



**Pack 5** Kits 17-20

**BUILD THE ICONIC WORLD WAR II U-BOAT** 



### Pack 5 Assembly Instructions

Kit 17: Four torpedoes

Kit 18: The bow compartment

Kit 19: Hull extension

#### Kit 20: Bow bulkhead

hachette

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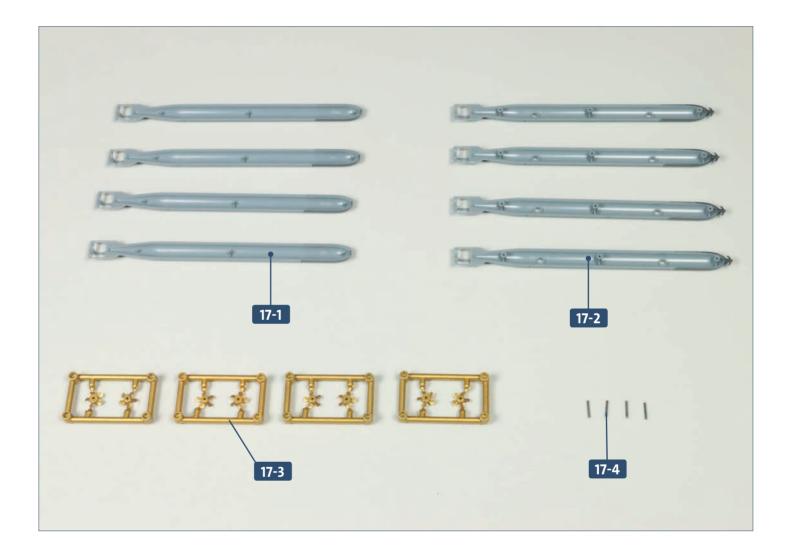
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WARNING: All parts belong to a kit. Collectors' item for adults. Not suitable for children under 14. Some parts may have sharp edges, please handle them with care.

### Kit 17: Four torpedos

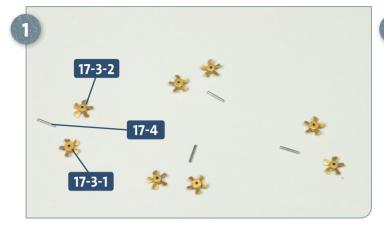
Four more torpedoes are equipped with a propeller each before their halves are joined. The torpedoes will be attached to the underside of the bow compartment in the next kit of the build.



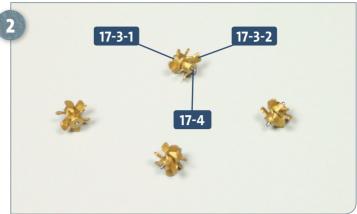
Parts reference list		
Part no.	Name	
17-1	Torpedo upper half (4)	
17-2	Torpedo lower half (4)	
17-3	Propeller screws (4)	
17-4	Propeller shafts (4)	

#### Kit 17: Four torpedoes

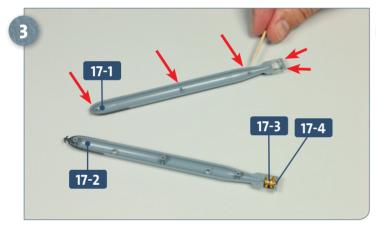
#### **STAGE 1** $\rightarrow$ Assembling the torpedoes



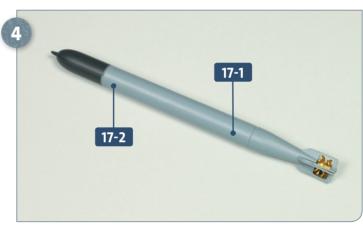
Detach the pairs of opposing screws **17-3-1** and **17-3-2** from the four frames **17-3** and arrange them in pairs. Place a shaft **17-4** with each pair, as shown above.



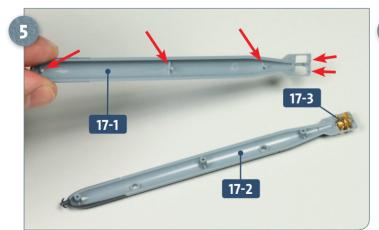
Join the two screws **17-3-1** and **17-3-2** of each pair with the propeller shaft **17-4** to create four identical propellers, as shown.



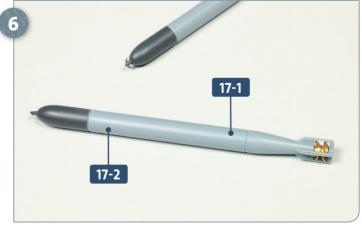
Take one upper torpedo half **17-1** and one lower half **17-2**. Insert a propeller **17-3** into the lower section **17-2**, so that the shaft **17-4** sits within the recess. Add some glue to the three small pegs along the upper section **17-1** and to the two by the propeller (arrows).



Place the upper half **17-1** onto the lower section of the torpedo **17-2** and gently press both parts together to secure.



Repeat the process for the second torpedo: place the propeller **17-3** in the lower section **17-2** and apply some glue to the three pegs along the upper section **17-1** and the two by the propeller (see arrows, above).



