampans. BM1 Williams later received a Medal of Honor for his heroism during this engagement, and his name currently graces the hull of the Navy's Arleigh Burke class guided missile destroyers, DDG-95.

On December 11, 1966, as Patrol Officer on a PBR combat patrol on the Mekong River, Signalman First Class Chester B. Smith pursued a sampan into a narrow canal where the sampan's occupants, aided by other Viet Cong along the canal banks, opened fire. Petty Officer Smith promptly directed his crew in returning suppressive fire. Bringing in his cover boat from the main river, Petty Officer Smith reentered the canal where he came upon a company-size Viet Cong force preparing to board forty sampans. After a four-hour engagement, Petty Officer Smith's PBR's accounted for fifteen enemy confirmed killed, twenty-eight enemy sampans sunk, twelve damaged, three captured, and an enemy ammunition cache destroyed. Petty Officer Smith later received a Navy Cross for this action.

One Naval Ship Systems Command report noted the PBR “was not built to current U.S. Navy standards,” nor was it subjected to an “adequate test and evaluation period.” Not surprisingly, a few bugs arose once it deployed in combat, but most were resolved expeditiously in theater. Author Tom Cutler, a veteran of the riverine forces, phrased it more eloquently: “Born in an atmosphere of urgency and tested under actual combat conditions, the PBR could have been a disaster. Instead, it proved to be a fierce little combatant that accomplished its mission.” More than anything else, the PBR demonstrated that off-the-shelf technology could be adapted for military use when circumstances demanded it.



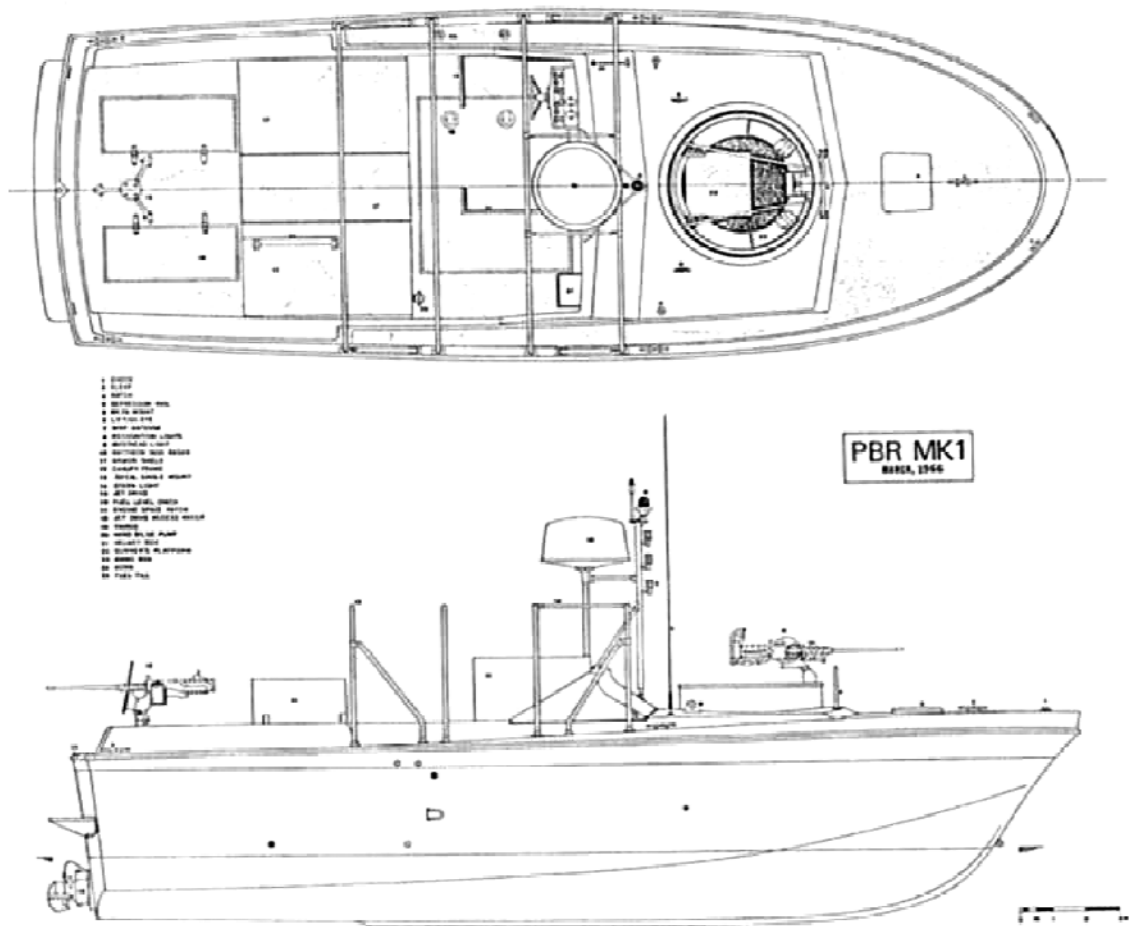
**A Patrol Boat River (PBR) near Cat Lo, 13 April 1966. Credit: U.S. Navy**



**PBR approaches a sampan for a closer look. Credit: U.S. Navy**

# 31' PBR Mark 1 Specifications

PURPOSE	TO PATROL AND SECURE THE MAJOR RIVERS AGAINST INFILTRATION BY ENEMY CRAFT
CREW	4 SAILORS
LENGTH OVERALL	31'-0"
BEAM	10'-7"
DRAFT	1'-10.5" LOADED
DISPLACEMENT	14,600 LBS
HOISTING WEIGHT	14,230 LBS
HOISTED BY	SLINGS
CONSTRUCTION	V-BOTTOM FIBERGLASS REINFORCED PLASTIC
FUEL CAPACITY	160 GALLONS
SPEED	27 KNOTS
POWER TRAIN	2 DETROIT DIESEL 6V53N , 216 HP @ 2,800 RPM
PROPULSION	2 WATER JET PUMPS





## Assembly Instructions

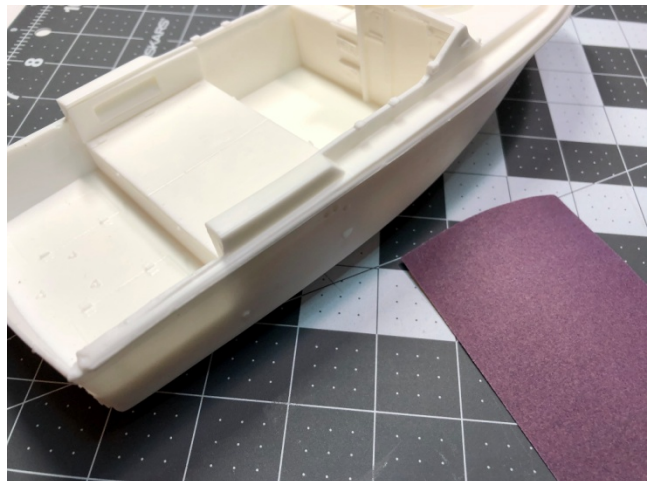
- After opening and unpacking the kit from the box, having a few part bins will come in handy to organize your build.



- You will need the following tools, glue, and putty for assembly. We highly recommend using a super glue gel such as lock tight or gorilla super glue with the brush applicator. This will allow you to reposition parts before the super glue dries completely.



1. Use fine sandpaper to clean-up any casting flash around the hull.

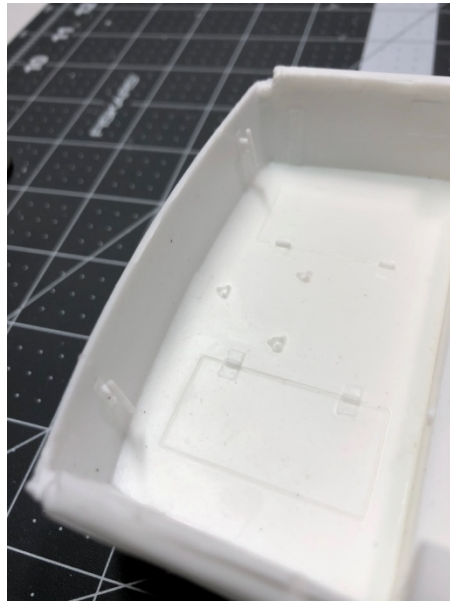




2. Locate the following parts.



3. Glue the rope cleates onto the stern of the boat.



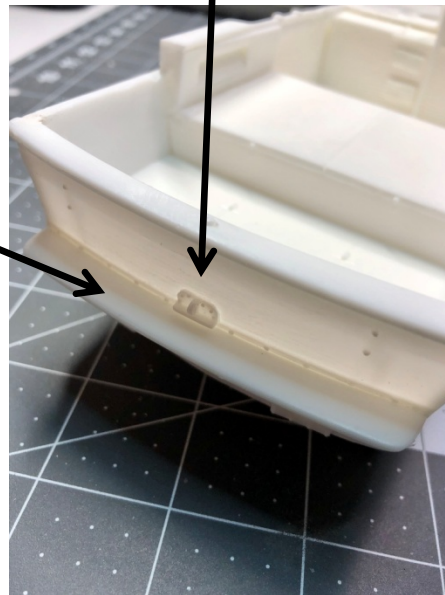
4. Glue the stern part as shown.



