

AUSTRALIAN RIVER BOAT SERIES WOODEN MODEL KIT

ISABELLA-PADDLE STEAMER 1912

SCALE 1:60



**Modellers
Shipyard**

www.modelshipyard.com.au



LENGTH: 420mm HEIGHT: 150mm

ITEM CODE: KTMS1008

BUILDING INSTRUCTIONS

Paddle Steamer *Isabella* 1912

Modellers Shipyard is proud to present another kit in our series of models that have significance to Australian history. We are the only manufacturer of wooden model kits in Australia.

Paddle steamers and riverboats formed a vital part in opening up the inland of Australia. The inland river system of the Murray, Darling, Lachlan and Murrumbidgee formed a network to connect inland communities across the Australian states of New South Wales, Victoria, Queensland and South Australia. Paddle steamers have been plying these inland waters since 1853 travelling along the river system from Goolwa at the mouth of the Murray to the inland towns of Bourke on the Darling, Wagga Wagga on the Murrumbidgee and Forbes on the Lachlan.

Paddle steamers opened up the inland of eastern Australia allowing goods such as wool and wheat to be transported along the rivers to the inland ports of Echuca and Goolwa and then for transfer to the sea ports of Port Elliot, Adelaide or Melbourne. These same paddle steamers then transported cargo needed for these growing inland communities.

Life on the rivers was hard for the owners, crew and often families on the paddle steamers. Droughts often stranded the boats for months on end. Floods brought their own hazards with fast flowing waters, poorly defined river banks and submerged tree snags made navigation difficult and often dangerous.

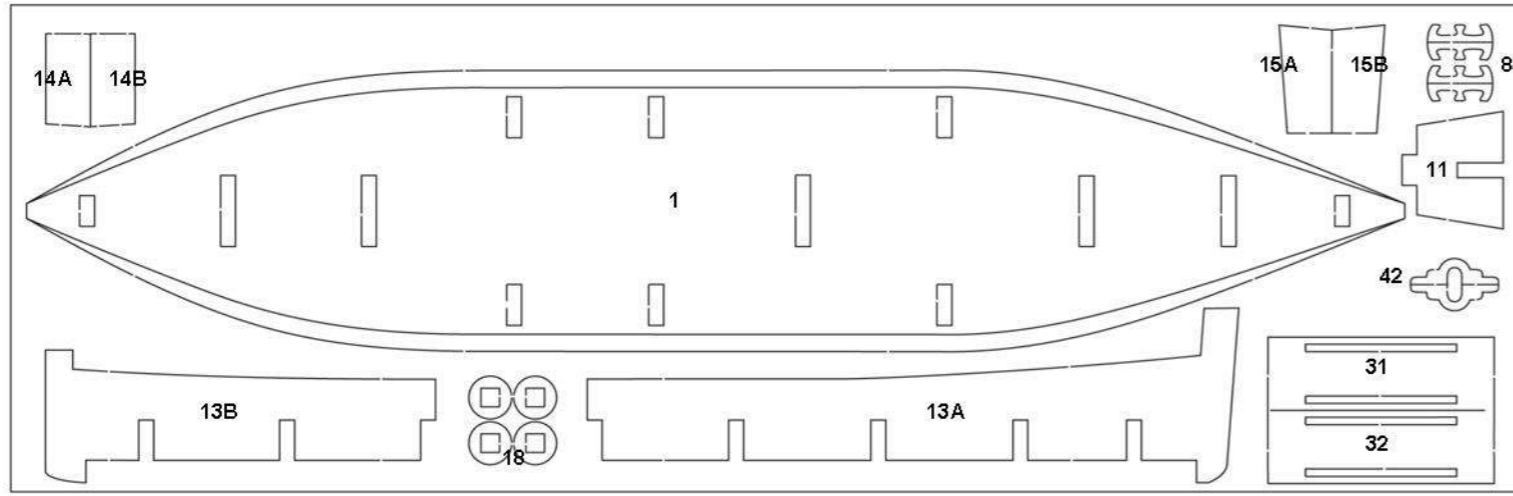
The PS *Isabella* is typical of the working boats that plied the river system in the late 1800s to the early 1900s. Working boats like her towed cargo barges up and down the rivers servicing the needs and providing vital links for the inland communities to the outside world.

Materials & Parts List

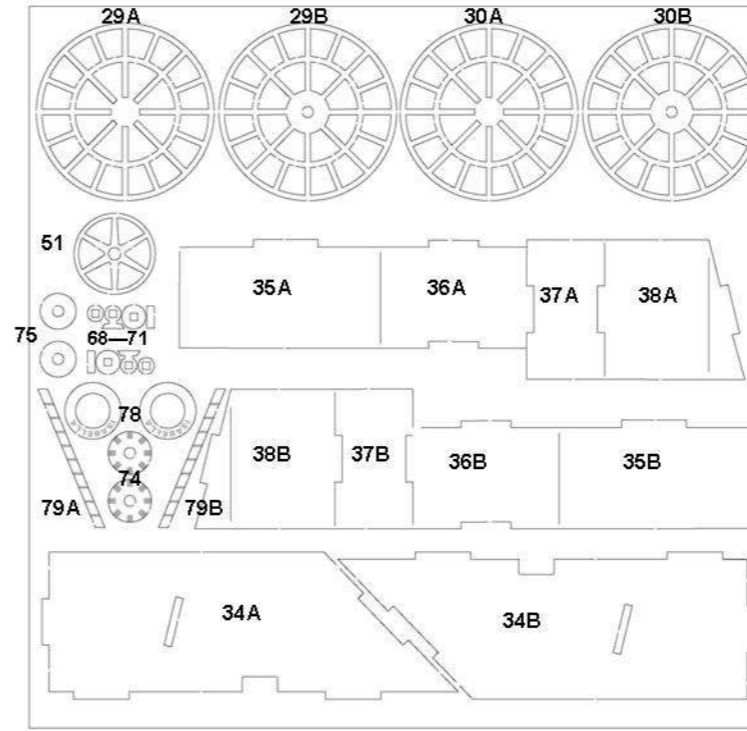
Part	Description	Location	Part	Description	Location
1	Hull Base	Board 1	25	Stack	5mm dowel
2	Bulkhead	Board 2	26	Engine Trim	Board 6
3	Bulkhead	Board 2	27	Engine Trim	Board 6
4	Bulkhead	Board 2	28	Engine Trim	Board 6
5	Bulkhead	Board 2	29A/B	Paddle Wheels	Board 4
6	Bulkhead	Board 2	30A/B	Paddle Wheels	Board 4
7A/B	Bulkhead	Board 2	31	Wheel Jigs	Board 1
8A/B	Bulkhead	Board 2	32	Wheel Jigs	Board 1
9	Bulkhead	Board 2	33	Paddles	Board 6
10	Bulkhead	Board 2	34	Wheel Housing	Board 4
11	Bulkhead	Board 1	35	Wheel Housing	Board 4
12A/B	Engine Bay	Board 2	36	Wheel Housing	Board 4
13A/B	Keel	Board 1	37	Wheel Housing	Board 4
14A/B	Stern Blocks	Board 1	38	Wheel Housing	Board 4
15A/B	Bow Blocks	Board 1	39	Cabin Planking	0.6x4mm Silver Ash
16	Hull Planks	2x5x400mm limewood	40	Lattice	Board 6
17	False Keel	Board 5	41	Lattice	Board 6
18	Base feet	Board 1	42	Bearings	Board 1
19	Engine	Board 3	43	Drive Shaft	3mm dowel
20	Engine	Board 3	44	Main Deck	Board 7
21	Engine	Board 3	45	Crew Quarters	Board 5
22	Engine	Board 3	46	Crew Quarters	Board 5
23	Engine	Board 3	47	Crew Quarters	Board 5
24	Engine	Board 3	48	Crew Quarters	Board 5

Materials & Parts List Continued

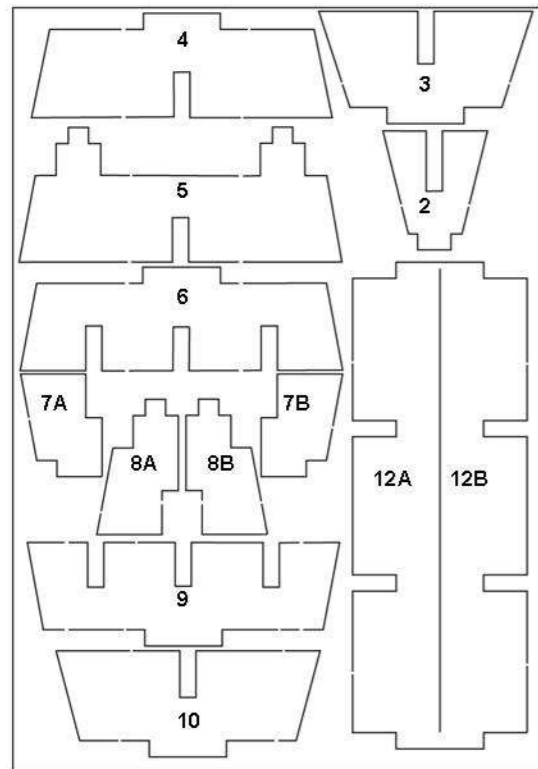
Part	Description	Location	Part	Description	Location
49	Railings	Board 5	73	0.25mm Cord	Parts Card
50	Support	Board 5	74A/B	Wheel Hubs	Board 4
51	Shaft Pulley	Board 4	75A/B	Wheel Hubs	Board 4
52	Drive Belt	Parts Card	76	Name Plates	Board 6
53	Wheel House	Board 5	77	Cabin base trim	1x2mm walnut
54A/B	Wheel House	Board 5	78A/B	Life Buoys	Board 4
55A/B	Wheel House	Board 5	79A/B	Ladder sides	Board 4
56A/B	Wheel House	Board 5	80	Ladder steps	Board 6
57	Wheel House	Board 5	81	Rudder	Board 5
58	Wheel House	Board 5	82	Rudder Hinges	Parts Card
59	Helm Pin	Parts Card	83	Nails	Parts Card
60	Helm	Parts Card	84A-C	Bollards	Board 1
61	Upper Cabin	Board 5	85	Chain	Parts Card
62	Upper Cabin	Board 5	86	Pulleys	Parts Card
63	Upper Cabin	Board 5	87	Sampson Post	4x4mm walnut
64	Upper Cabin	Board 5	88	Rope 1.5mm	Parts Card
65	Upper Cabin	Board 5	89	Stanchions	Parts Card
66	Upper Cabin	Board 5	90	Hatch base	Board 7
67	Door/window trim	1x1mm walnut	91	Flag pole	2mm dowel
68A/B	Boat Lights	Board 4	92	Flag	Parts Card
69A/B	Boat Lights	Board 4	93	Upper Deck	Board 7
70A/B	Boat Lights	Board 4			
71A/B	Boat Lights	Board 4			
72	Eye Pins	Parts Card			