Place the upper half **17-1** onto the lower half **17-2**. The pegs of the upper section are pressed into the holes of the lower.

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#### Kit 17: Four torpedoes

Continue with the third torpedo: insert the propeller **17-3** into the lower section **17-2**, add glue to the three pegs along the upper section **17-1** and the two by the propeller. Then join the two halves together, as indicated by the arrows.



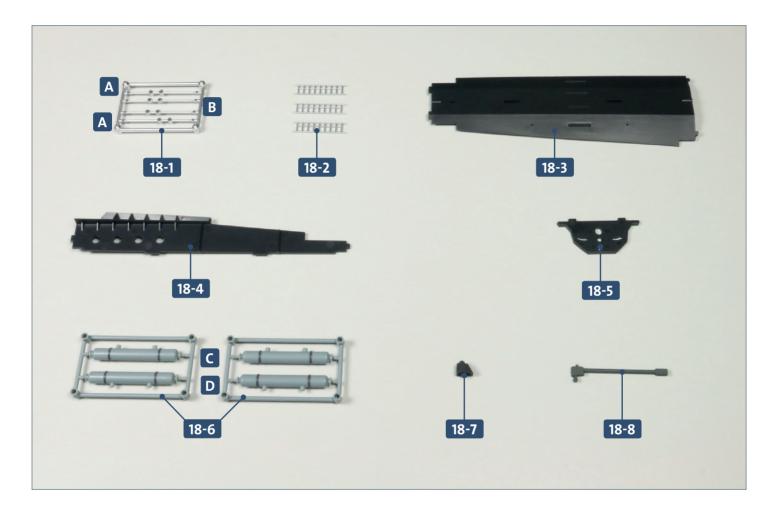
Do the same again for the last torpedo: place the propeller **17-3** in the end of the lower half of the torpedo **17-2**, add glue to the pegs on the upper half **17-1**, and fit the two halves together.

#### **COMPLETED WORK**



Four more torpedoes have been assembled. These will be attached to the model in the next part of the build.

Parts of the bunk frame and two compressed air bottles are assembled and installed in the bow compartment. Structural plates, parts for the bow hydroplane and four torpedoes are then attached to the underside of the deck.

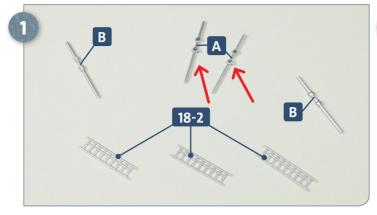


Parts reference list		
Name		
Frame struts (2 x A, 2 x B)		
Bunk frame		
Under deck torpedo plate		
Inner plate		
Forward plate		
Compressed air cylinders (2 x C, 2 x D)		
Bow hydroplane drive		
Bow elevator linkage		

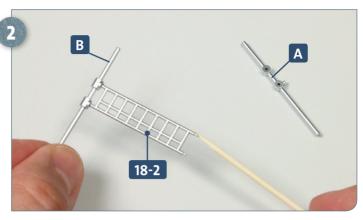


Screws			
Ref	No.	Dimensions	
EP	1+1	2.3 x 6 mm	

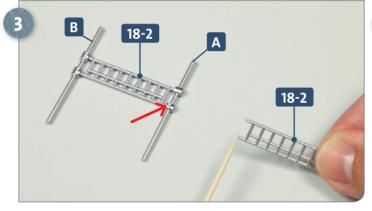
#### **STAGE 1** $\rightarrow$ Assembly and installation of the bunk



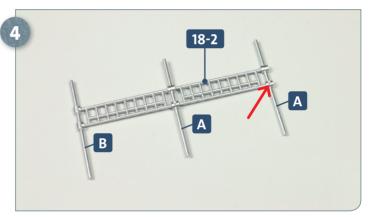
Remove the four bracing struts from frame **18-1** and arrange them on your work surface as shown: two **A** struts in the middle, the two **B** struts on the outside along with the three frames **18-2**. Note that the **A** struts have a peg in the middle (arrows).



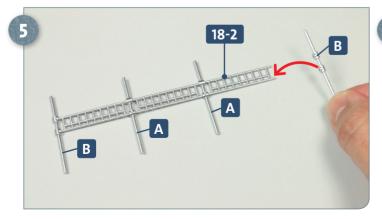
Fix the first bunk frame **18-2** to the two sockets on one of the strut **B** parts using some glue. Take care with the orientation of the grid. Also, apply some glue to the pegs on the other end of the frame.



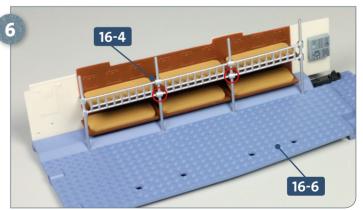
Glue the first **A** strut to the free end of the first bunk frame **18-2**. Check the orientation of strut **A**; the peg in the middle should be upwards as shown by the arrow above. Next, apply some glue to the pegs of the second bunk frame **18-2**.



