Baltimore Class Heavy Cruiser

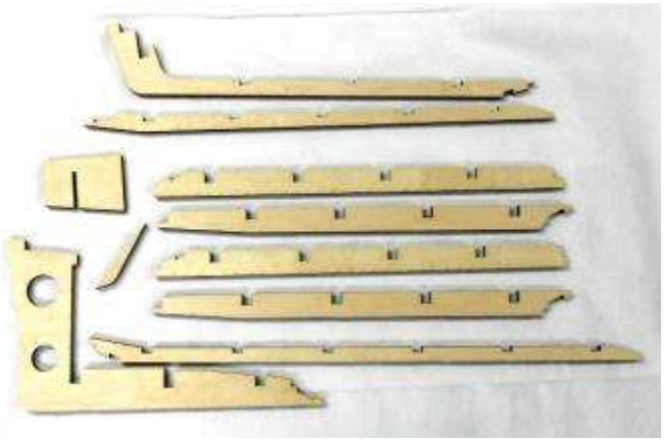
Displacement: 14,472 tons standard, 17,031tons full load
Dimensions: 673ft 5in overall x 70ft 10in x 24ft @full load
Machinery: 4-shaft, GE turbines, 120,000shp = 33 knots
Armament 9 – 8 in/55 (3x3), 12 – 5in/38 (6x2), 48 – 40mm (11x4, 2x2), 24 20mm

CA68	Baltimore	CA123	Albany	CA131	Fall River
CA69	Boston	CA124	Rochester	CA132	Macon
CA70	Quincy	CA125	Northampton	CA133	Toledo
CA72	Pittsburgh	CA126	Cambridge*	CA135	Los Angeles
CA73	St Paul	CA127	Bridgeport*	CA136	Chicago
CA74	Columbus	CA128	Kansas City*	CA137	Norfolk*
CA75	Helena	CA129	Tulsa*	CA138	Scranton*
CA122	Oregon City	CA130	Bremerton		

*canceled before completion

This hull kit will build a 1/144 scale Baltimore class or Oregon City class heavy cruiser hull, suitable for R/C naval combat under Fast Gun or Treaty rules. The same basic hull was also used for the Saipan class light aircraft carriers (CVL48 Saipan and CVL49 Wright) although it was widened 8ft for the carriers. Depending on your club rules, you may have to modify kit to get the proper beam, or if your beam tolerances are measured at the carrier deck, no modification will be necessary. The kit features laser cut parts for precise fits and accurate shapes. The windows for the vulnerable area are already defined, based on an 11lb displacement, eliminating the need to make complex measurements. The kit features laser cut parts for precise fits and accurate shapes. The kit includes 24 3/8" ribs, a 3/8" sub-deck, 4 keels and a 1/8" deck. The builder will need to supply 1/32" plywood sheeting for the bottom, 1/8"x1/4" basswood sticks, superstructure, and all controls and armament. The kit contains the following:

- 1 fore center keel (2 pieces)
- 1 aft center keel (2 pieces)
- 2 mid keels (2 pieces each)
- 24 ribs
- sub-deck (4 pieces)
- rudder
- sub-keel piece
- 1/8" deck (6 pieces)



Start by examining the kit and making sure all the parts are there. A couple of notes on assembling laser cut wood parts:

- All the notches should fit together with a slight friction fit. However, the thickness of the plywood varies some, so if the fit on a part is too tight, sand the mating part slightly until it is thin enough to fit without forcing it.

Assembling the hull

1. The sub-deck bends up at the bow, so several cuts need to be made to make this bending easier. Using a saw, cut

about 3/4 of the way through the sub-deck where the first 6 ribs fit. Gently flex the sub-deck to make sure it is flexible, taking care not to break the top layer of the plywood.

2. After the cuts are made, join the sub-deck and the keels together at the dovetail joints.

3. Add the ribs to the sub-deck. The saw cuts on the sub-deck should be facing up so that the cuts will be on the bottom side of the sub-deck.

4. Once all the ribs are fitted in the sub-deck, add the fore and aft center keels. The bow keel will not seat all the way right now because the sub-deck is flat. Do not glue the keels in place at this time.

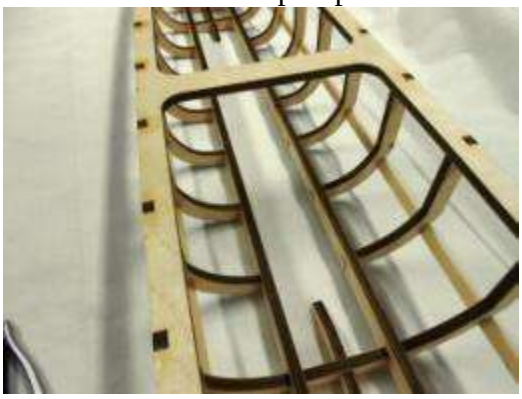
5. Now carefully roll the assembly over. Finish seating the bow keel into the ribs. The sub-deck should now curve up at the bow and the keel should be flat on the table.
6. Add the two center keels to the ribs. The tapered ends of the center keels face the bow of the ship.

7. Add some weight to hold the bottom of the hull firmly to the table. Check to make sure that the sub-deck is level and has no twist. When you are satisfied that everything is aligned, glue it together with thin CA. Reinforce the glue joints with thick CA or epoxy.
8. Add the 1/8”x1/4” stringers to sides of the hull. Start at the stern where the most curvature is and move towards the bow. Where there is a lot of curvature, sand the slot sides to angle them and make it easier to fit the stringer. Cut the stringers so that all the joints are at a rib. Make sure that the bottom of the keel remains flat with the stringers fitted. Once satisfied with the fit, glue the

Baltimore Heavy Cruiser Hull Kit

stringers.