5. Locate the stern towing/salvage fitting.



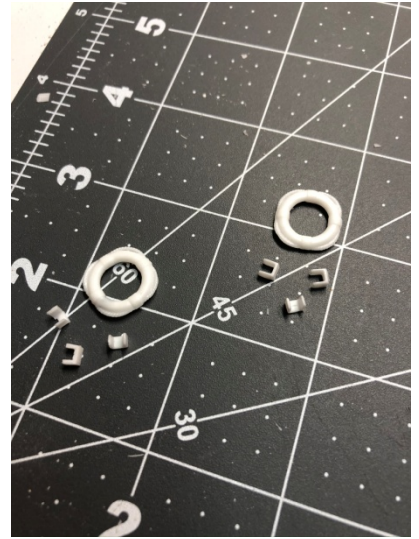
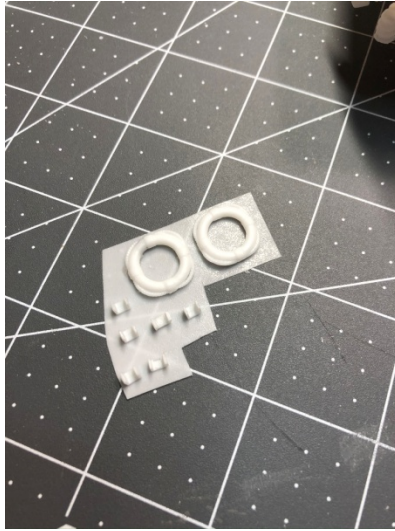
6. Glue the fitting in the following location. Also mount the transom step as shown here.



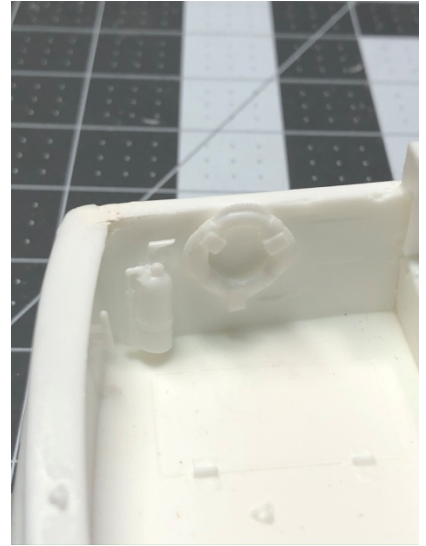
7. Glue the two water jet gates and four exhaust pipes as shown. The two smaller exhaust pipes are glued on the outer edge.



8. Locate the two life rings and six fittings.



9. Assemble the life rings and mount them on both sides of the stern gunners position along with two fire extinguishers.



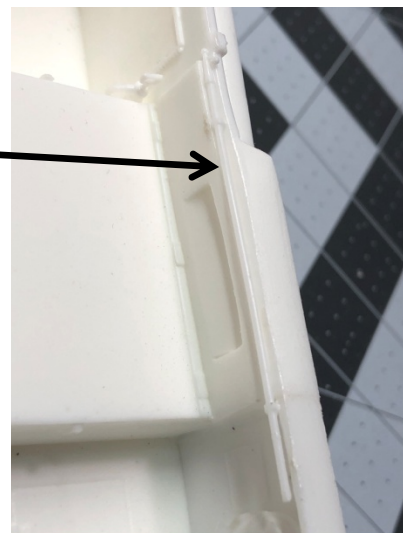
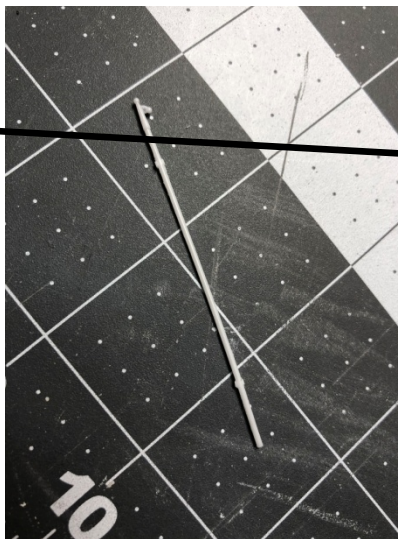
10. Locate the stern side fairings and glue them above the life rings and fire extinguishers.



\*Tip: Paint the life rings international orange and the fire extinguishers bright red.



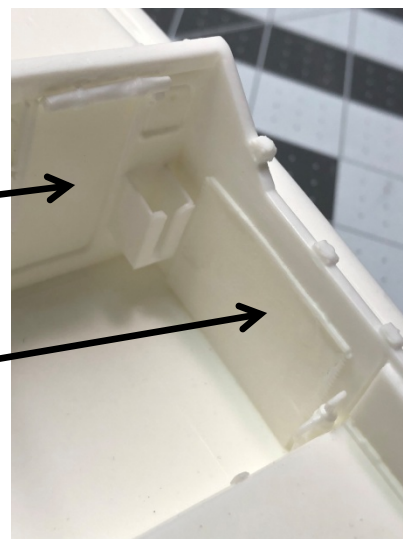
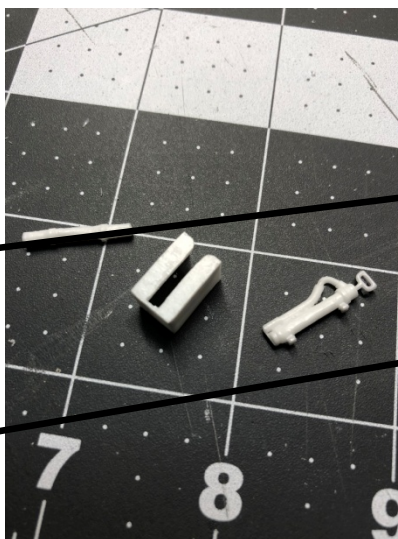
11. Locate the rope hook and glue it to the inside above the engine air intake.



12. Locate the hand bilge pump, helmet rack, and access way tarp. Glue them into position as shown.

\*Tip 1: When painting the boat the cabin access door slot should be black to simulate an open access-way with the tarp rolled up above.

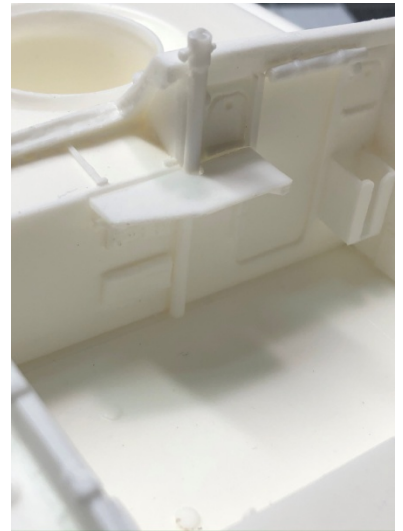
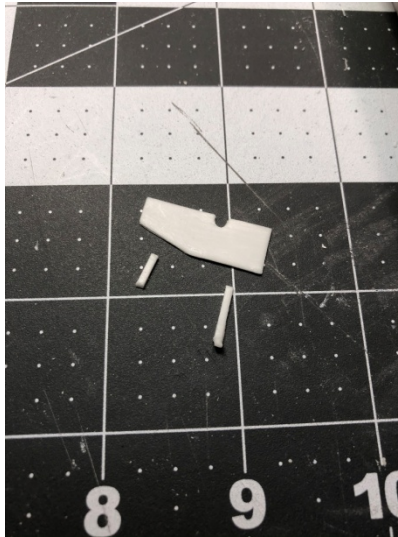
\*Tip 2: Paint the small arms and ammo storage cover olive green. The hand bilge pump is bronze.