Attach the second bunk frame **B** to the other side of strut **A**, as shown. The second strut **A** is then glued to the free end of the frame, in line with the first strut **A**. Again, the peg of strut **A** should face upwards.

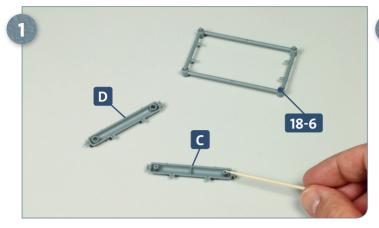


The third bunk frame **18-2** is attached to the free side of the second **A** strut. The second **B** strut is then glued to the end, as shown above.

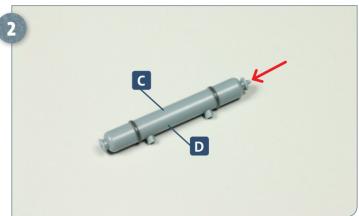


Take the bow compartment assembly. Glue the lower ends of the bunk frame assembly into the four holes in the deck **16-6**. The pegs on the back of the central struts **A** (circled) fit into the holes on the upper bunk supports **16-4**.

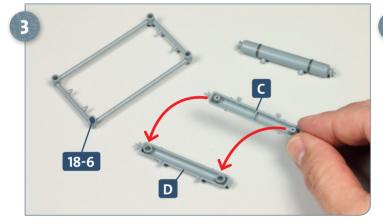
#### **STAGE 2** $\rightarrow$ The compressed air cylinders



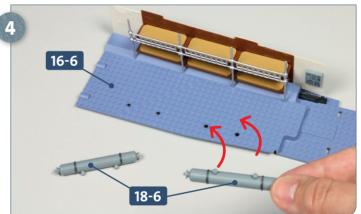
Take care when removing the two halves of the cylinder **C** and **D** from the frame **18-6** that the peg at one end isn't accidentally cut off (see arrow in the next photo). Apply a little glue to the pegs inside part **C**.



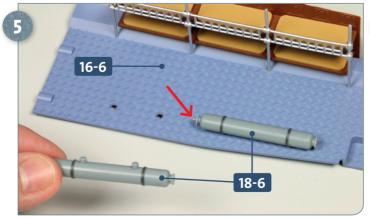
Join the two halves **C** and **D** and gently press together.



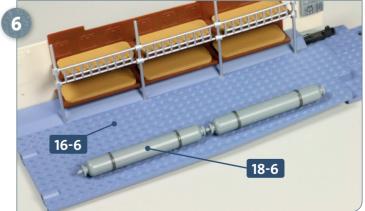
Repeat the process with the second cylinder **18-6**: remove both halves **C** and **D** from the frame, apply glue to the pegs of **C** and join as shown above.



Apply some glue to the two pegs on the first compressed air cylinder **18-6** and after reading the next step, fit these into the holes in the deck of the bow compartment **16-6**, as indicated by the two arrows.

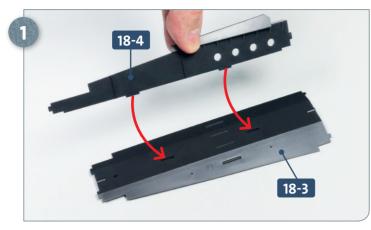


Pay attention to the orientation of the cylinder **18-6** as you fit it onto the deck **16-6**: the peg shown by the arrow goes on the left. Next, add some glue to the pegs of the second cylinder **18-6**.

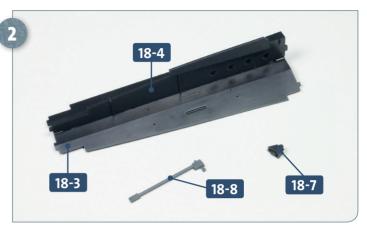


The second cylinder fits into the two remaining holes in the deck **16-6**. Once again, pay close attention to the orientation.

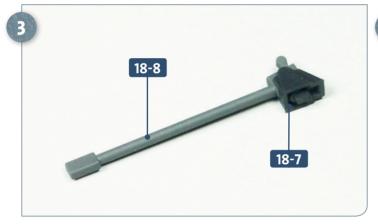
#### **STAGE 3** ightarrow Under deck preparation and torpedo placement



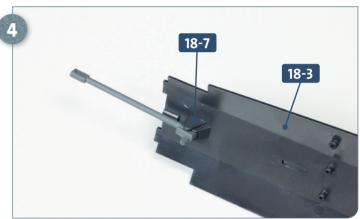
Place the under deck torpedo plate **18-3** upside down on your work surface. Take the inner plate **18-4**, apply some glue to both of its tabs, and fit these into the slots in the under deck plate **18-3** as indicated by the arrows.



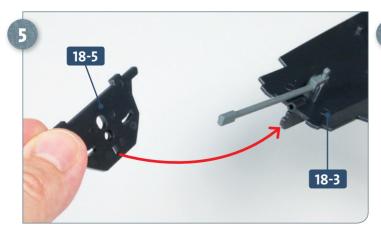
The inner plate **18-4** is fixed to the underside of plate **18-3**. Next, have ready the bow hydroplane drive **18-7** and elevator linkage rod **18-8** as shown.