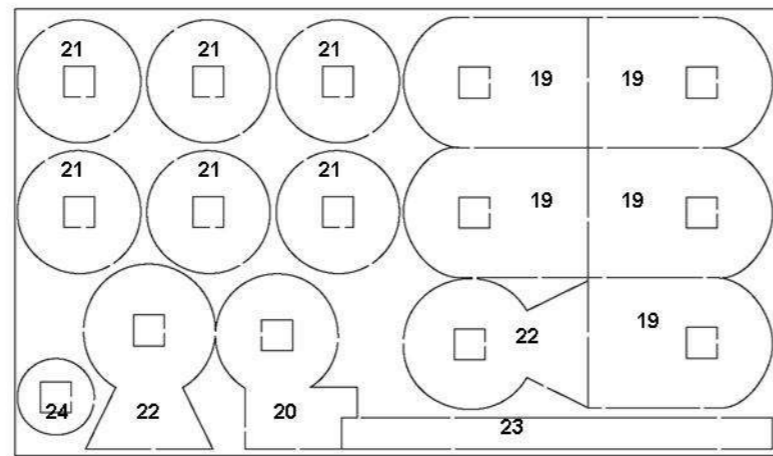
Board 1



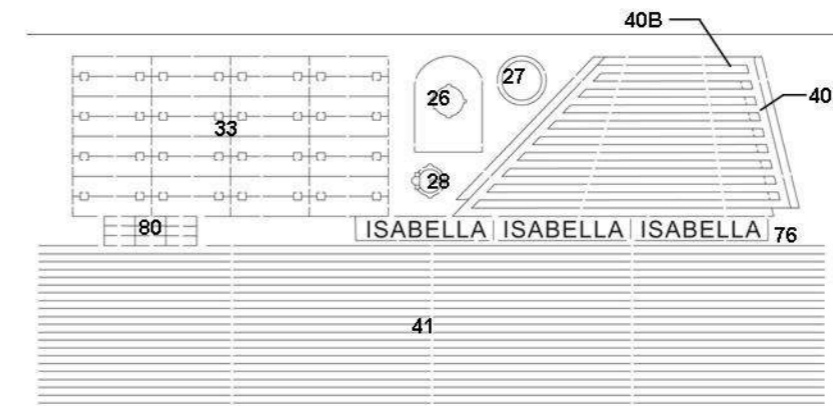
Board 4



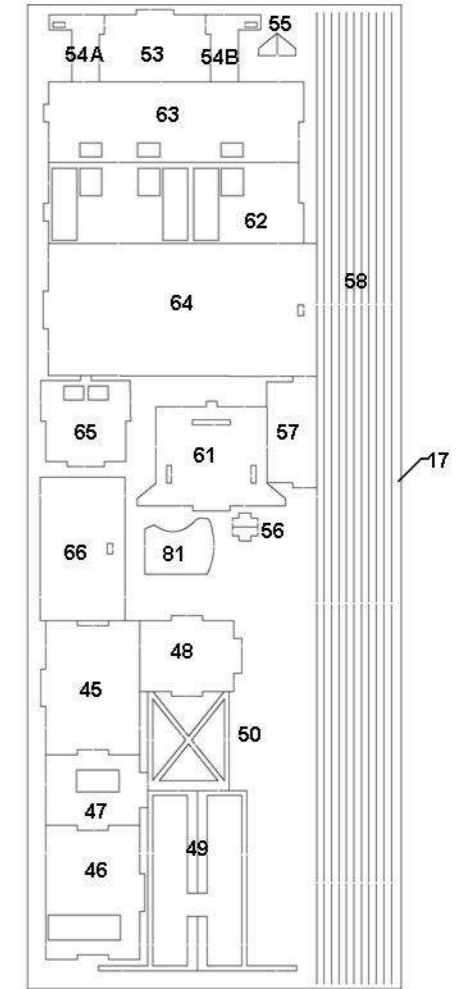
Board 2



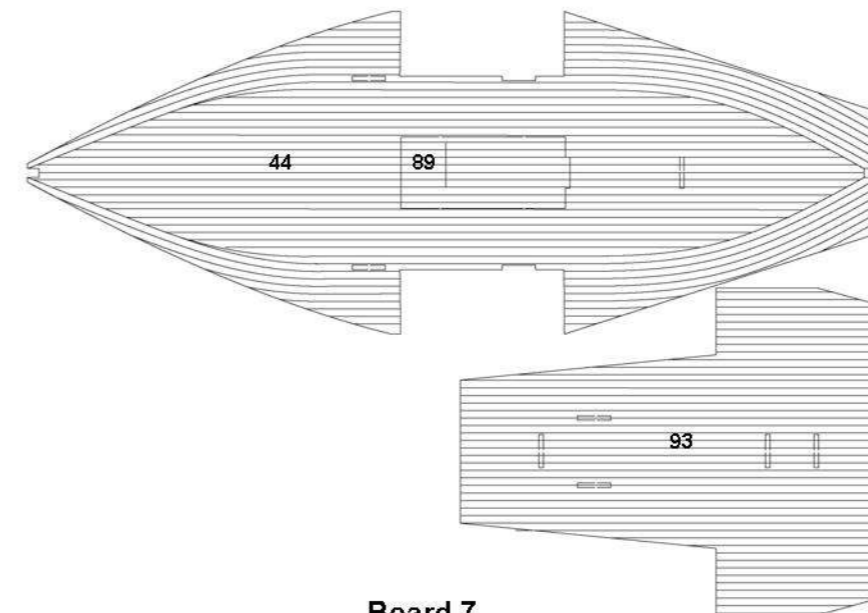
Board 3



Board 6



Board 5



Board 7

1.0 Assemble the Keel & Frames

Identify P1 through to 15A/B from Board 1 & Board 2. Dry fit parts together. Some fractional fitting may be necessary. Note P14A/B are the stern blocks and P15A/B are the bow blocks.

Once satisfied with the fit of each part apply PVA glue to each and hold in place with elastic bands while the glue sets—Photos 1 & 2.