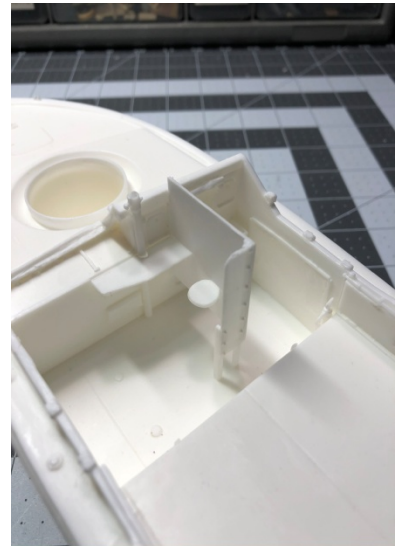
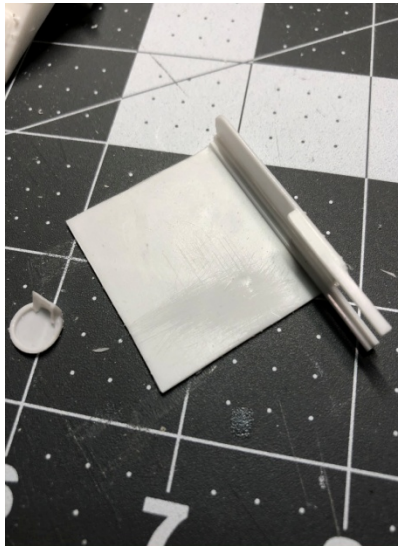
13. Locate the stern side fairings and glue them above the life rings and fire extinguishers.



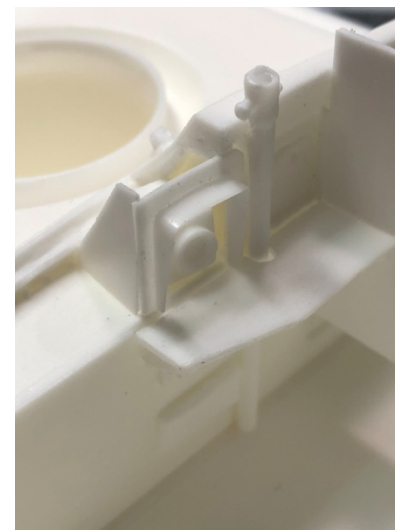
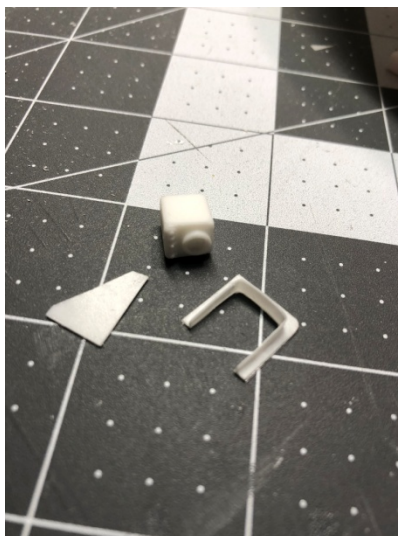
14. Assemble and mount the radioman's chart table.



15. Glue the radioman's seat to the inside armor plate and mount the plate as shown.



16. Locate the three radar indicator parts and assemble as shown.

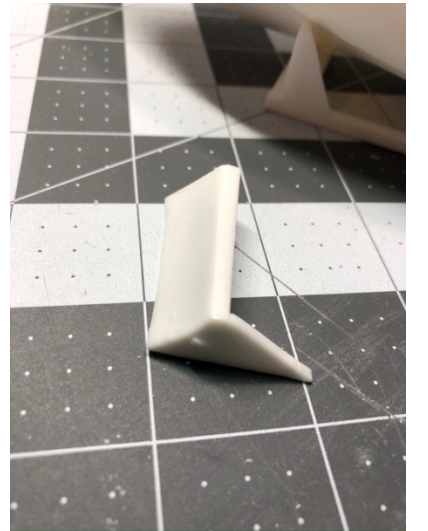
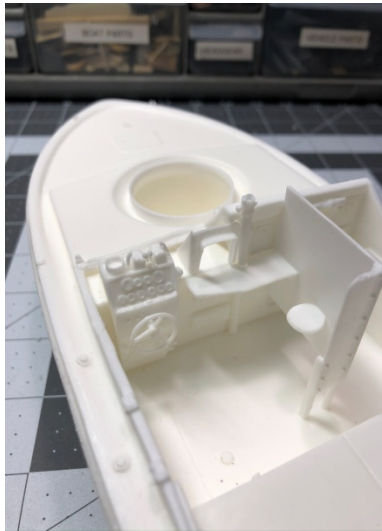




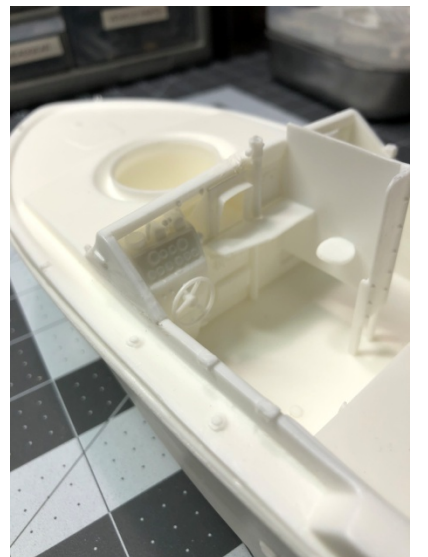
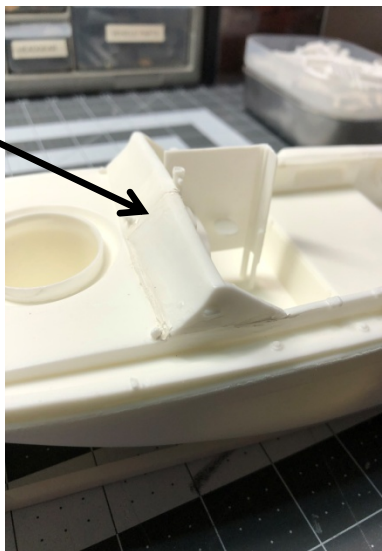
17. Gather these small parts for the steering console and assemble as shown.



18. Glue the steering console to the helm and locate the port side part of the helm.

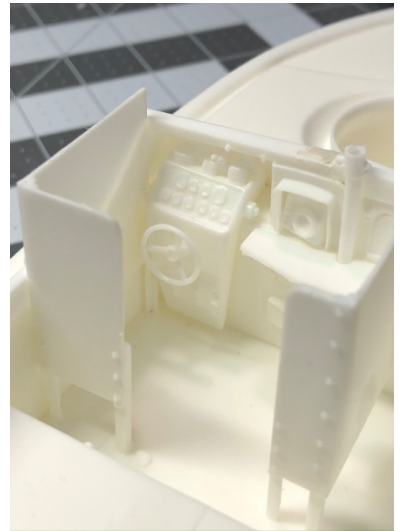


19. Glue and add putty to fill any gaps on the helm.





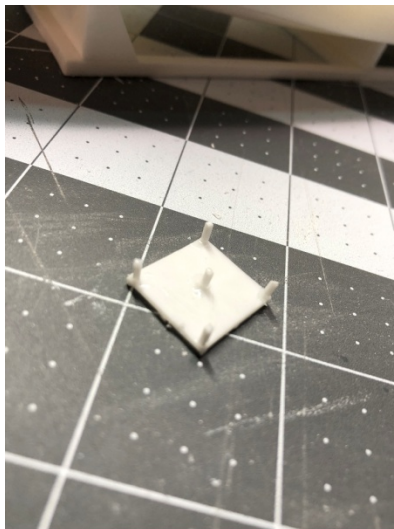
20. Glue the helmsmen's seat to the port armor plate and mount as shown.



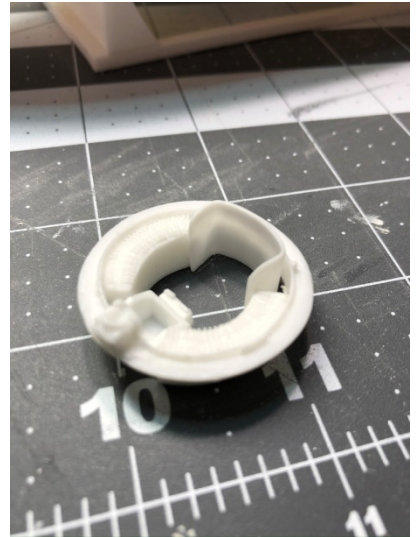
21. Glue the deck hatch as shown and gather these parts for the forward gunners platform.



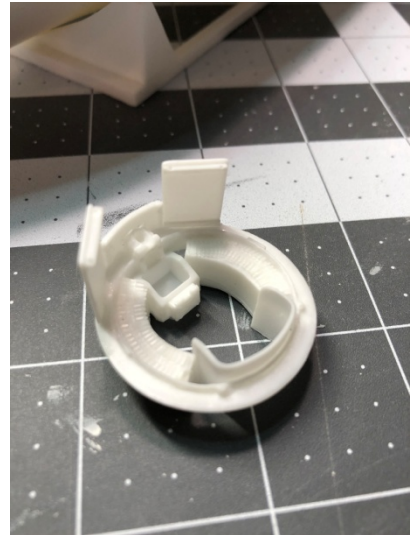
22. Glue the parts as shown and mount the platform inside the forward gunners station.



