Pack 10 | Build Instructions

Your 1:200 scale model of the legendary battleship Bismarck is packed with intricate details which precisely replicate every aspect of this state-of-the-art warship. Each piece has been created using premium quality materials to bring maximum enjoyment during your complete build.

In your tenth model pack, you will assemble:

STAGE 105: A HULL SECTION AND DECK DETAILS
STAGE 106: 2CM AND 3.7CM FLAK GUNS
STAGE 107: THE AFT SIGNAL BRIDGE
STAGE 108: THE SIXTH 15CM GUN TURRET
STAGE 109: THE MOTOR FOR THE SIXTH 15CM GUN TURRET
STAGE 110: THE THIRD 38CM GUN TURRET

STAGE 111: HULL SECTION AND TURRET HOUSING
STAGE 112: HULL SECTION AND GUN PARTS
STAGE 113: GEARBOX FOR THE NEXT 38CM TWIN TURRET
STAGE 114: THE BILGE KEELS
STAGE 115: TWO HULL SECTIONS
STAGE 116: TWO HULL SECTIONS
Advice from the experts

Spare screws are included with each part. Occasionally, you may be instructed to keep spare or unused screws for a later stage. Keep these spares in a safe place and label them correctly.

Please make sure you don’t mix up the screws. They look quite similar, but the threads do vary slightly. Using the wrong screws may damage the parts.

When securing parts together using multiple screws, fit each screw loosely to ensure all the parts are correctly aligned before gently tightening them firmly, but not overtight, in the order in which you placed them.

Your screwdriver can be magnetised by stroking it with a magnet (fridge magnet, etc.) enabling it to hold the screws and make assembly easier.

If a screw is tight going into a metal part, do not force it as you may shear the head off. Remove it and put a tiny smear of Vaseline, soap or light oil on the thread. That will lubricate it and make it easier to drive home.

During the course of this build, you will receive many pieces that you will assemble immediately – following the instructions in the corresponding stage – and other pieces that you should store safely to one side, for use in future assembly stages.
STAGE 105
A HULL SECTION AND DECK DETAILS

COMPONENTS CHECKLIST
105-01: Lower port hull section
105-02: Port splinter protection
105-03: Starboard splinter protection
105-04: Lockers x 6
105-05: Lifebuoys x 6
105-06: Storage cylinders for sub calibre rounds x 4
105-07: Skylights x 9
105-08: Paravanes x 8 (A to F)
105-09: Fire hoses x 3
105-10: Deck details (G to K)
105-11: Two ladders (LL: left and LR: right)
PM: Four 2 x 4mm PM screws

01. FITTING THE HULL SECTION

Take the hull assembly from the previous stage. Fit hull section 105-01 next to hull section 96-01 and keel section 104-01, so that the screw sockets fit over each other.

Fix the hull sections together with three 2 x 4mm PM screws.
02. SPLINTER PROTECTION, LIFEBUOYS, CYLINDERS AND LOCKERS

Fit the port splinter protection 105-02 on the aft superstructure. Tabs on the lower edge of part 105-02 fit into recesses in the decking 102-01. Glue in place.

Fit the starboard splinter protection 105-03 on the other side of the aft superstructure. Again, tabs on part 105-03 fit into recesses in the decking 102-01. Glue in place.

On the port side of the aft superstructure, check the fit of three lockers from frame 105-04 around the side of the deck, near the splinter protection on the decking 102-01. Small pegs on the base of the lockers fit into recesses in the decking. Glue in place.

Similarly, glue three lockers from frame 105-04 to the starboard side of the aft superstructure.

Take three lifebuoys from frame 105-05 and identify their positions on the port side: two are fitted on the wall of the superstructure deck 102-02 and one is fitted on the wall of part 94-01. Glue in place.

Similarly, three more lifebuoys from frame 105-05 are fitted on the deck walls on the starboard side.
Take two of the storage cylinders from frame 105-06 and fit them to the port side of the aft superstructure, on the decking 102-01, near the opening for the gun turret. The detail faces outwards. Glue in place.

Fit the other two storage cylinders from frame 105-06 on the starboard side of the aft superstructure, on the decking 102-01. Again, the detail on the sides of the cylinders faces outwards. Glue in place.

Take four lockers from frame 105-07. Smooth any rough edges. They are positioned down the side of the aft superstructure, on decking 99-01. Glue the pegs on the lockers into the recesses in the decking.

Fit the remaining five lockers from frame 105-07 on the starboard side of the superstructure, on decking 99-01. Glue the pegs on the bases of the lockers in place, as shown.

Cut a paravane B from frame 105-08. Identify the position on the wall of the deck 102-02 and glue in place, as shown.