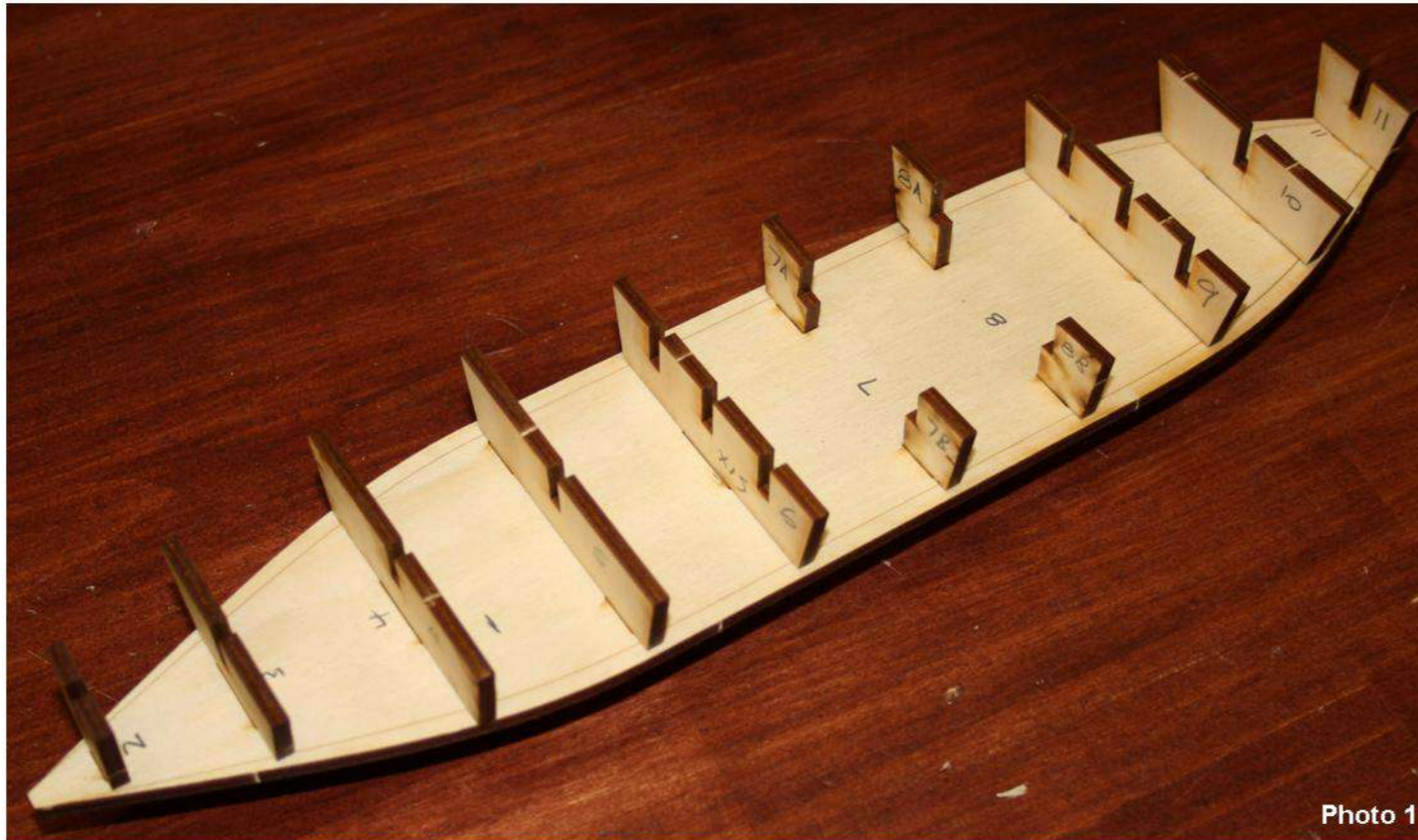


Photo 1

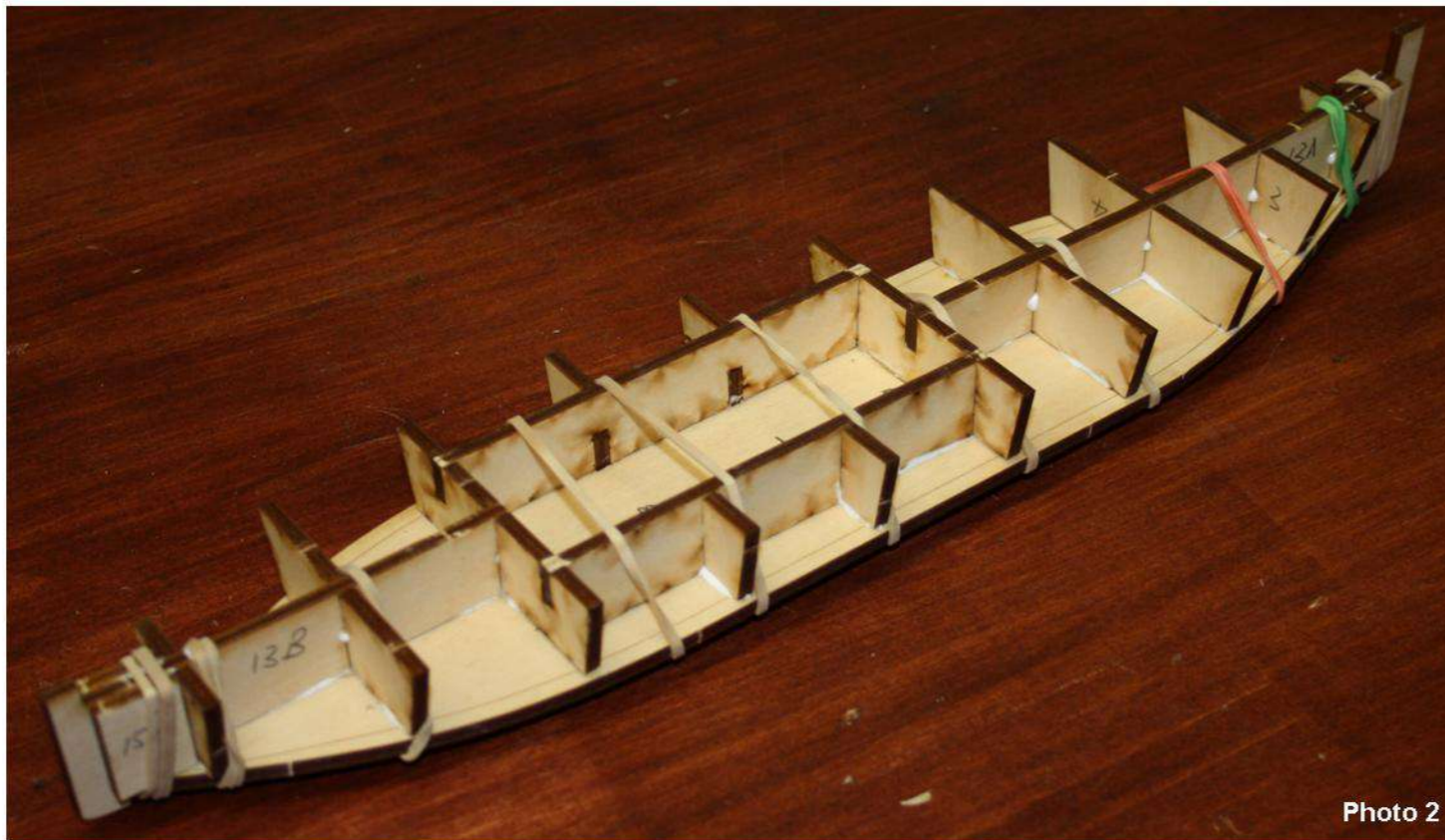


Photo 2

2.0 Fair the Frames

Fair the frames as required. You will find that the bow block and frames 2, 3 & 4 will need fairing at the bow. At the stern the stern blocks and frames 9, 10 & 11 will need fairing.

3.0 Planking the Hull

Identify the hull planks P16 2x5x400mm limewood. Fit a plank on each side of the hull. Use a hand held plank bender to shape the planks around the bow and stern areas. When satisfied glue and pin in place - Photos 3, 4 & 5.

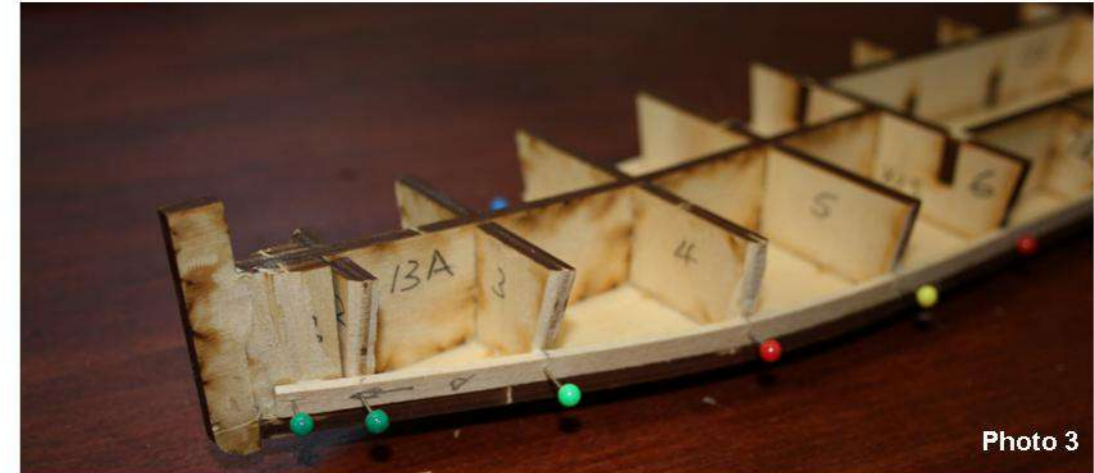


Photo 3

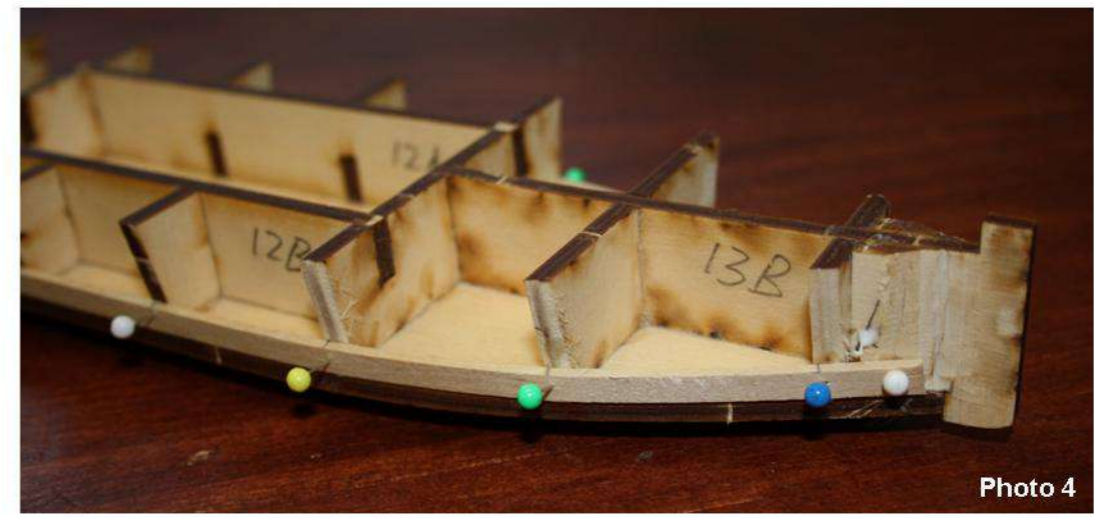


Photo 4

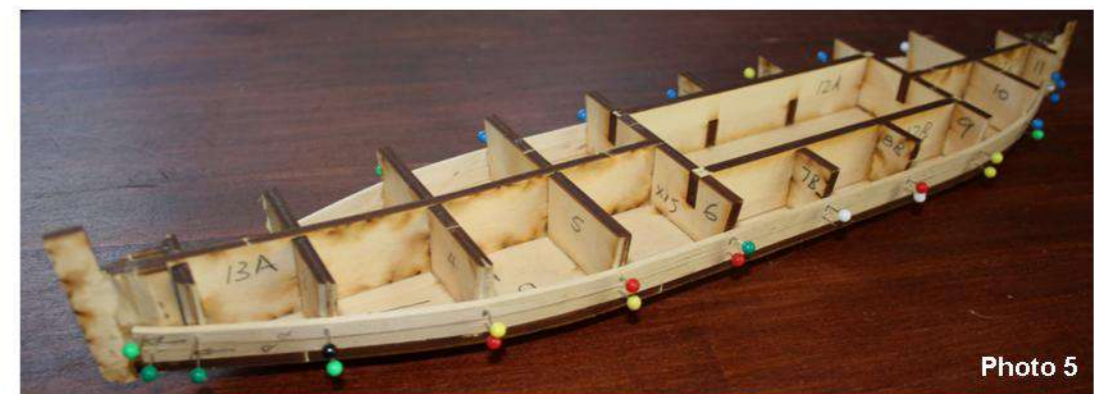


Photo 5

5.0 Finish the Hull

Fit 4 hull planks each side of the hull. Use wood filler if need to fill in any gaps. Use sandpaper to finish the hull — Photo 6.