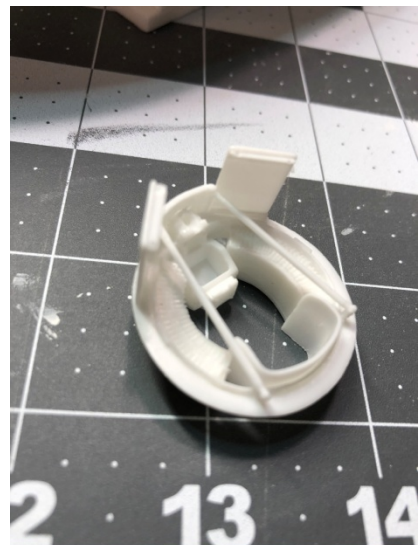
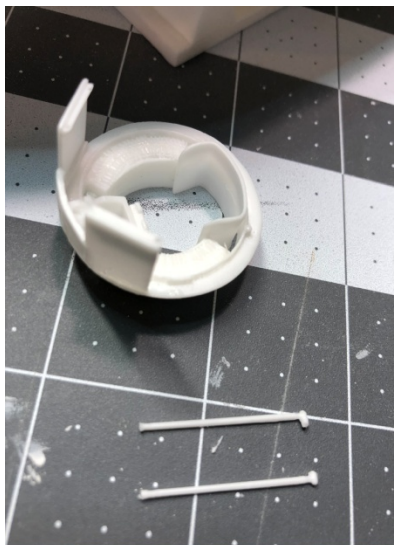
23. Install the gunners armor ring. No glue is necessary, just press into position. Locate the Mark 17 gun mount and armored back rest and glue the back rest as shown.



24. Locate the Mark 17 front armored shields and glue into position.

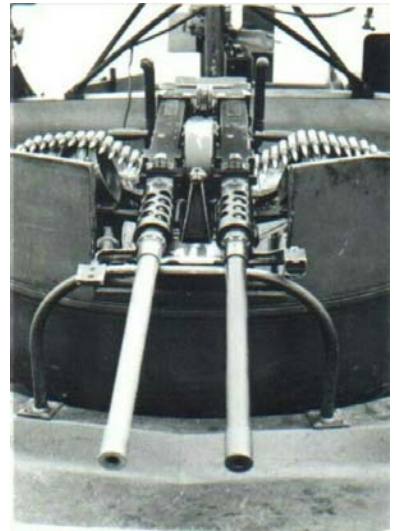
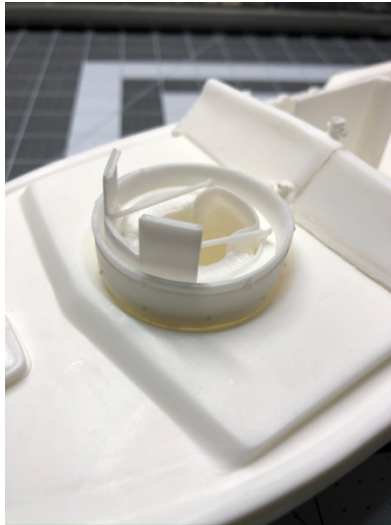


25. Locate the Mark 17 support arms and glue as shown.

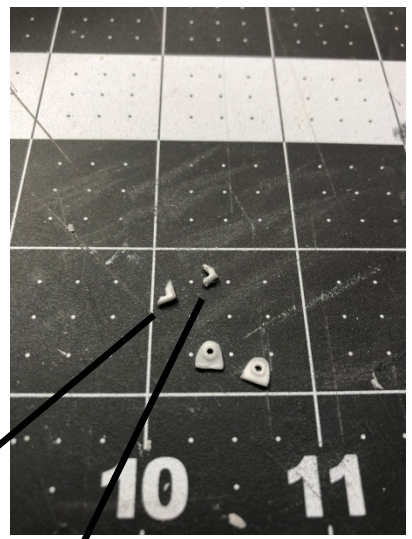




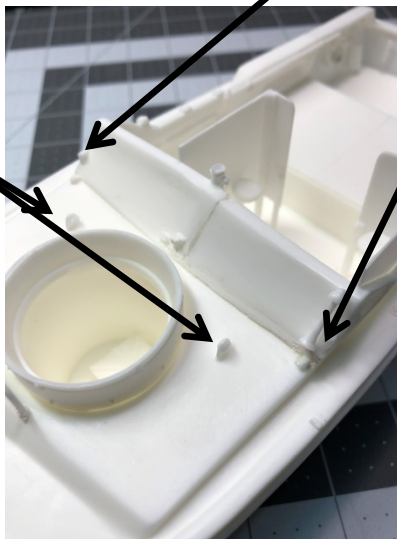
26. No glue is necessary for the Mark 17 gun mount and it can just sit inside the armor ring and spin in any position you want.



27. Glue the forward gun stop just in front of the armored ring and locate the following parts for the next step.



28. Glue the two lifting hooks, bimini top supports, and horn in the following locations.

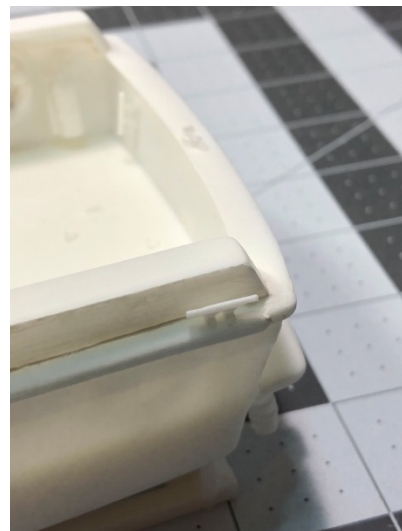




29. Locate the stern light protector and glue it into position.



30. Locate the deck cleats (total of five) and install them center, port and starboard on each side of the boat.



31. Assemble the Mark 26 gun mount and glue into position.

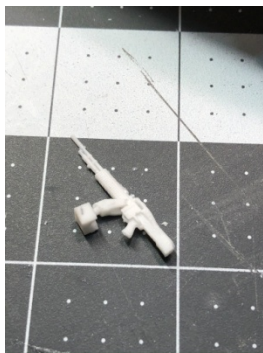
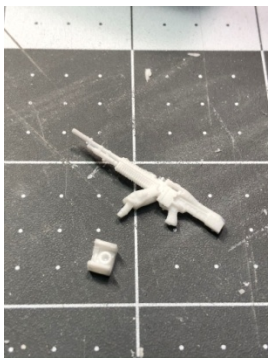


32. You have two primary main gun options for the stern mounted Mark 26. Option 1 is the Mark 4 Mod 0 Naval 60mm Mortar. Follow these steps for assembling the mortar.