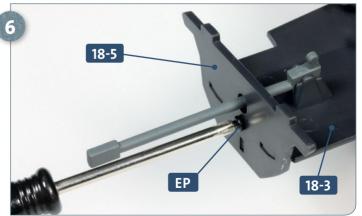
Apply some glue to the small peg on the linkage **18-8** and fit it into the hole of the drive **18-7**, as shown above. Make sure the linkage **18-8** is fully seated within part **18-7**.



After turning plate **18-3** over, apply some glue to the tab of drive **18-7** and insert it into the small slot at the top front of plate **18-3**.



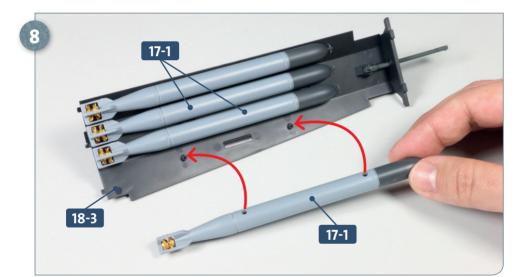
Test-fit the forward plate **18-5**, onto the assembly **18-3** as shown above. When sure of a good fit, apply glue inside the three slots in plate **18-5** and secure in place onto the front edge of plate **18-3**.



Once in place, secure the forward plate **18-5** to plate **18-3** with an **EP** screw through the central hole.

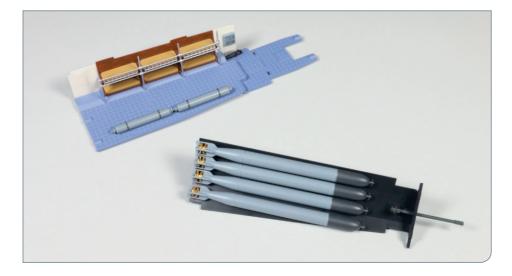


Take the four torpedoes **17-1** you assembled previously. Apply some glue to the first two pegs on torpedo plate **18-3**. Fit the holes on the first torpedo over these pegs, as shown.



In the same way, attach two more torpedoes 17-1 to the adjacent pairs of pegs on the plate 18-3. The final torpedo 17-1 is glued to the two outermost pegs on torpedo plate 18-3, as indicated by the two arrows.

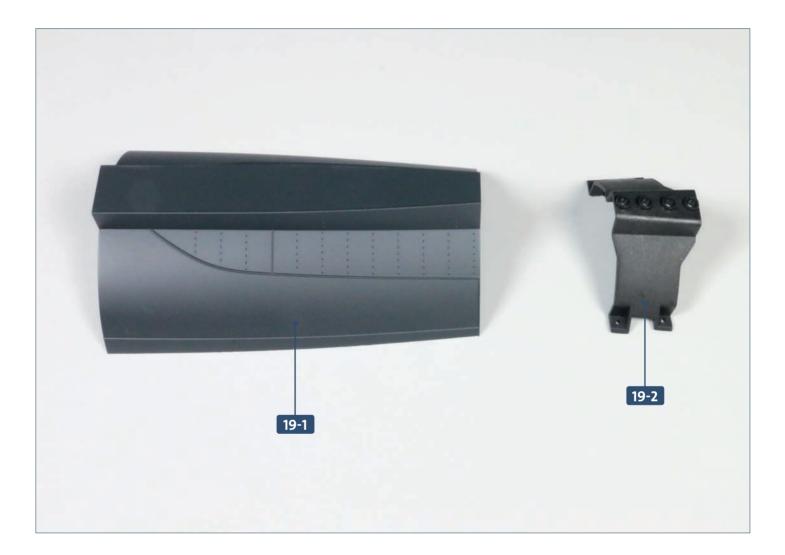
#### **COMPLETED WORK**



The assembly of the bow compartment continues, with the addition of frames to the bunks, the mounting of compressed air cylinders, and the preparation of the under deck assembly for attachment to the bow compartment.

### Kit 19: Hull extension

A connecting piece is attached to the next section of the hull, which is then attached to the existing hull assembly.



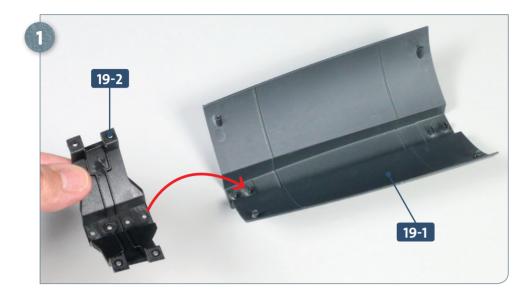


SCREWS		
Ref	No.	Dimensions
AM	8+1	2 x 4 mm

Parts reference list		
Part no.	Name	
19-1	Lower hull section	
19-2	Connector	

#### Kit 19: Hull extension

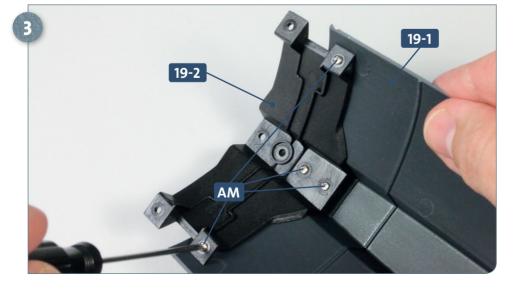
#### **STAGE 1** $\rightarrow$ Attaching the connector to the hull section



Place the lower hull section **19-1** on your work surface. Take the connector **19-2** and fit it to the front end of the lower hull section, as indicated by the arrow.