Identify the false keel P17 from Board 5. Fit and fix in place as shown Photo 7.

Identify the base feet P18A-D from Board 1. Fit and fix in place as shown Photo 7.

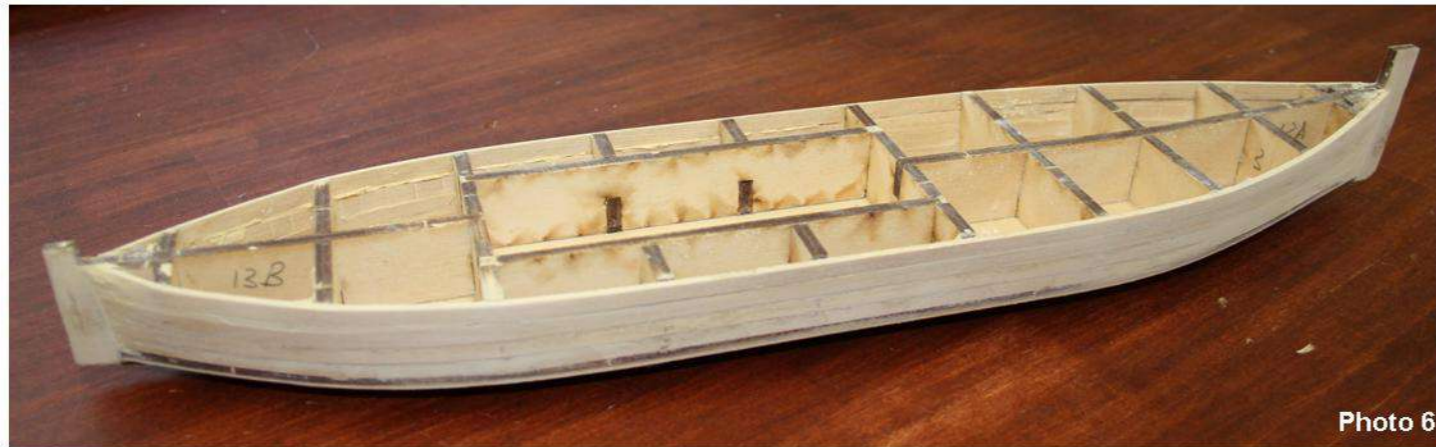


Photo 6

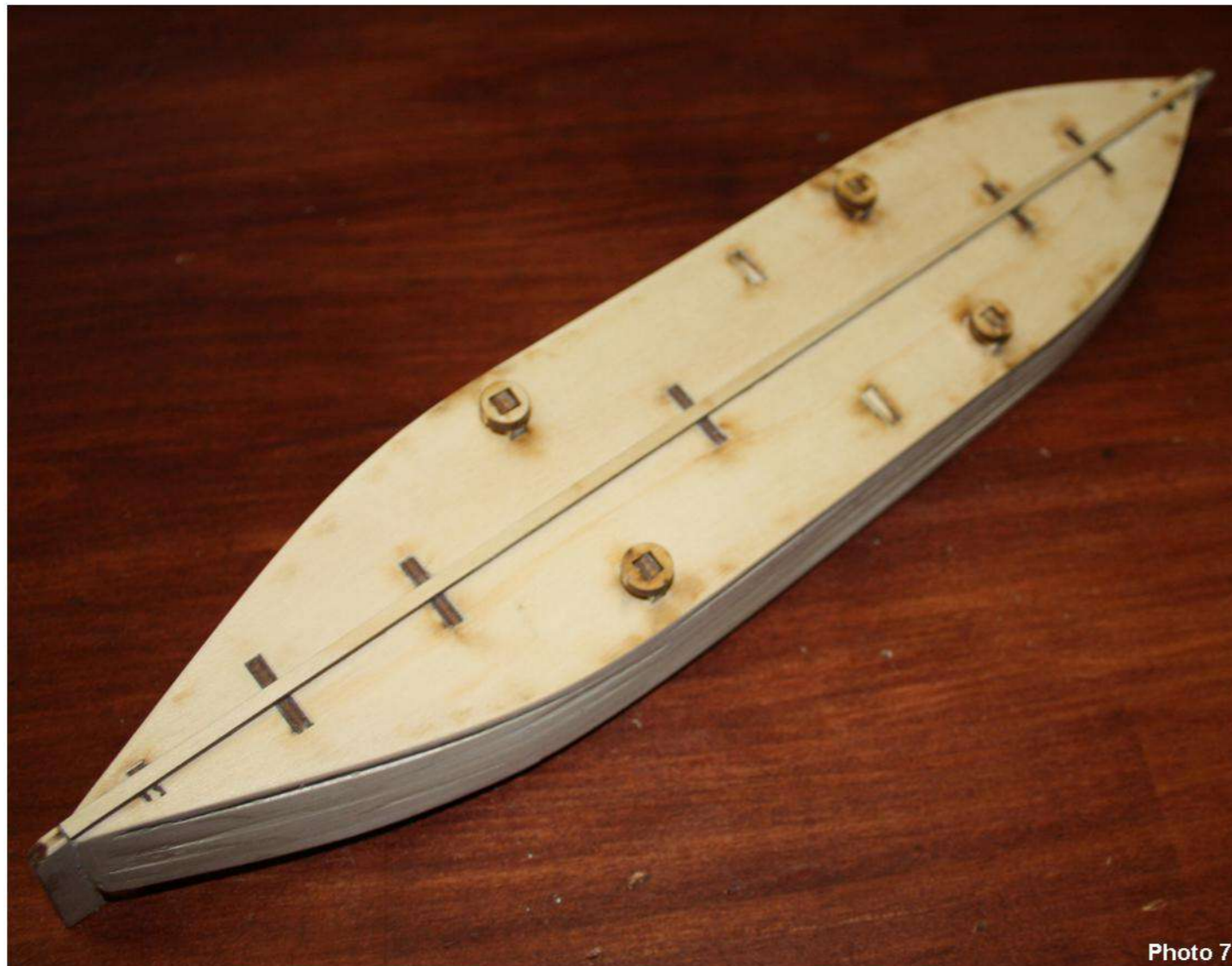


Photo 7

6.0 Mark Waterline

Mark a waterline 10mm from the base of the hull.

Below the waterline paint the side and underside of the hull black.

Above the waterline paint the hull white. Also paint the inside of the steam engine bay white—Photos 8 & 9

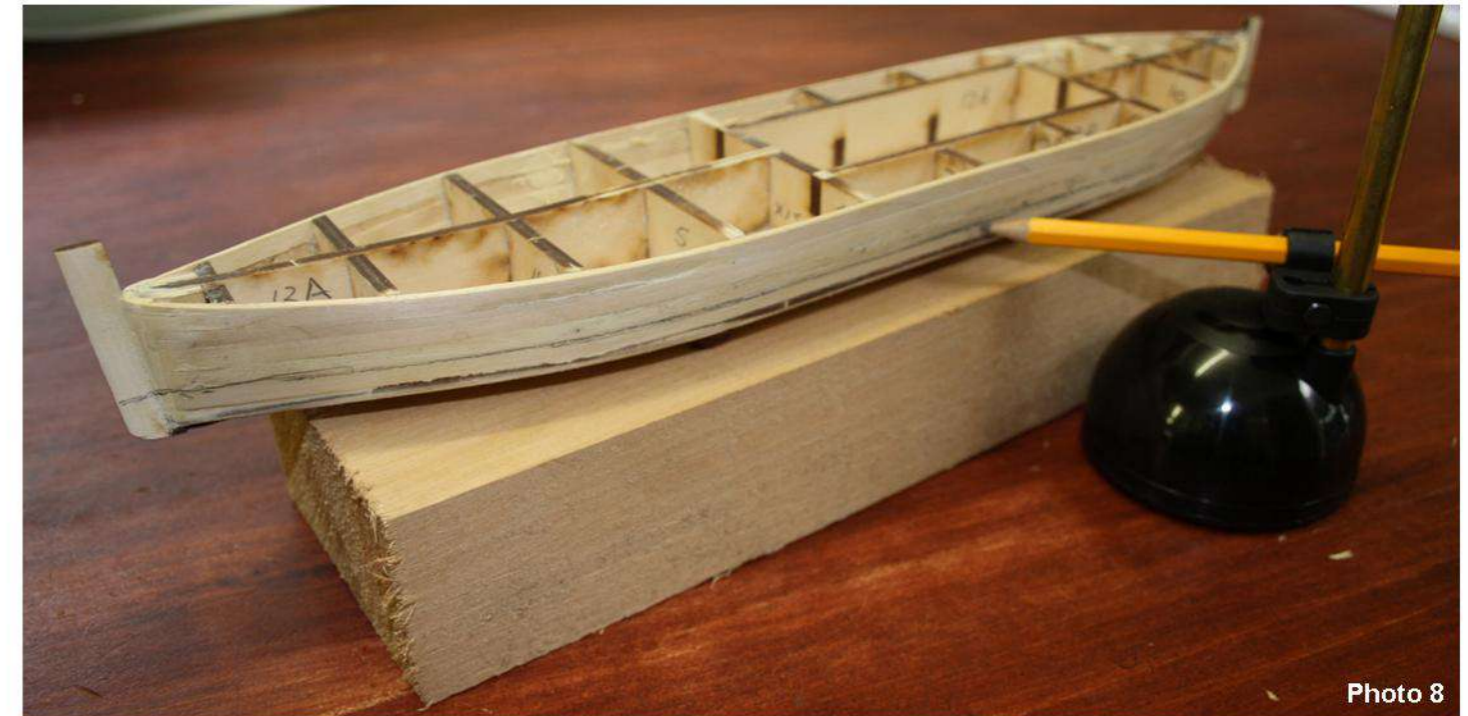


Photo 8



Photo 9

7.0 Steam Engine

Identify P19A-E, P20, P21A-F, P22A/B, P23 and P24 from Board 3.