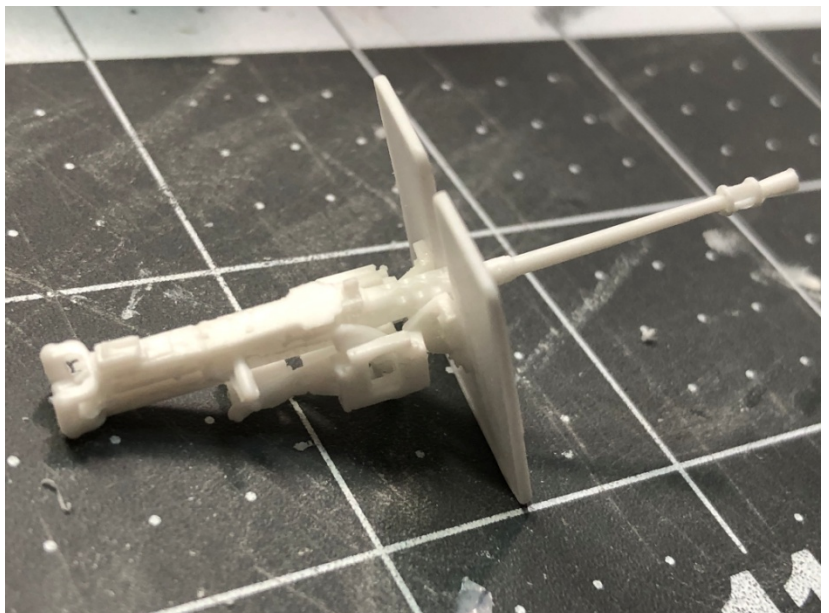
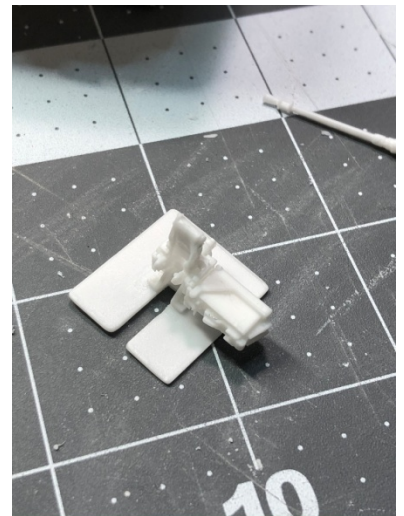
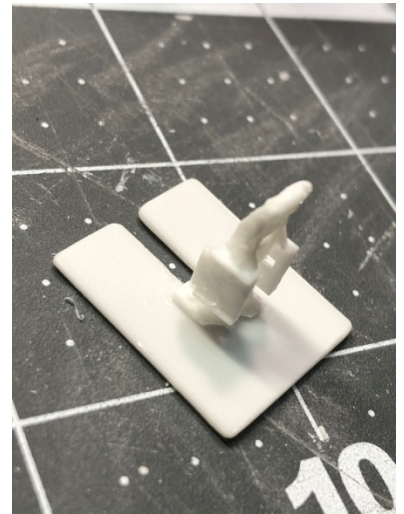
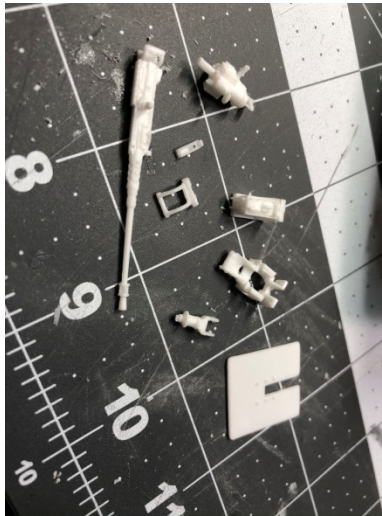


You have three options for mounting additional arms on top of the naval mortar in a piggy-back fashion. These gun options and mount are included in the kit.





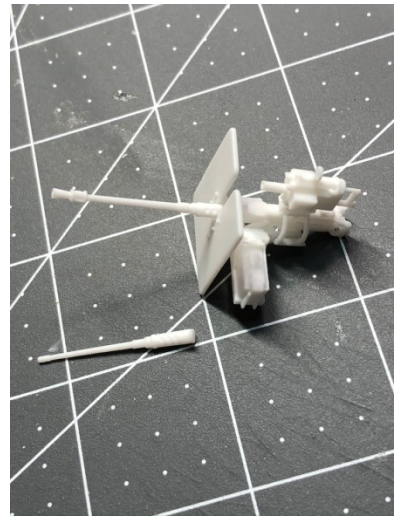
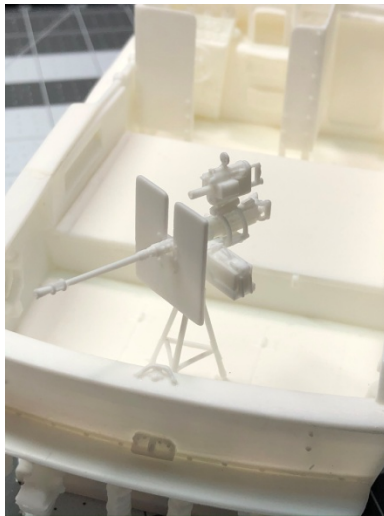
33. The second option for the Mark 26 mount is an M2HB .50 Cal Machine Gun (MG). Follow these steps for assembling the .50 Cal.



34. If so desired you can mount the Mark-18 Mod 0 Grenade Launcher in a piggy-back fashion above the M2HB .50 Cal MG by following these steps.



35. You can also change the barrels of the M2HB .50 Cal MGs to display without flash suppressors.

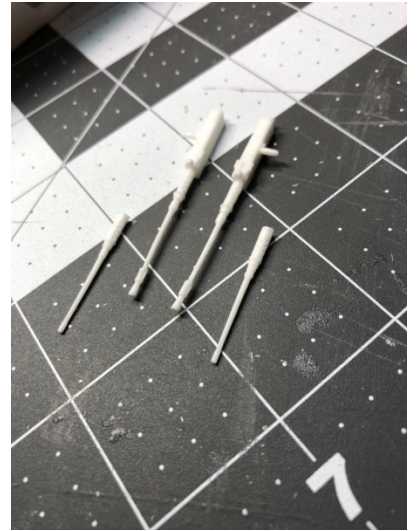
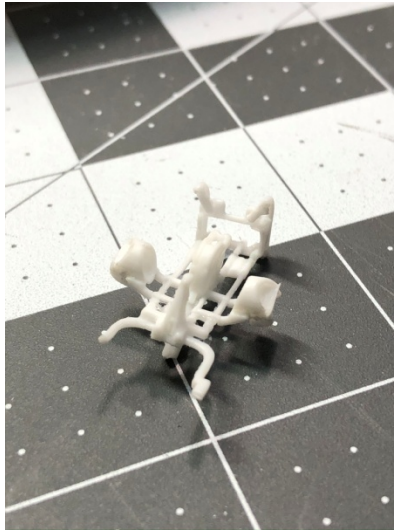


36. Gather the following parts for assembly of the Mark-17 forward gun tub.

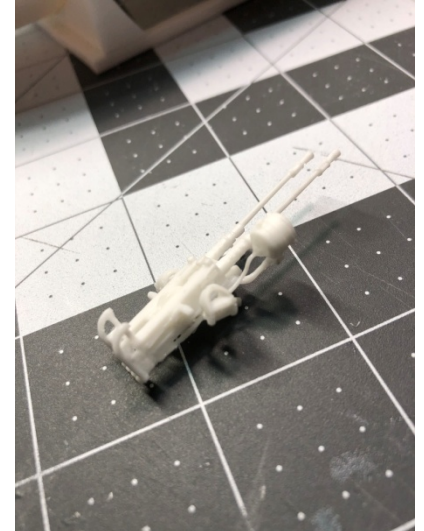
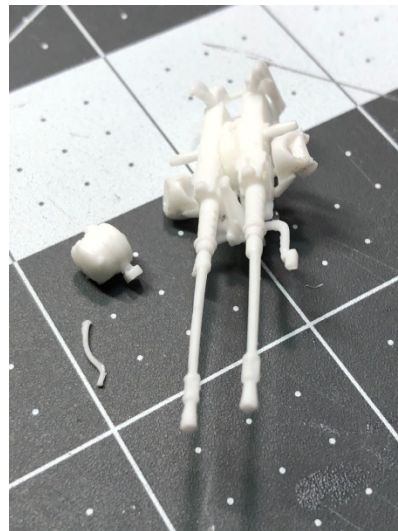




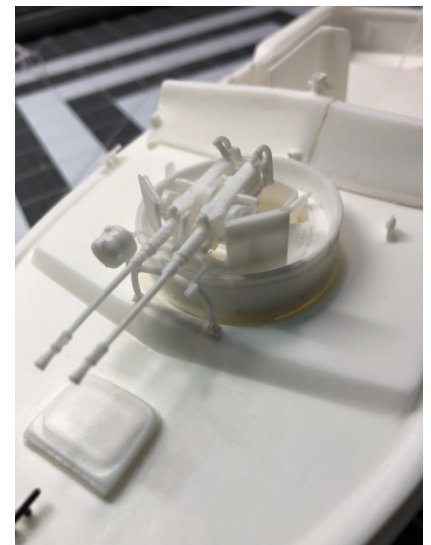
37. Assemble the Mark-17 gun cradle as shown. You can also replace the M2HB .50 Cal MG barrels with ones that don't have flash suppressors.



38. Glue the searchlight and power cable as shown here.

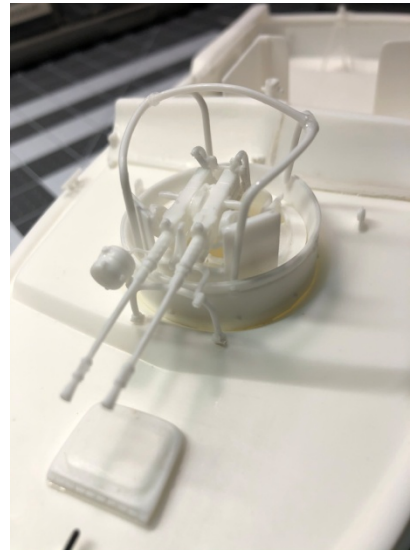
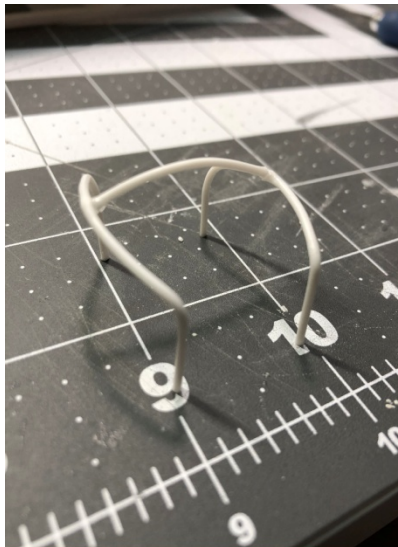


39. Glue the gun cradle onto the Mark-17 mount and place into the gun tub ring. Gluing the mount inside the gun tub is not necessary, so the guns can rotate freely.