Paravanes D and C from frame 105-08 are fitted on the same wall, on either side of the first paravane. Identify the fixing points and glue in place, as shown.
Paravanes A and E from frame 105-08 are fitted on the starboard side of the superstructure, on the wall 102-02. Glue in place, pointing away from each other, as shown.

Two paravanes F are fitted on the port side of the forward superstructure, on the deck wall 21-06, pointing away from each other, as shown. Glue in place.

The last paravane F is fitted on the starboard side of the forward superstructure, on the deck wall 21-06, as shown. Glue in place.

Returning to the aft superstructure, identify the fixing point for the first hose reel from frame 105-09, on the deck wall between the two aft paravanes on the port side, fitted in steps 1 and 2.

Two more fire hose reels from frame 105-09 are fitted to the wall of the superstructure deck 102-02 on the starboard side of the aft superstructure. Glue in place.

Remove the fan I from frame 105-10. Identify its position against part D from frame 98-02 (fitted in stage 98), with the base on the decking 102-01. Glue in place.
Take parts **G** and **H** from frame **105-10** and identify their positions on either side of the central hangar **94-01**. Glue in place, with the bases of parts **G** and **H** on the decking **102-01**.

Identify the position for the mainmast winch, part **K** from frame **105-10**, and the ship's bell, part **J** from frame **105-10**. Pegs on part **K** and the base of part **J** fit into recesses in the roof of the hangar **94-01**, between the supports for the boats. Glue in place.

Take the left ladder **LL** from frame **105-11** and identify the fixing point on the decking **64-01**, near the 15cm gun fitted on the port side in stage 98. Glue in place.

The right ladder **LR** from frame **105-11** is fitted on the starboard side of the superstructure near the barbette fitted in stage 64. Glue in place.

**Completed work**

Various details have been fitted to the aft superstructure, shown here. Paravanes have been fitted to the forward superstructure and another section has been added to the hull assembly (not shown).
STAGE 106
2cm AND 3.7cm FLAK GUNS

COMPONENTS CHECKLIST
106-01: Lower starboard hull section
106-02: Mounts for 2cm flak guns (A) and lookout binoculars (B)
106-03: Pipework (C, F), lockers (D, E) and splinter protection (G to J)
106-04: Splinter protection (M, N) and cabinets (K, L)
106-05: Boat mounts (O to Q)
106-06: Flak control station D (R to X)
106-07: Eight 3.7cm anti-aircraft guns
106-08: Four large rope reels (Y, Z)
106-09: Two 2cm army-style flak guns and bases
106-10: Two railings
106-11: Rope
PM: Four 2 x 4mm PM screws

01. FITTING THE NEXT HULL SECTION

Position the hull section 106-01 next to the keel section 104-01 and hull section 98-01, ensuring that the screw sockets fit over each other.

Fix the hull section 106-01 in place using three 2 x 4mm PM screws.
02. 2cm FLAK GUNS AND OTHER DETAILS

Take the binoculars, B, from frame 106-02. Identify the fixing points on the deck covering 97-03 on the bridge in front of the aft control room. Glue in place.

Cut the two gun mounts A from frame 106-02. Identify the fixing point on the decking 97-01 behind the aft control room. Glue in place, as shown.

Take the two circular gun bases from the metal frame 106-09. Bend the seats up at right angles along the marked lines, as shown.

Take the first 2cm flak gun from the metal frame 106-09. Bend the barrel section of the part at right angles twice, at the points indicated by the arrows.

Bend the sides of the gun upwards at right angles. Bend the two flanges at the rear of the gun at right angles over the top of the gun (arrows). Repeat to make a second 2cm flak gun.

With the seat on the outside, see step 7, fit the first gun base from step 3 on the gun mount A fitted in step 2. Glue in place. Position one of the 2cm flak guns from step 5 on top of it and glue in place.
Repeat step 6 on the other side of the model to fit the second gun base and 2cm flak gun on the gun mount A fitted in step 2.

Cut the pipework C and F from frame 106-03 and identify the fixing points on the decking wall 94-01. Glue in place, as shown.

Take splinter protection part I from frame 106-03 and fix it in place across the decking 97-05 as shown. Pegs on the base of part I fit into recesses in the decking. Glue in place. Take locker E from frame 106-03 and glue in place next to part I.

Similarly, glue splinter protection part J and locker D in place on decking 97-05 on the other side of the aft superstructure.

The shorter lengths of splinter protection G and H are positioned forward of splinter protection I and J. Glue in place on the decking 97-05, as shown.

Remove locker K from frame 106-04. Identify the fixing point on the deck wall 102-02 and glue in place, as shown.
Similarly, take locker L from frame 106-04 and glue in place on the deck wall 102-02 on the other side of the aft superstructure.

Two short lengths of splinter protection, parts M and N from frame 106-04 fit on either side of the model, close to the longer lengths of splinter protection. Glue in place, as shown.