Assemble as shown Photo 10. Use a file to remove any notches from the laser cutting. Once satisfied glue all parts.

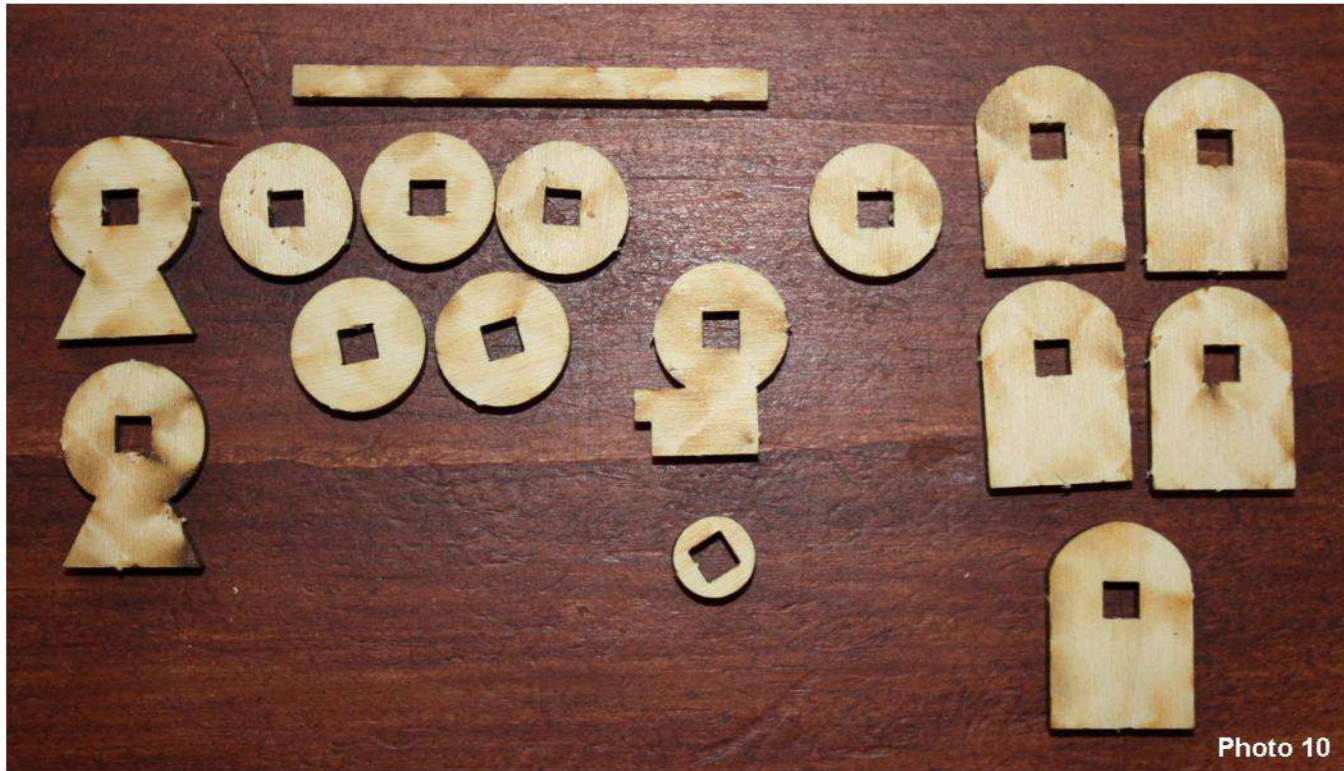


Photo 10



Photo 11

8.0 Steam Engine Stack

Identify the steam engine stack P25 - 5mm dowel. Cut a length 42mm long. Drill a 5mm hole in the top front of the engine body and fix in place the stack. Paint the whole steam engine black.

Identify P26, P27 & P28 from Board 6. Fix in place as shown Photos 12 & 13.



Photo 12



Photo 13

9.0 Locate Steam Engine

Locate the steam engine in the engine bay. Place the engine central in the bay and 43mm from the stern end and 15mm from the bow end of the engine bay—Photo 14. Place the hull safely away to be used later.

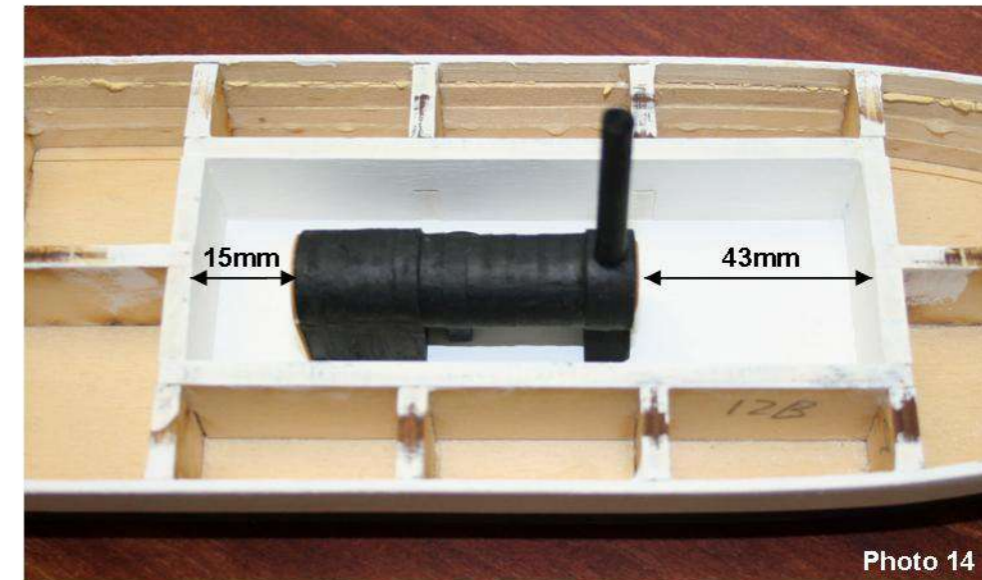


Photo 14

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SHEET 5

10.0 Paddle Wheels

Identify the Paddle Wheels P29A/B and P30A/B on Board 4. Take note that P29A and P30A are the outer wheels. Identify the wheel hubs 74A/B and 75A/B on Board 4. Note that P74A/B are the outer hubs. Also identify the paddle wheel jigs P31 & P32 from Board 1. Identify the paddles P33 from Board 6.

Use the jigs guides to hold the wheel halves in place—Photo 15. Before gluing the paddles in place select a direction of rotation for a paddle wheel—mark your chosen direction on the inner wheel hub.. Then mark the direction of rotation of the second wheel to be in the opposite direction to the first wheel—Photo 16.

Use PVA glue to fix the paddles in place. Make sure the paddles are placed on the side of the wheel spoke that will support the paddle as the wheel rotates against the water—Photo 17.

Once the glue is dry paint the paddle wheels white. Put the wheels safely aside to be fitted to the model later.

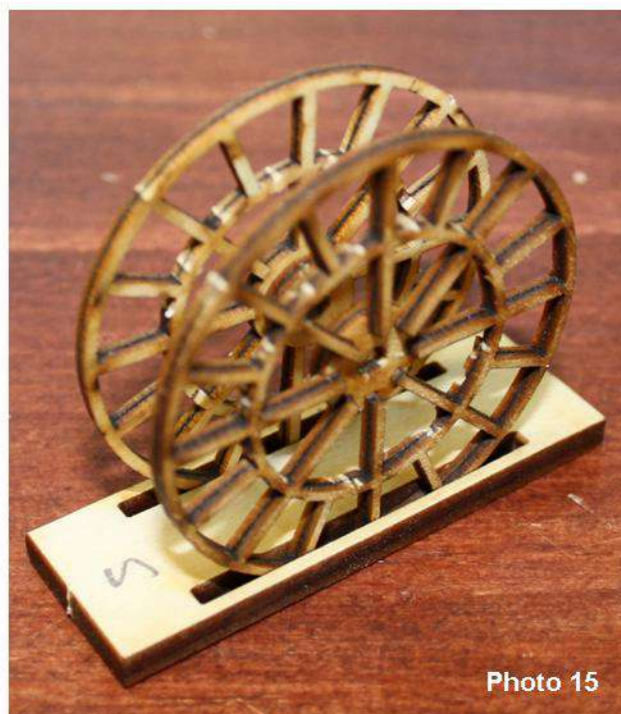


Photo 15



Photo 17



Photo 16

11.0 Paddle Wheel Housing

Identify the paddle wheel housing parts P34A/B, P35A/B, P36A/B, P37A/B & P38A/B from Board 4.

Assemble 34A, 35A, 36A, 37A & 38A. Apply PVA glue and use blue tac to hold parts in place while glue sets.

Repeat for the other paddle wheel housing. See Photos 18 to 21.