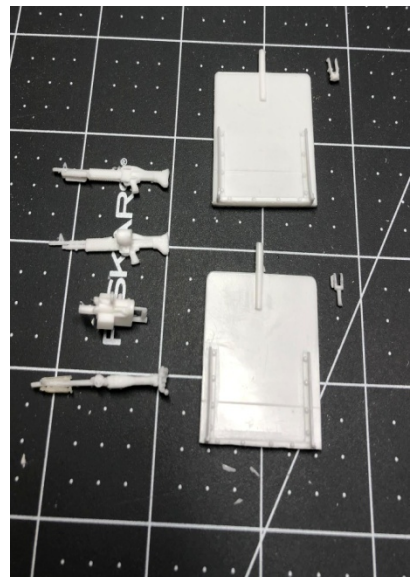




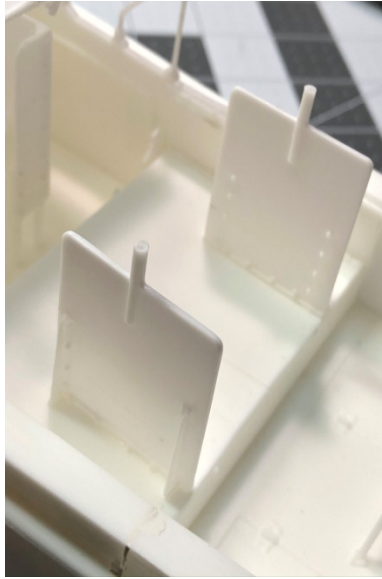
40. The sun shield and gunners frame are optional accessories for the forward gun tub. Assemble and position the parts following these steps.



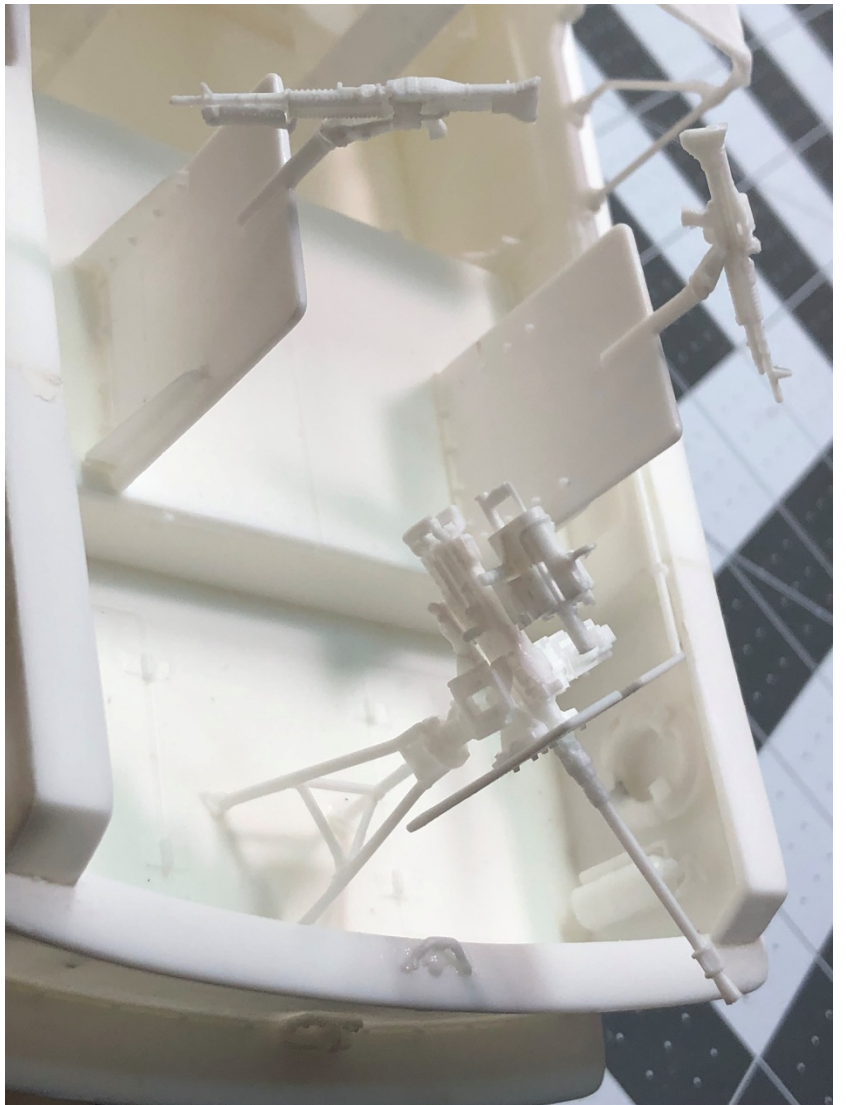
41. Gather these weapons for the amidship gunners position. You have several options for the types of weapons you want to mount on top of the armored shields.



42. Glue the armored shields in the following location with the supports facing outward. You can mount various M-60 MG models and the Mark-18 Mod 0 grenade launcher here.



43. If you decide to mount the Mark-18 grenade launcher on top of the aft M2HB .50 cal MG normally two M-60 MGs were place on top of the amidship shields.





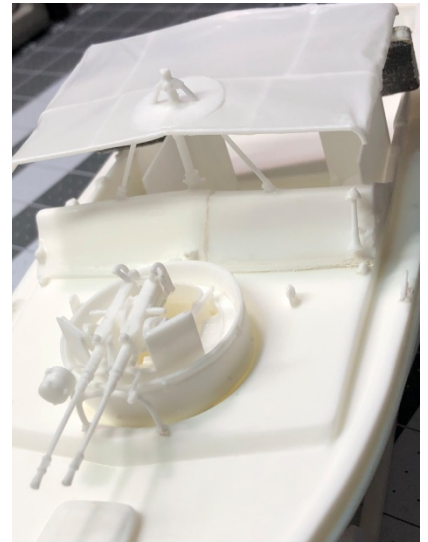
44. Probably the most challenging part of assembly will be the canvas bimini top. With plenty of patients and following the tips in these steps you will be successful. Gather the following parts for assembly of the bimini top, radar mast/dome, navigation/searchlight, and antennas.



45. Start by gluing the radar mast to the helm mount and glue the radar support on top of the canvas top as shown.

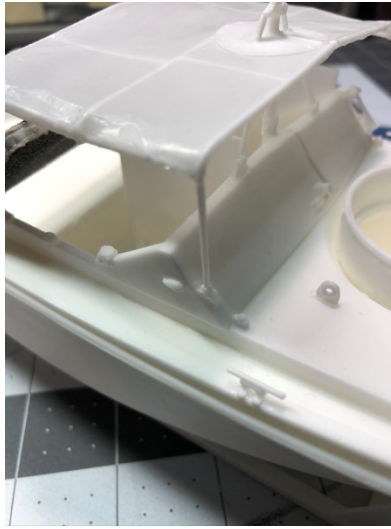


46. Superglue gel two support rods underneath the canvas top and superglue the top to the helm as shown. Place something on the back side of the canvas top to hold it into the correct position as the glue dries. I used a filing pad.