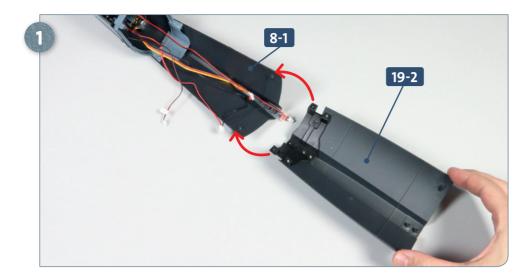
The connector **19-2** is correctly fitted onto the hull section **19-1** when the four holes on both parts (circled in red) are aligned. Have ready four **AM** screws.



Secure the connector **19-2** to the hull plate **19-1** using four **AM** screws, as shown in the photo.

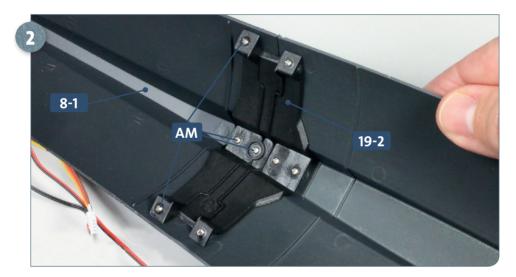
#### Kit 19: Hull extension

#### **STAGE 2** $\rightarrow$ Joining the new assembly to the hull structure

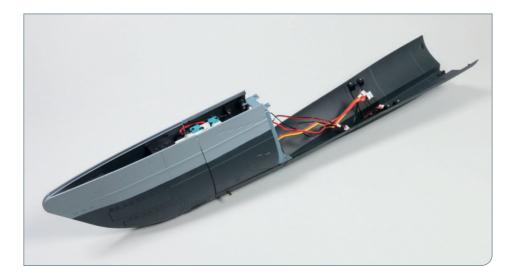


Take the main hull assembly you last worked on in kit 14. Guide the connector **19-2** to the back end of the hull **8-1**, as indicated by the arrows.

Join the connector **19-2** to the hull **8-1** using four **AM** screws in the positions as shown.

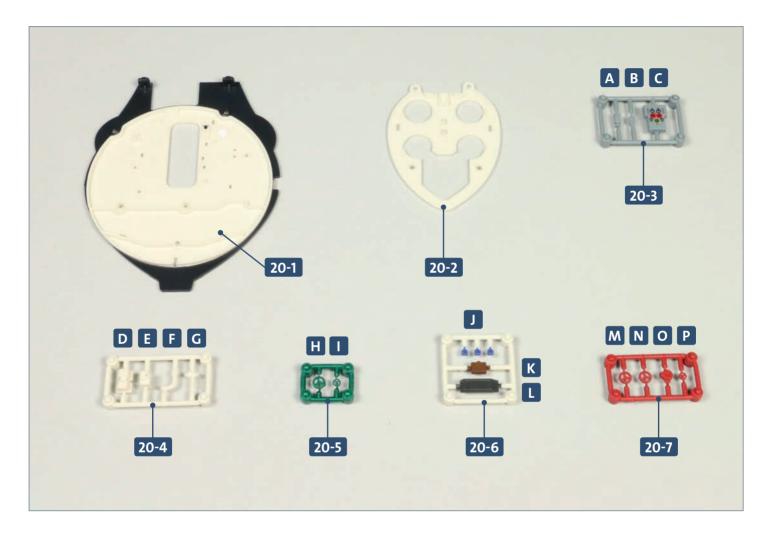


#### COMPLETED WORK



The hull has now been extended by the addition of a new section.

Various small parts are attached to the bow compartment bulkhead. The four torpedo tubes are connected using a mounting plate. The bow compartment is then assembled and inserted into the hull structure, and cables are routed.