Photo 18

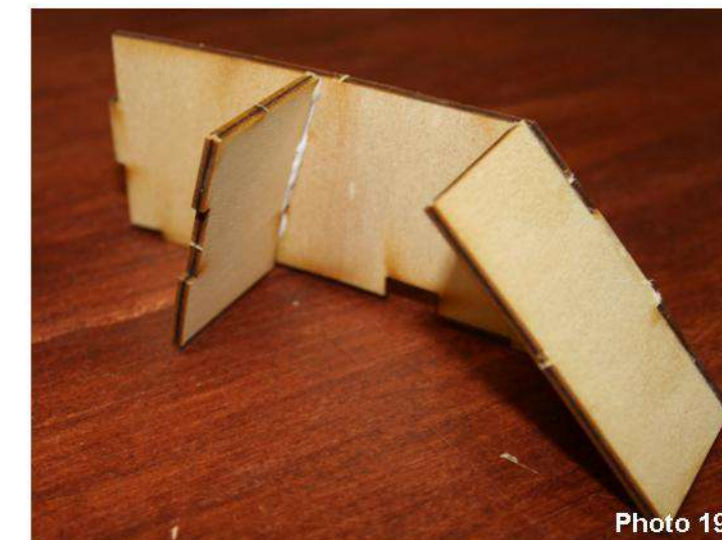


Photo 19

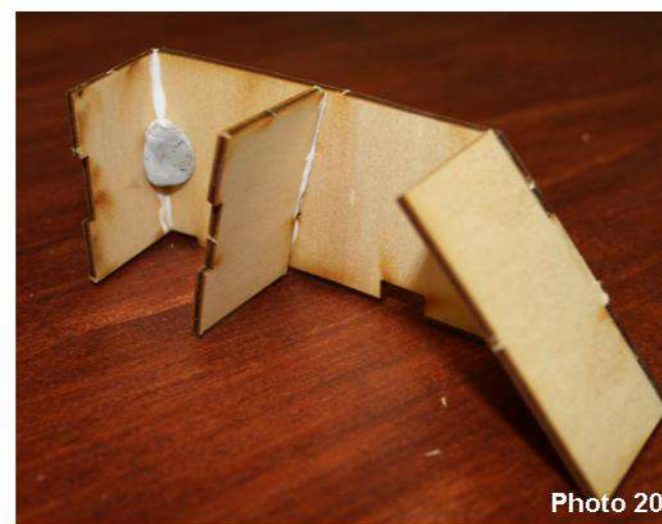


Photo 20

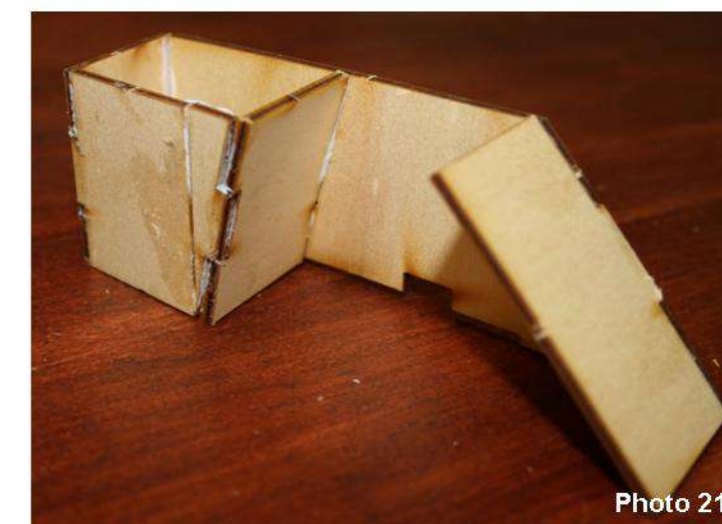


Photo 21

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SHEET 6

12.0 Plank & Paint Paddle Wheel Houses

Identify P39 0.6x4mm silver ash timber strips. Plank the external faces of the paddle wheel house with these timber strips. Paint the inside of each paddle wheel house white—See Photo 22

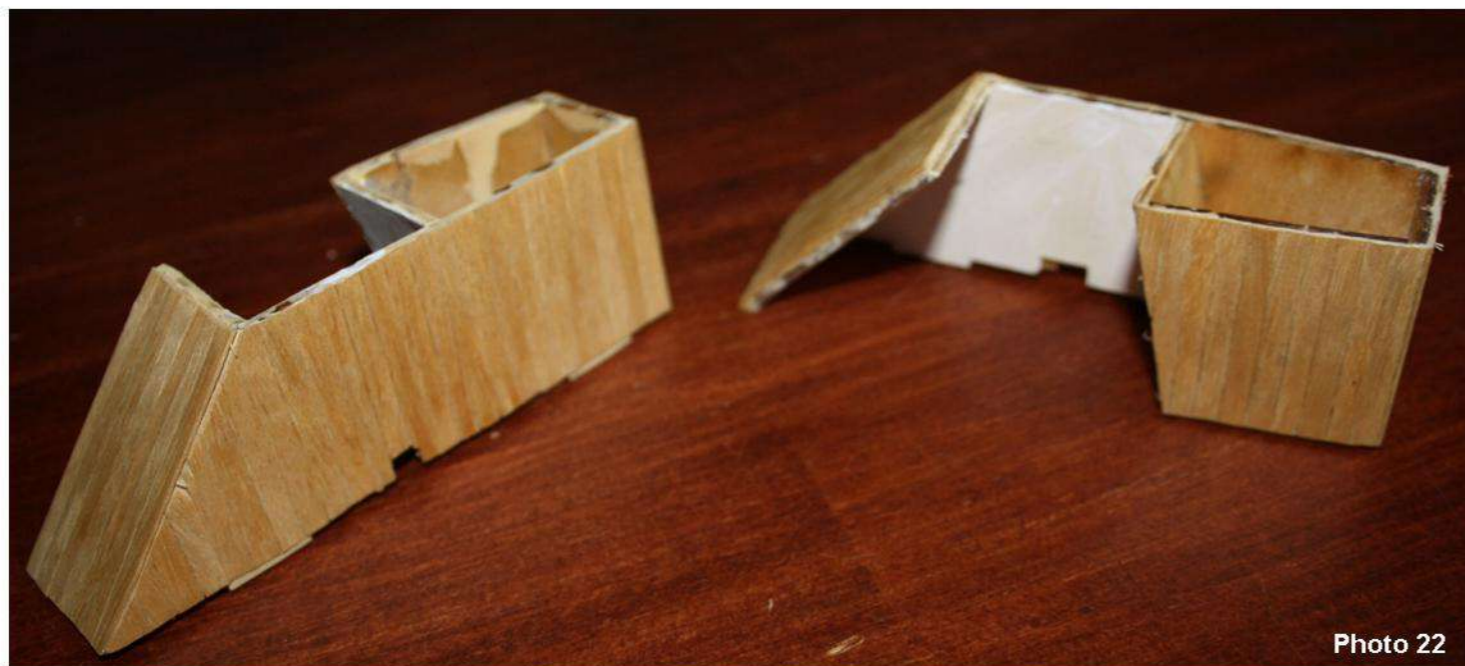


Photo 22

13.0 Housing Lattice

Identify the paddle wheel house lattice P40A/B and the vertical lattice pieces P41 from Board 6.

Assemble as shown Photo 23. Paint each housing white as shown Photo 24



Photo 23

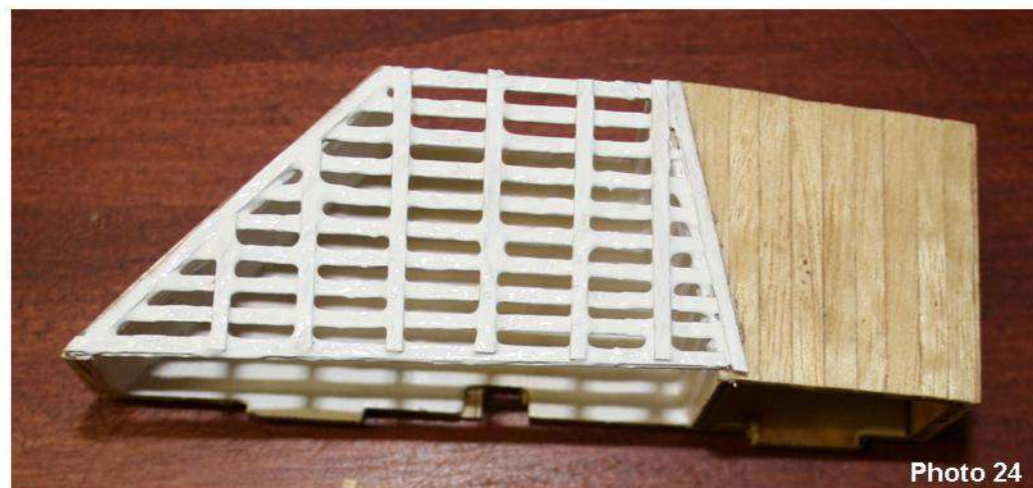


Photo 24

14.0 Drive Shaft Bearings

Identify the drive shaft bearings P42A/B on Board 1. Paint these parts white.

Identify the drive shaft P43—3mm dowel. Cut to a length of 150mm.

Identify the main deck P44 on Board 7. Trial fit the paddle wheel houses, drive shaft and bearings on the main deck—Photo 25. Locate the position of the bearings and glue in position on the main deck. Remove housings and drive shaft and store safely to be used later.



Photo 25

15.0 Crew Quarters

Identify the parts for the crew quarters P45, P46, P47 & P48 from Board 5.

Assemble as shown Photo 26. Paint the window a light grey. Use P67 1x1mm walnut trim around the window and door. Use P39 Silver Ash to plank the external surface. Photo 27. Use P77 1x2mm walnut trim around the base of the crew quarters.



Photo 26



Photo 27

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SHEET 7

16.0 Engine Bay Railings & Support

Identify the engine bay rails and support P49A/B & P50 from Board 5. Paint the parts white. Do not fit to the model yet.

17.0 Drive Shaft Pulley

Identify the drive shaft pulley P51 on Board 4. Paint black—Photo 28
Also paint the drive shaft P43 black.



Photo 28

18.0 Fit Main Deck

Fit and glue in place the main deck P44 to the hull.

19.0 Assemble Main Deck Parts

Fit the drive shaft through one bearing and fit the drive pulley to the drive shaft and slide the shaft through the second bearing. Fit the two paddle wheels to the drive shaft. Fractionally fit as needed. Glue in place.

Identify the drive belt P52. Remove adhesive side of tape and fit around the engine drive pulley P24 and the drive shaft pulley. Glue in place.

Fit and glue in place the crew quarters. Fit and glue in place the engine bay railings and support. See Photos 29, 30 and 31.