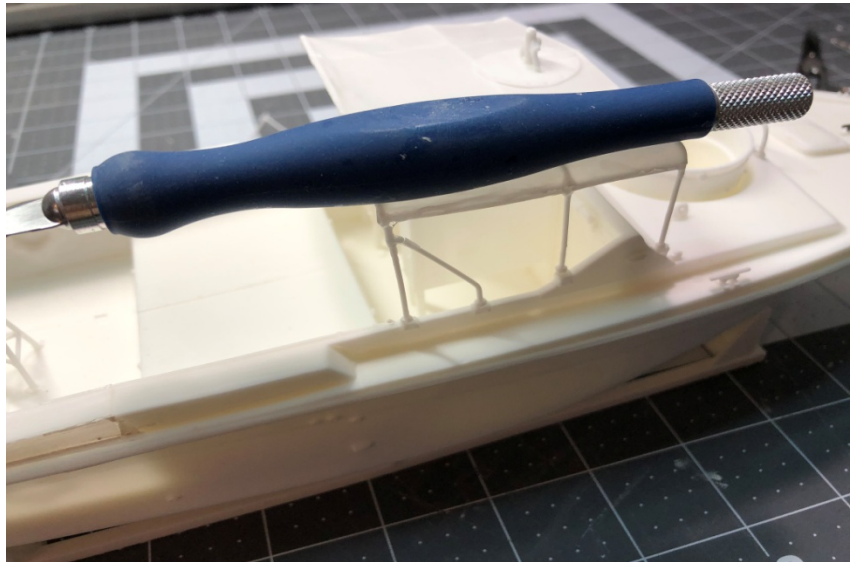




47. Once the canvas top glue is dry and stable, start gluing the support bars from front to back.



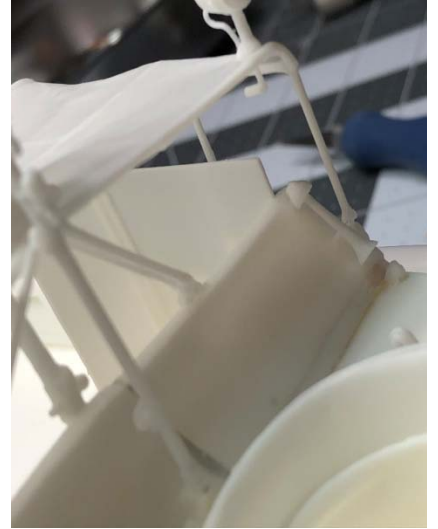
48. Once all the support bars are in place you may need to add some weight to the canvas top to ensure the bars glue securely.



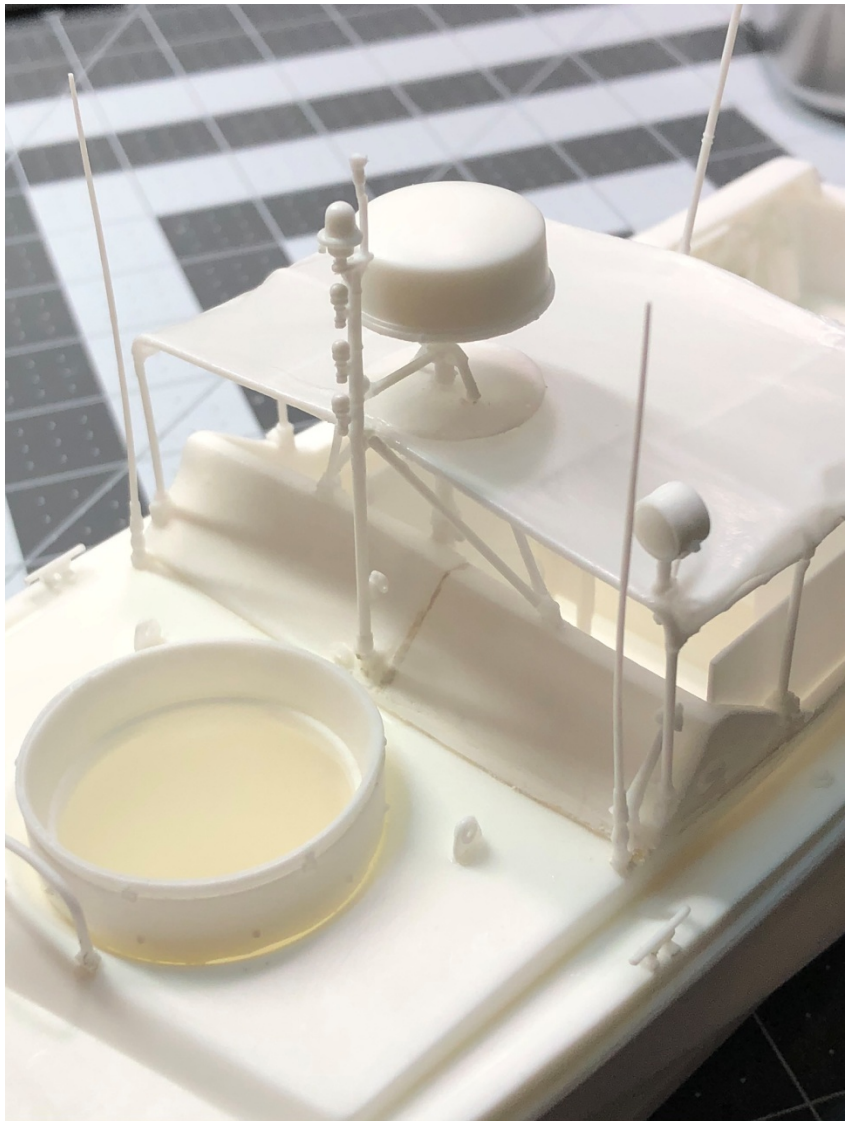
49. Once the glue is dry and the canvas top is completely stable you can glue the parts for the light mast. Then you can glue the radar dome into position. The dome was painted either light navy gray or the same color as the boat.



50. Locate the small handle for the searchlight and glue it underneath the canvas bimini top.

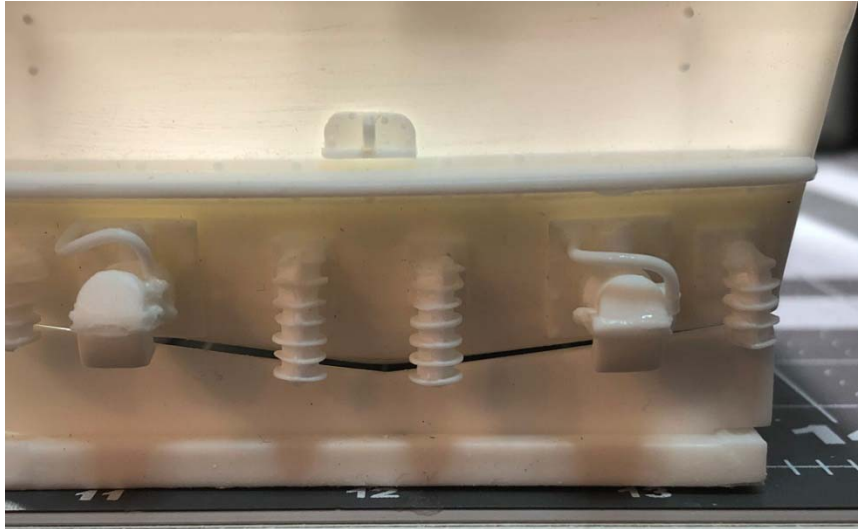


51. Glue the antennas and flag mast into position.

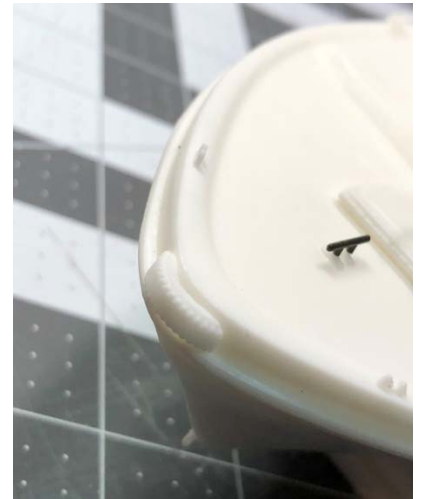
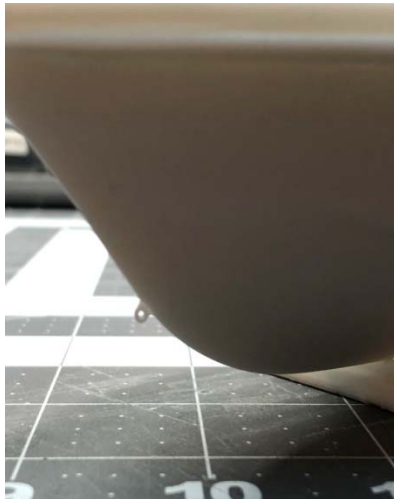




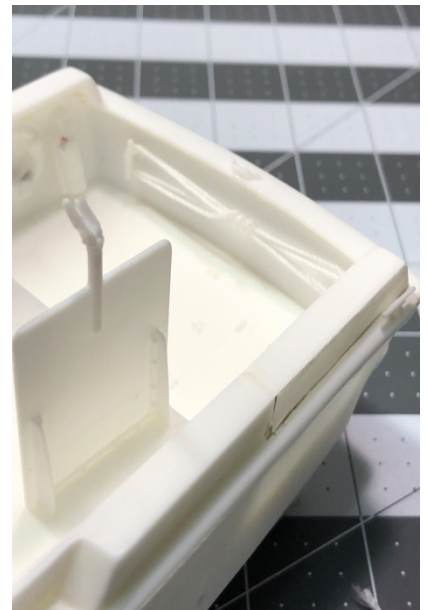
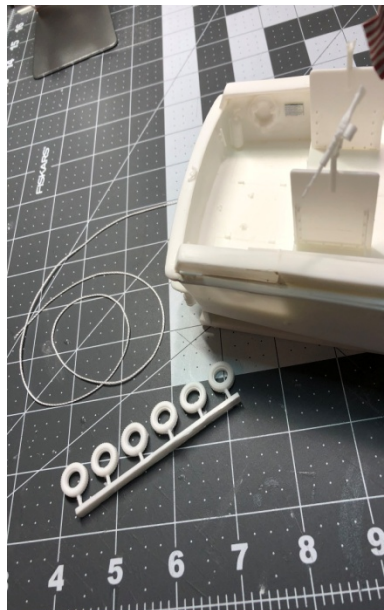
52. Finishing steps are to glue the Jacuzzi Jet Pump control cables to the gates.