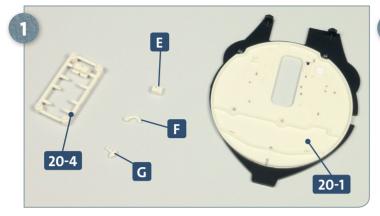


Parts reference list		
Part no.	Name	
20-1	Bow compartment bulkhead	
20-2	Forward torpedo tube mounting plate	
20-3	Frame (A, B, C)	
20-4	Frame (D, E, F, G)	
20-5	Frame (H, I)	
20-6	Frame (J, K, L)	
20-7	Frame (M, N, O, P)	

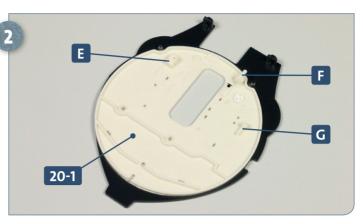
EP	
EP	

Screws			
Ref	No.	Dimensions	
EP	9+1	2.3 x 6 mm	

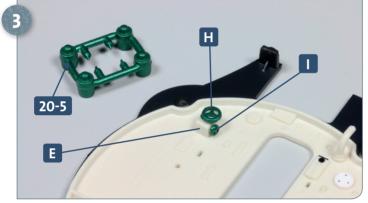
#### **STAGE 1** ightarrow Bow compartment bulkhead



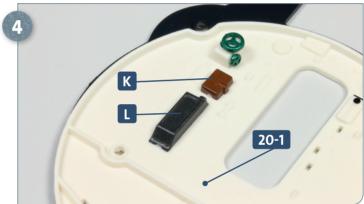
Place the bow compartment bulkhead **20-1** on your work surface. Take frame **20-4** and remove parts **E**, **F** and **G**, as shown above.



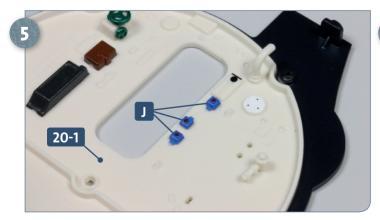
Glue parts **E**, **F** and **G** to the bulkhead **20-1** as shown in the photo.



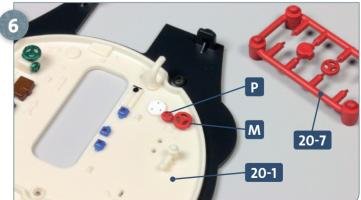
Take frame **20-5** and detach parts **H** and **I**. Add a little glue to the pegs of both parts, and fit them into the holes in part **E**, which you fitted in the previous step.



Remove parts K and L from frame **20-6**. Fit both parts to the bulkhead **20-1**, by adding a little glue to their pegs.



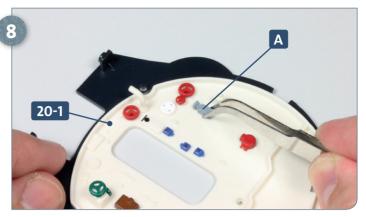
Next fit the three light switches, J: remove these from frame **20-6** and attach to the bulkhead **20-1** with a little glue, as shown.



Take frame **20-7** and detach the two low pressure valve handwheels, **M** and **P**. Glue these to the bulkhead **20-1** as shown above.

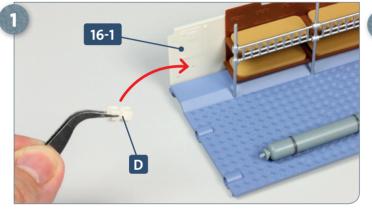


Detach the two remaining parts from frame **20-7**, **N** and **O**, and glue these to the bulkhead **20-1** as shown above.

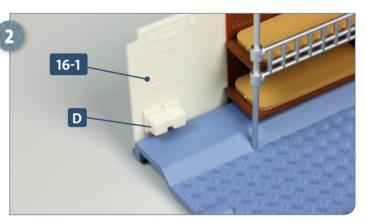


Finally, detach part A from frame **20-3** and glue it to the bulkhead **20-1** as shown above.

#### **STAGE 2** $\rightarrow$ Bulkhead box detail

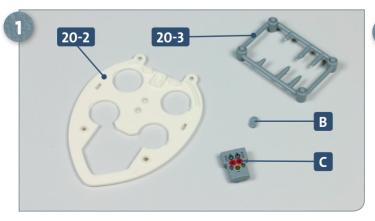


Now, take the main bow compartment assembly. Detach part **D** from frame **20-4**, apply some glue to each of its two pegs, and fit these into the holes in the rear bulkhead of the bow compartment **16-1**, as shown.



Part **D** is glued in position on the rear bulkhead of the bow compartment **16-1**.

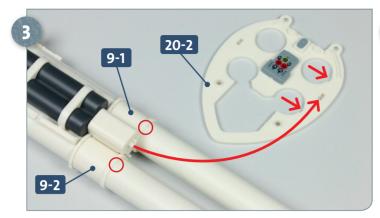
#### **STAGE 3** $\rightarrow$ Building the torpedo tube assembly



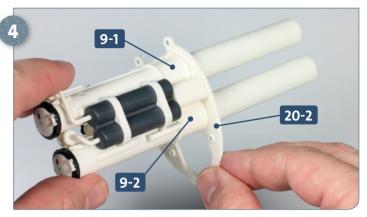
Place the forward mounting plate **20-2** on your work surface with the raised areas upwards. Detach parts **B** and **C** from frame **20-3**.