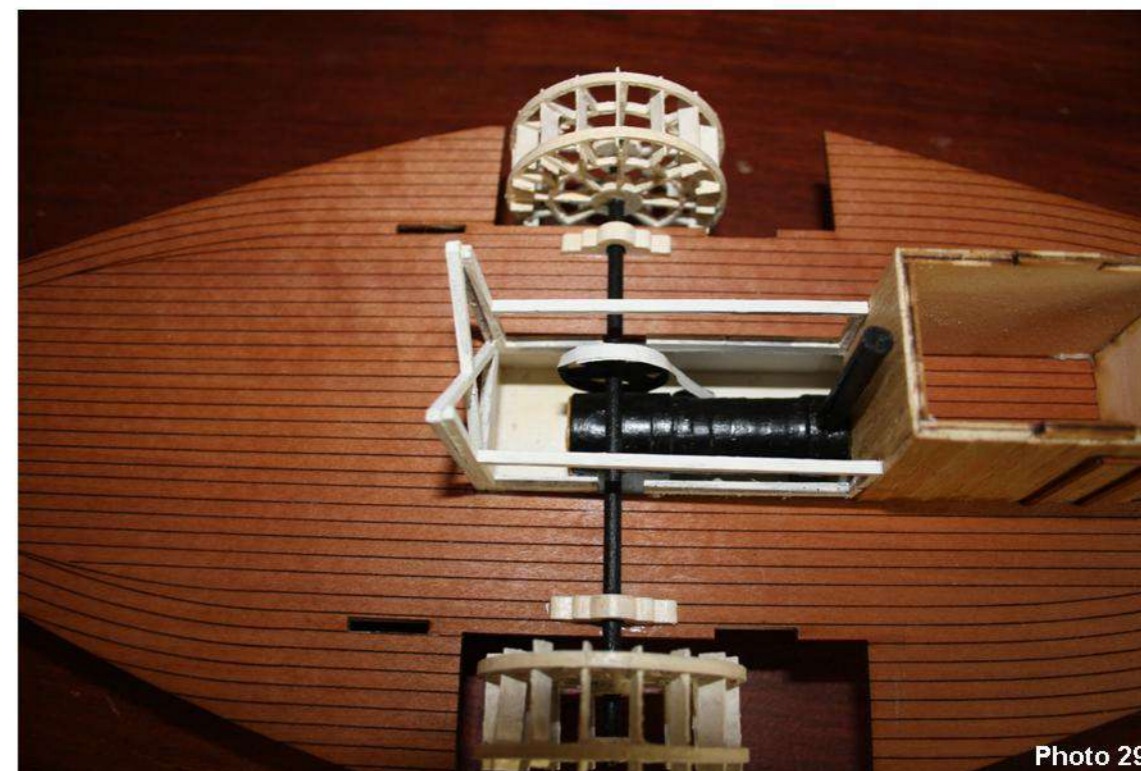


Photo 29

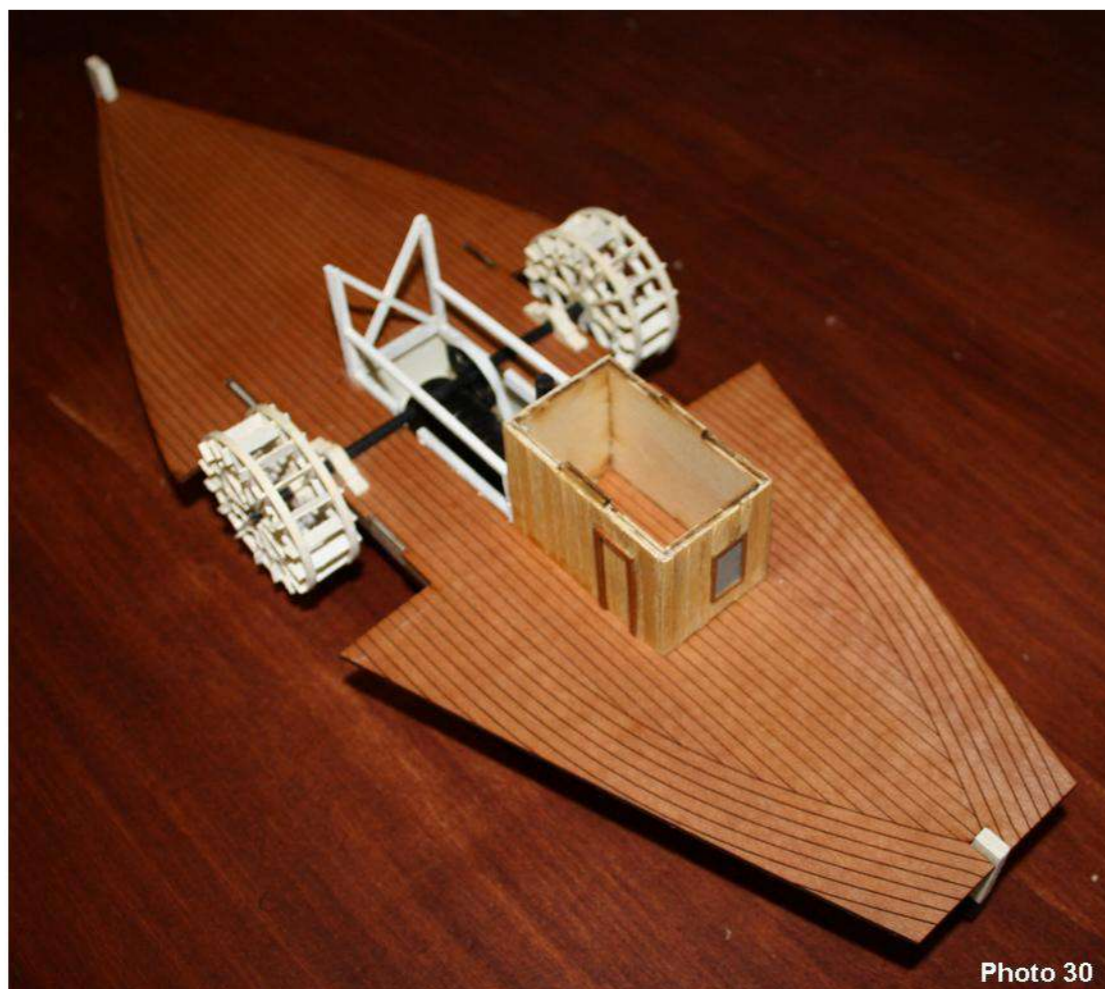


Photo 30

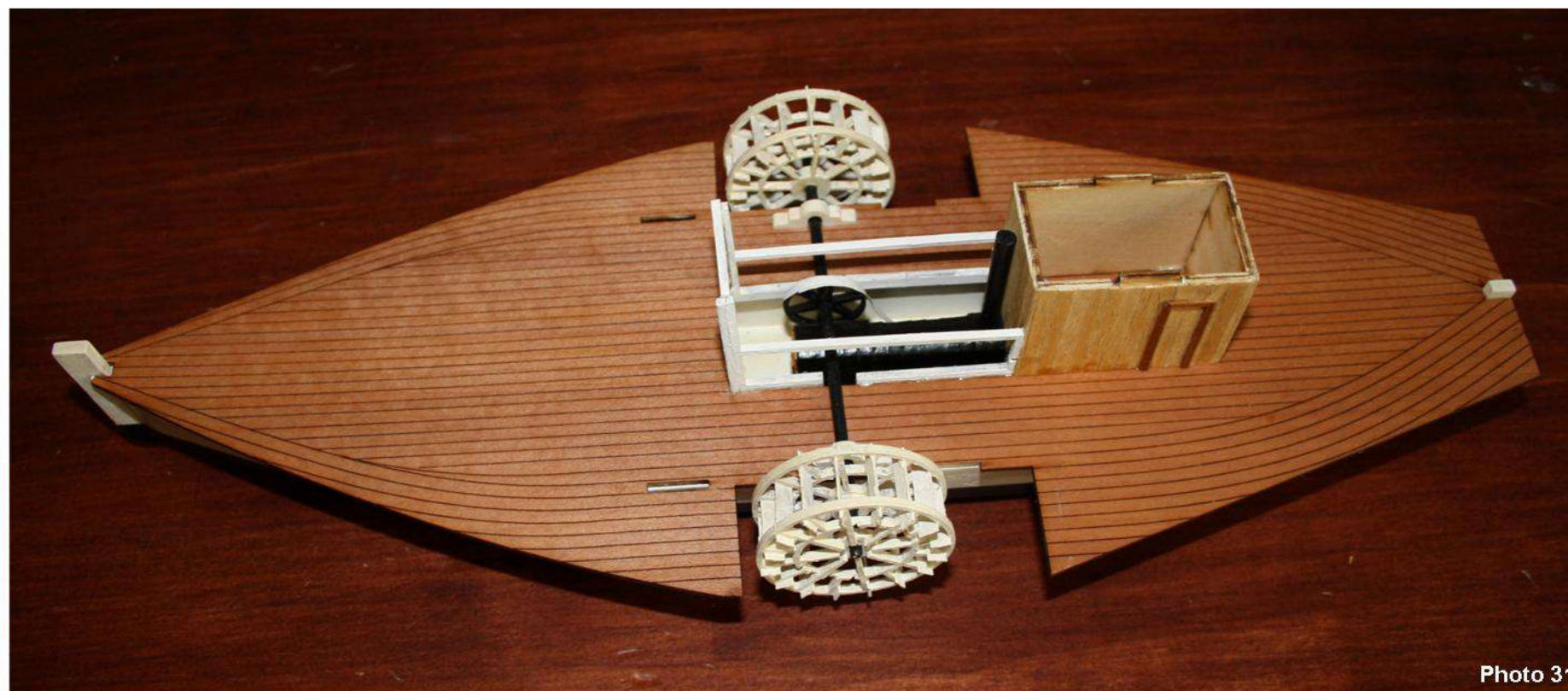


Photo 31

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SHEET 8

20.0 Upper Deck

Identify the upper deck P93 on Board 7. Fit and glue in place the paddle wheel housings.

Fit and glue in place the upper deck as shown Photo 32



Photo 32

21.0 Wheel House

Identify the wheel house parts P53, P54A/B, P55A/B, P56A/B & P57 on Board 5. Assemble the wheel house as shown Photo 33. Fit wheel house up-rights P58 on Board 5. Plank external sides of wheel house with P39 and fit name plate P76 on Board 6 —Photo 34. Paint inside of wheel house and use a wooden pin P59 to fix in helm P60 in place—Photo 35.