9. Cut out the centers of the ribs between the double keels. This will form the water channel for the pump.



10. Using a plane and/or sanding block, blend the sub-deck with the ribs.

11. Now is the best time to waterproof the hull. Using the sealer of your choice (spar varnish or laminating/finishing epoxy are good choices) coat the entire hull assembly. If the wood soaked up all the sealant and looks dry, put on a second coat.
12. Sheet the bottom of the hull with 1/32 plywood. In the center section, the hull has simple enough curves that one piece can cover several ribs. In the bow and stern, use a separate sheet for every one to two ribs. Trim the sheeting even with top of the stringer.

13. Fill in between the first 2 bow ribs and after the last stern rib with wood blocks.
14. Sand the wood blocks to the shape of the ribs and blend with the sheeting.
15. Attach the outer deck pieces to the hull, using epoxy and clamps.

16. Sand the sides of the deck flush with the sub-deck.
17. Fiberglass the bottom of the hull with 2oz - 4oz fiberglass cloth and laminating or finishing resin. Cut the cloth slightly oversized and set it on top of the hull. Plan to use separate pieces for the vertical parts of the stern and bow, since the cloth will not wrap

around these areas. Start by pouring a small bead of epoxy on the cloth along the center of the hull, and then use a brush or squeegee to spread it to the edges. Allow plenty of time for the epoxy to work through (wet) the fiberglass before adding more epoxy. Work on a small area at a time, and

make sure the cloth is wrinkle free before moving on to the next area.

18. Once the epoxy is cured, trim the edges of the fiberglass. Open up the holes for the shafts and rudder and sand down any seams.
19. Install a 5/32" (1/8" ID) brass tube for the rudder post. The post should extend about 1/8" above the rudder tray and about 1/8" below the bottom of the hull.
20. Glue a 1/8" brass rod into the rudder. The easiest way to ensure this shaft is straight is to lay the shaft on a 1/16" of wood on a flat surface. Tack the shaft to the rudder with epoxy. Fill in the rest of the slot around the shaft with epoxy.
21. Shape the rudder with sandpaper into an airfoil shape. Start by making a line down the center of the back and front face of the rudder. Round the front, using the line to keep it even. Now sand

the back down to a point about 1/16" thick. Add fiberglass cloth to the sides of the rudder to make it more durable.

22. The stuffing shafts are made from 9/32 brass tube. Cut 4 tubes to 8" in length. Make 2 drive shafts out of 1/8" brass or steel rod and get some 1/8" ID x 1/4" OD oilite or similar bearings to hold the shafts in the tubes. The outer tubes will be dummy (non-driven) shafts, so bearings and a full shaft are not necessary.
23. To install the inside stuffing shafts, first install the rudder and the props (1" diameter props are best) on the shafts. Now slide the stuffing tubes into the

hull, making sure that the props are close to, but slightly ahead of the rudder. The rudder should move freely from side to side without hitting the props. Check that the stuffing shafts are fully through the ribs inside the hull and then glue in with epoxy, forming a small fillet around each shaft to ensure a water tight joint.

24. Make braces for each of the stuffing tubes and add them approximately 1/2" from the end of the tubes.
25. Motor installation. The motors are bolted to 1/8" thick motor mount, which

in turn is held to the glued in motor mount with 3 wood screws. This allows

the motors to be removed for maintenance at the pond.

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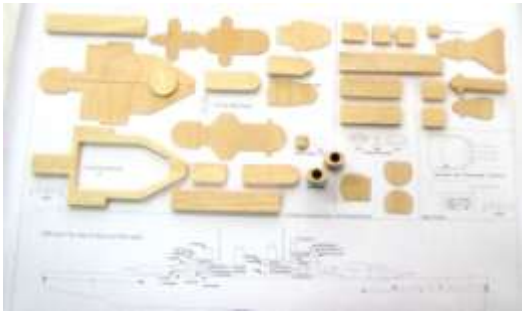
Making the superstructure

1. A basic “stand-off scale” superstructure has been drawn up, using original Navy plans from CA-74. Start by cutting the out the different levels from a suitable 5/8” thick material. Balsa sheets or foam will work, depending on how durable you want the superstructure to be. Keep the material as light as possible, so that the ship doesn’t become top heavy. Cut the decks out of 1/16” plywood. When done, the complete kit will look like this:



2. Using the drawing as a guide, assemble the levels and decks together.

3. It is easiest to fill and sand the different levels before you glue the superstructure together. Now is also the time to add a layer of fiberglass cloth to the outside of the levels for greater durablitly. When satisfied with the superstructure, glue it together and to the main hatch.
4. The turrets are laid out on the deck by measuring from the bow and stern respectively. The number 1 turret is centered 12.5” from the bow and the number 2 turret is 16.5” from the bow. The number 3 turret is centered 12.5” from the stern.
5. After marking the turret locations, cut an approximate 2.2” hole (the outside diameter of a 1.5” PVC pipe coupler) in the deck.
6. Use the plans to make the turrets from balsa and plywood. The sides of the turrets should be made from plywood or glassed for durability.

26. Assemble the turret and the barbets (PVC pipe) together. Glue the barbets to the deck, leaving 1/8” of space between the deck and bottoms of turrets 1 and 3, and 1 1/8” for turret 2.
27. If you need the superstructure drawing, email mail@jenkse.us for a copy.