53. Glue the forward tow hook to the bow and if you so chose you can glue the makeshift tire fender to the bow.

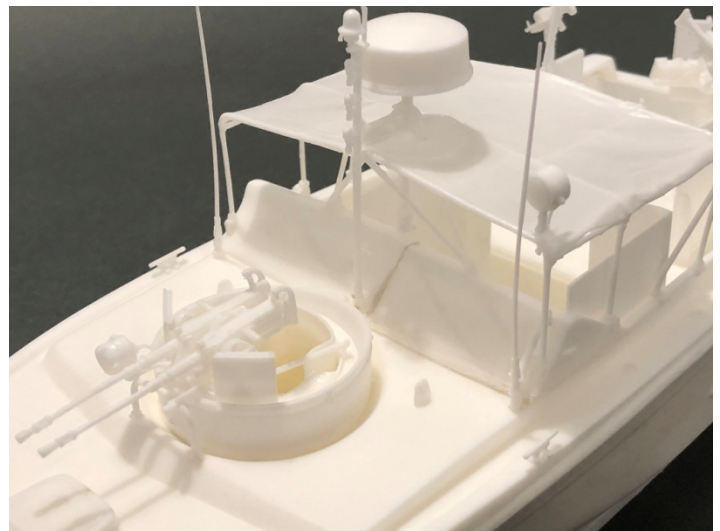


54. Using scale rope you can mount the tire fenders to the side of the boat and make a tow rope that was stowed on the stern as shown. If there is rope left over you can also give the forward gunner a rope seat as shown below.





55. Add wheels to the PBR cradle if so desired. This step completes assembly.



# Painting Tips

- Details of the light mast for painting the globes and Nancy Beacon. —————→

- The Radar Dome was painted either light gray, Olive Drab or Marine Corps Green. —————→

- All Navy PBRs in Vietnam were painted Marine Corps Green overall, not Olive Drab!

- The canvas top was painted gray-green. —————→

- You can paint the hull below the waterline hull red or flat black, but typically the Mk I had a red hull.

- PBRs in Vietnam did not have many markings or decals other than the national identification stars located on the bow or on top of the canopy. However, some boats assigned to River Patrol Flotilla V did display their insignia on both sides of the pilothouse as shown here.

- The boat registry number was etched into the stern of the boats as shown here.

Example: —————→

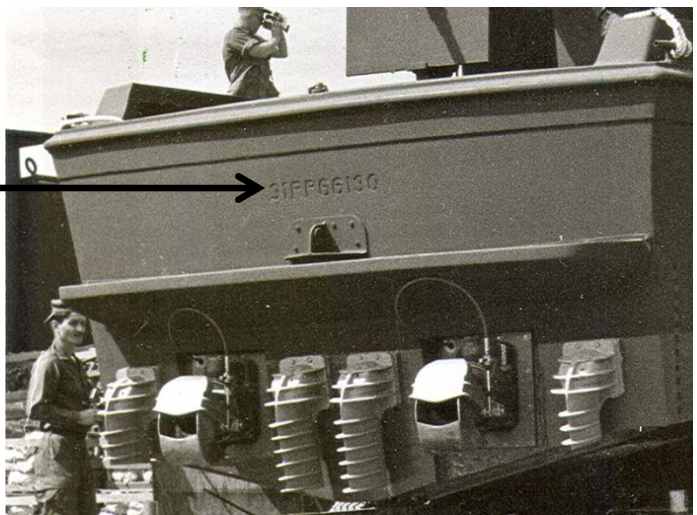
31RP66130

31 = Boat length

RP = River Patrol

66 = Year of production

130 = 130th boat built in 1966





## Decal Tips

- The following placement is recommended for the decals.

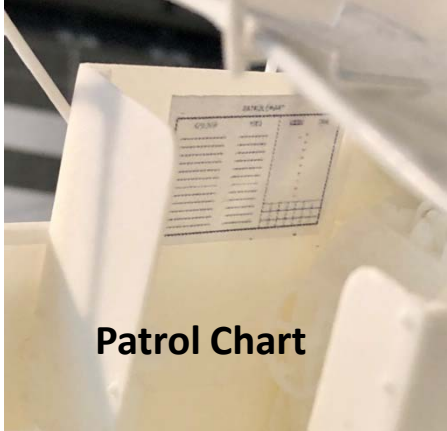


or





- Decal recommendations continued.



**Patrol Chart**

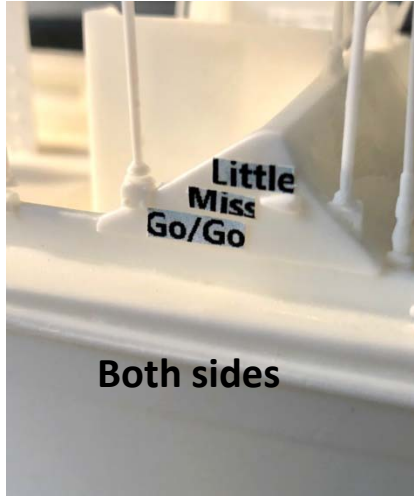


**Life ring  
instructions**

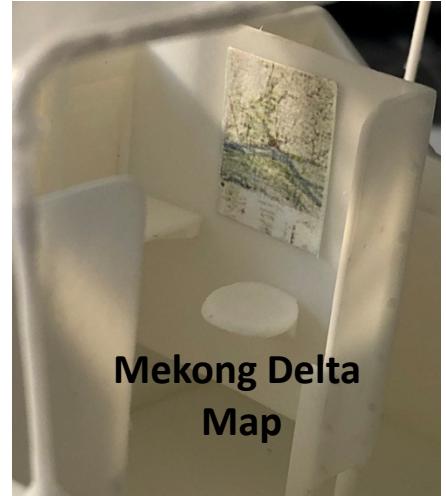


**Fire  
Extinguisher  
label**

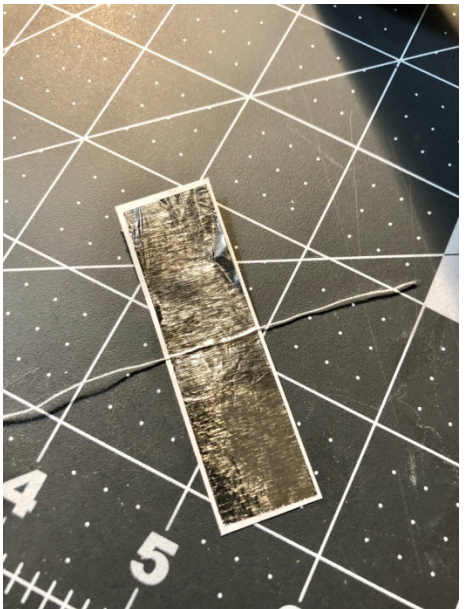
- Steps are below for building the flag. You will need a glue stick, small piece of white thread, and aluminum foil.



**Both sides**



**Mekong Delta  
Map**





## Finishing Tips

- Go easy on rust when you weather the kit. PBRs were fiberglass and didn't rust. Most of the fittings were aluminum, which also didn't rust. The only parts that might have some minor rust spots are the armor plates, bilge pumps, and around bolts, but the crews took very good care of their boats. If you want to weather a boat you can paint rain streaks, mud and chipped paint revealing fiberglass, which was yellowish white.

- PBR stands for Patrol Boat River, as the Navy likes to name things backwards or Proud, Brave, Reliable as affectionately referred to by crewmembers'.

- If you need help assembling the kit please visit Brown Water Enterprises .

[www.brownwater.net](http://www.brownwater.net)