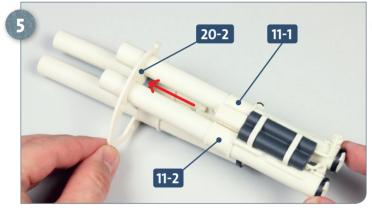
Glue part **B** into the recess at the top of the mounting plate **20-2**. Add some glue to the pegs of part **C** and glue these into the holes in the centre of the mounting plate.



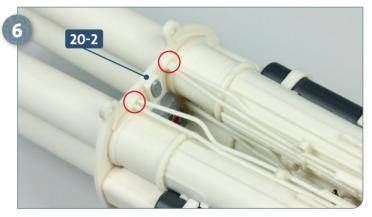
Take torpedo tube assembly 1 and 3, parts **9-1** and **9-2**. The wide peg fits into the slot in the mounting plate **20-2** (showed by the curved arrow, above). The two circled protrusions on the tubes fit in the notches in the mounting plate indicated by the two short arrows.



After test-fitting, apply a little glue to the contact areas and fix the torpedo tube assembly **9-1/9-2** to the mounting plate **20-2**, as shown in the photo above.

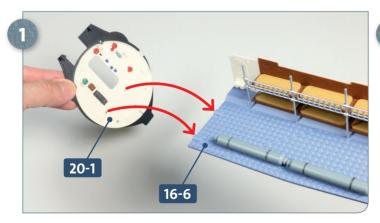


Repeat the process for torpedo assemblies 2 and 4, parts **11-1** and **11-2**: apply some glue to their contact surfaces, then fit to the mounting plate **20-2**, as shown.

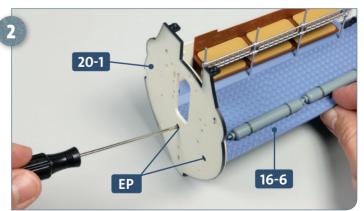


Detail view of the upper section of the mounting plate **20-2**: the ends of the two lines from 9 and 11 fit into the two recesses in the mounting plate (circled).

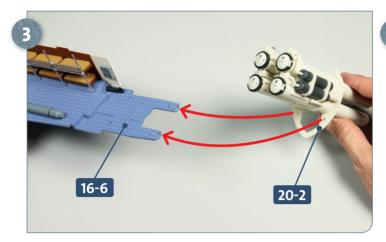
#### **STAGE 4** $\rightarrow$ Constructing the bow compartment and inserting it into the hull assembly



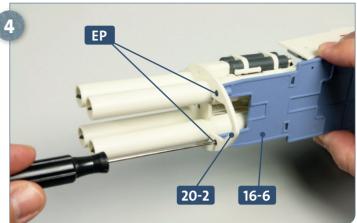
Fit the bow compartment bulkhead **20-1** to the bow compartment deck **16-6** as indicated by the two arrows.



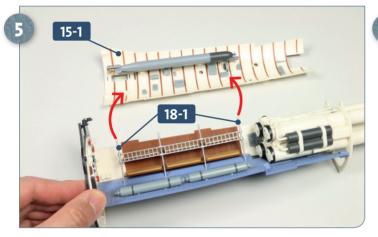
Secure the deck **16-6** to the bulkhead **20-1** with two **EP** screws through the back of the bulkhead, as shown.



Orient the torpedo mounting plate **20-2** as shown and offer it up to the bow compartment deck **16-6** so that the slots in plate **20-2** fit over the tabs at the end of deck **16-6**, as shown by the arrows.



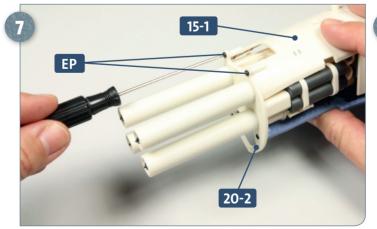
Secure the forward torpedo assembly **20-2** to the bow compartment **16-6** using two **EP** screws.



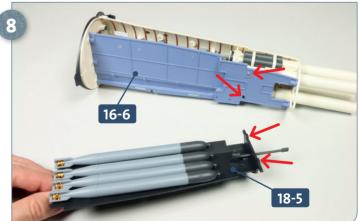
6 EP 20-1 5-1

Take the bow compartment deckhead assembly **15-1**. Join this to the bow compartment assembly by inserting the two upper ends of the outer bunk struts **18-1** into the raised sockets in the deckhead, as indicated by the arrows.

Fix the bulkhead **20-1** to the bow compartment deckhead **15-1** using two **EP** screws.

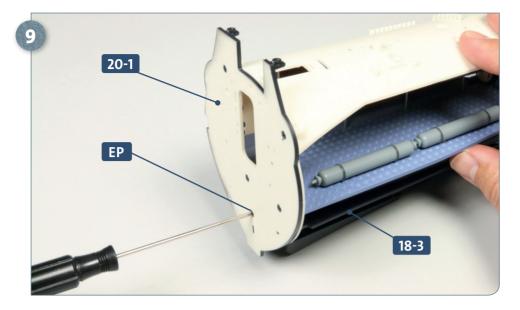


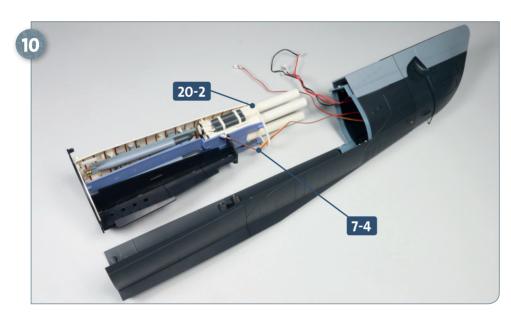
The forward torpedo mounting plate **20-2** is also attached to the bow compartment deckhead **15-1** using two **EP** screws.