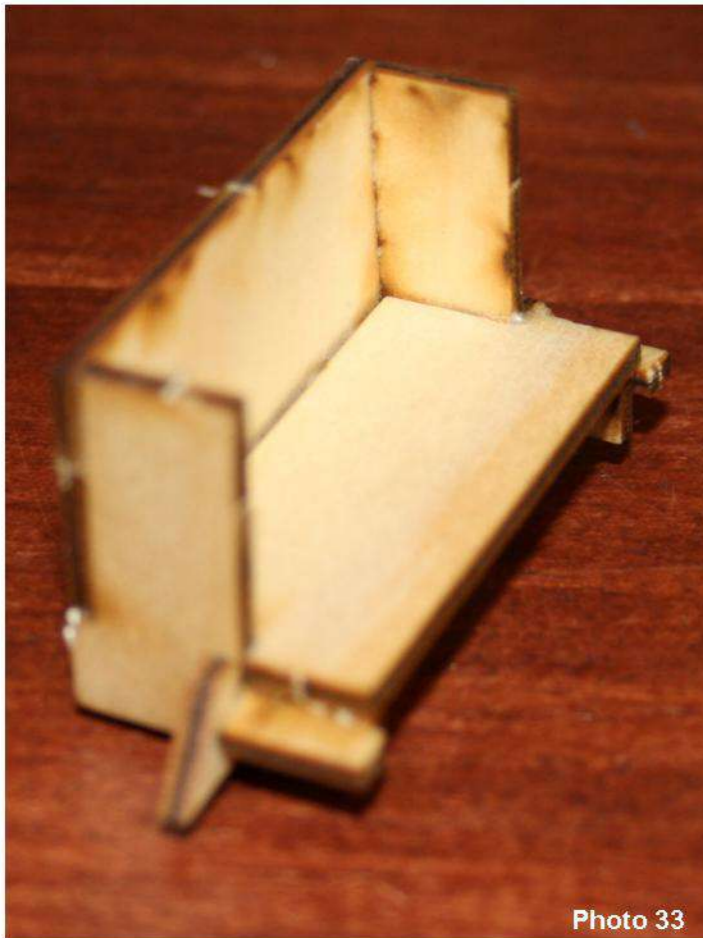


Photo 33



Photo 34

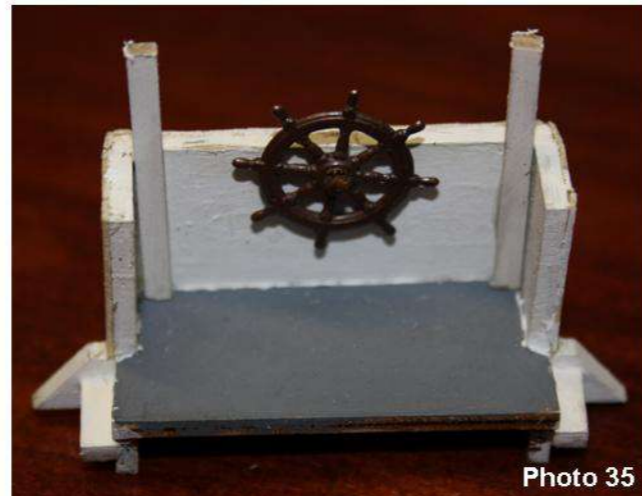


Photo 35

22.0 Upper Deck Cabins

Identify the upper deck cabin parts P61, P62, P63, P64, P65 & P66 on Board 5 Assemble as shown Photo 36. Paint windows light grey. Use P67 1x1mm walnut trim around the windows and doors. Use P39 Silver Ash to plank the external surface. Photos 36 & 37.

Paint underside of wheel house roof and underside of deck cabin roof white.



Photo 36



Photo 37

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SHEET 9

23.0 Fit Wheel House & Upper Deck Cabins

Fit the wheel house and upper deck cabins in place on the upper deck—Photo 38.

Fit 1x2mm walnut trim P77 around the base of the wheel house and cabins

Use P58 on Board 5 as a trim to fit around the edge of the upper deck cabins roof. Paint white.

Identify the boat lights P68A/B, P69A/B, P70A/B & P71A/B on Board 4. Assemble as shown Photos 38, 39 & 40. Paint and locate on wheel house roof as shown Photo 41.

For the steam engine stack cut a 30mm length of 5mm dowel P25 and paint black. Align the stack along the centre line of the deck cabins roof and with the stack on the engine below. Fix in place.

Fit eye pins P72 to the corners of the upper deck roof and the stack as shown Photo 38. Use 0.25mm cord P73 as support ties for the stack.

Identify P58 on Board 5 and fix as a trim around the edge of the upper deck. Paint white.



24.0 Life Buoys & Ladder

Identify the life buoys P78A/B on Board 4. Paint the name black first and then carefully paint the life buoy white. Fix in place central to the forward face of the paddle wheel houses—Photos 42 & 43.

Identify the ladder parts P79A/B on Board 4 and P80 on Board 6.

Assemble the ladder, paint white and fix in position as shown Photo 42



25.0 Rudder

Identify the rudder P81 on Board 5. Paint white. Identify the rudder hinges P82. Fix hinges to rudder and hull using super glue – Photo 44. Use the heads only of brass nails P83 to simulate fixing of rudder hinges. Fit an eye pin P72 to the top rear edge of rudder—Photo 44



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SHEET 10

26.0 Bollards

Identify the bollards P84A/B/C/B on Board 1. Paint white. Fix the bollards in place on the main deck fore & aft as shown Photo 45.

27.0 Main Deck Trim

Identify P58 on Board 5 as a trim to fit around the edge of the main deck. Paint white—Photo 45.

28.0 Steering Chain

Identify the steering chain P85 and the pulley wheels P86. Fix two pulley wheels on the aft trim as shown Photo 46. Fit another two pulley wheels at the rear edge of the paddle wheel housings—Photo 45. Drill a 3mm hole into the base of the crew quarters as shown Photo 45.

Take the length of chain and attach its mid-point to the eye pin on the rudder—Photo 47. Then run the remaining length of chain on each side around the two pulley wheels and into the pre-drilled hole—Photo 45. Place a dab of glue on each pulley wheel to hold the chain in place.

29.0 Sampson Posts

Identify the length of 4x4mm walnut P87. Cut two lengths 10mm long. Fit the fore sampson post 15mm behind the stem post and on the centre line of the deck. Place the stern sampson post 10mm in front of the stern post.

30.0 Rope Coils

Identify 1.5mm fawn cord P88. Cut length in half and make two rope coils. Fix as shown Photo 45.

31.0 Upper Deck Stanchions

Identify the stanchions P89. Fix in place around edge of upper deck as shown Photo 45. Fit 0.25mm cord P73 through the stanchion holes starting and finishing on either side of the ladder steps.

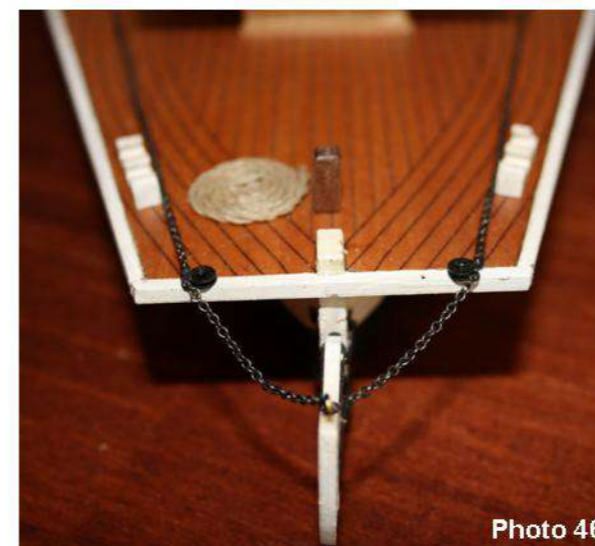


Photo 46

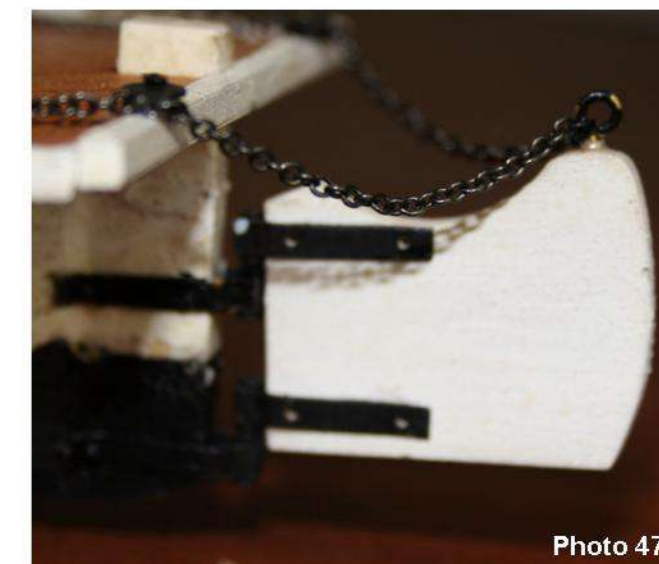


Photo 47

32.0 Foreward Hatch

Identify the hatch base P90 on Board 7. Use P58 on Board 5 as a trim to fit around the edge of the hatch. Paint the trim white. Fit the hatch in place as shown Photo 45.

33.0 Flag

Identify the length of 2mm dowel P91. Cut the dowel to 60mm and paint white. Fit an eye pin P72 at the top and base of the pole. Identify the flag P92. Attach the flag to a length of 0.25mm cord P73 and tie off to the eye pins—Photo 48. Fix the flag pole to the stem post as shown Photo 45.



Photo 45



Photo 48

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SHEET 11

34.0 Finishing Touches

Fit the *Isabella* name plates P76 on Board 6 to the paddle wheel lattice. Review your whole model and make any fine adjustments or touches of paint. Spray the whole model with a couple of coats of clear matt or satin polyurethane varnish. You are now ready to mount and display your model.



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SHEET 12