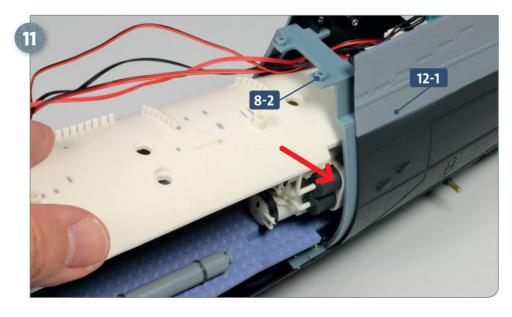
Turn the bow assembly onto its side. Take the under deck assembly, apply some glue to the two pegs of the forward plate **18-5** and fit these into the two recesses in the deck of the bow compartment **16-6** (indicated by the four arrows). See also next step.

Secure the rear end of the under deck assembly **18-3** to the bulkhead **20-1** using an **EP** screw. Note that there are tabs at the end of the assembly **18-3**, which fit into slots in the bulkhead **20-1**.





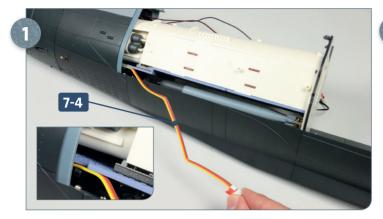
Now the bow compartment assembly is inserted into the main hull. Lay both assemblies side by side and route cable 7-4 (with the M-2 label) through the hole at the bottom of the forward plate **20-2**. Particular care is needed with the next step to ensure the parts are not damaged: it should not be rushed. It is important not to force the torpedo tube assembly into position as when it is correctly aligned and without any obstruction, it should slide fairly easily into place. Check that the torpedo tubes are correctly aligned and are parallel to each other and that the anchor chain is not in the way.



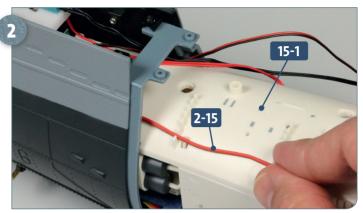
**Note:** If the bow compartment assembly gets stuck during insertion, don't force it. You may find it easiest to remove the screws at the top of connector **8-2** and lightly press down so that it flexes slightly at the side. Once clear of any obstruction, slide the bow compartment assembly into position and reattach any parts.

The bow compartment assembly is correctly inserted when it is pushed in as far as shown in the photo: the position of the ejection canisters on the torpedo tubes, marked by the arrow, provides a good guide. If there are still problems, it may help to temporarily loosen or remove plates **10-1** and **10-2**.

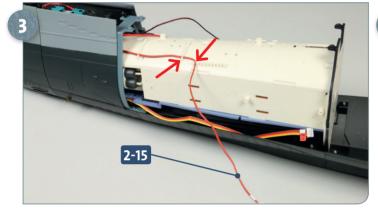
#### **STAGE 5** $\rightarrow$ Routeing the cables



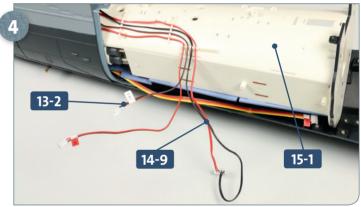
Locate cable **7-4** with label **M-2** and route it aft. The inset photo above shows how the cable is fed out beneath the floor of the bow compartment.



Study the photo in step 4 carefully to note the positioning of the cables in their guides. First, cable **2-15**, labelled **M-1**, is fitted into the outer slot of the forward cable guide on top of the bow compartment deckhead.

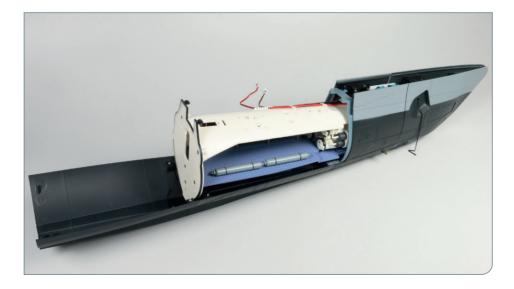


Cable 2-15, labelled M-1, is then routed through the next two guides as shown by the arrows.



Cables **13-2** (M-31) and **14-9** (one red and one black) are routed through the next recesses in the cable guides on the bow compartment deckhead **15-1**, as shown.

#### **COMPLETED WORK**



The assembly of the bow compartment is complete and has been inserted into the hull. The cables have been routed through the guides around the outside of the compartment.