**03. BOAT SUPPORTS AND ANTI-AIRCRAFT CONTROL STATION**

Take the first boat support, part O from frame 106-05. Identify the fixing point on the port side of the central hangar 94-01 and glue in place as shown.

Boat supports P and Q from frame 106-05 are also fitted on the port side of the central hangar. Check that you have them in the correct order and glue in place.

The second set of boat supports O, P and Q from frame 106-05 are fitted on the starboard side of the central hangar 94-01. Check the positions carefully and glue in place.

Take the catwalk C1 from frame 104-05, supplied with stage 104. Check the fit along the outer brackets of the boat supports O, P and Q on the port side of the aft superstructure. Glue in place.
Catwalk C2 from frame 104-05 fits on the starboard side of the aft superstructure on the ends of the boat supports O, P and Q. Glue in place, as shown.

Take the vent unit, part R from frame 106-06. Identify the fixing point at the rear of the aft superstructure on the decking 97-05. Glue in place.

Take part X, the front half of flak control station D, from frame 106-06, and identify the fixing point on the decking 97-05. Glue in place.

Part W from frame 106-06, the rear half of flak control station D, fits over the edge of the superstructure deck. Glue to part X, as shown.

Take the walkway, part T from frame 106-06, and check how it fits over parts W and X and sits on the ledge. Glue in place, as shown.

Take the two semicircular railings, 106-10 and check the fit around the edge of walkway T. Pegs on the railing fit into holes in part T. Glue in place, as shown. Note the recess where part S from frame 106-06 will be fitted in the next step (arrow).
Take the rangefinder U and vent S from the frame 106-06. Check the fit of part U on top of flak control station D. The vent S fits on the side of the flak control station. Glue in place, as shown.

Rangefinder V from the frame 106-06 fits on top of the anti-aircraft control station 94-05 on the searchlight platform of the aft superstructure. Glue in place, as shown.

04. 3.7cm FLAK GUNS AND ROPE REELS

Separate the eight 3.7cm flak guns and their mounts from the two identical frames 106-07. Make eight identical guns by gluing a flak gun to each mount, as shown.

The first and second 3.7cm flak guns 106-07 are glued on decking 102-01 and 97-05 on the port side of the aft superstructure.

Similarly, the next two flak guns 106-07 are glued on decking 102-01 and 97-05 on the starboard side of the aft superstructure.

The fifth and sixth 3.7cm flak guns 106-07 fit on either side of the forward superstructure on the first section of the superstructure deck 21-01.
The last two 3.7 cm guns 106-07 are glued to the deck covering 40-05 of the searchlight platform on each side of the battle mast on the forward superstructure, as shown.

Separate a part Z and a part Y from the frame 106-08. Check how they fit together to create a rope reel (inset), and glue them together. Wrap some of the rope 106-11 around the reel.

When the reel is full, cut the rope and glue the end in place to prevent it from unwinding. Repeat to make a total of four rope reels.

Identify the positions for the first two rope reels near the rear edge of the upper deck 99-01, on the port side, as shown. Glue in place.

Similarly, glue the two remaining rope reels in place on the starboard side near the rear edge of the upper deck 99-01.

Completed work
Further details, including flak guns and a flak control station, have been added to the aft superstructure. Flak guns have been fitted to the forward superstructure and another section has been added to the hull (not shown).
STAGE 107
THE AFT SIGNAL BRIDGE

COMPONENTS CHECKLIST
107-01: Upper port hull section
107-02: Connector
107-03: Aft signal bridge
107-04: Two life rafts
107-05: Supports for the signal bridge (A: left and right)
107-06: Details for the signal bridge (B to E)
107-07: Railings and a ladder (F to K)
PM: Five 2 x 4m PM screws

01. FITTING THE NEXT HULL SECTION

Take the hull section 107-01 and position it above hull section 105-01, so that the screw holes on part 107-01 align with the screw sockets on part 105-01, as indicated.

Fix the parts together using two 2 x 4mm PM screws.
Take connector 107-02 and fit it over the raised screw sockets of hull sections 107-01 and 100-01, as shown.

Fix the connector 107-02 in place using two 2 x 4mm PM screws.

**02. ASSEMBLING THE AFT SIGNAL BRIDGE**

Take the two signal bridge supports AL and AR from frame 107-05. Identify the fixing points on the central hangar 94-01. Note that the small pegs on the top bars should point outwards (arrows). Glue in place, as shown.

Take the two life rafts 107-04 and glue them to the rear of the aft signal bridge 107-03, as shown.

Take the small locker C from frame 107-06. Identify the fixing point inside the port side of the signal bridge and glue in place, as shown.

Take the small locker D from frame 107-06 and glue in place inside the starboard side of the signal bridge.
The shelter, part E from frame 107-06, fits near the forward edge of the signal bridge. Glue in place, as shown.

Part B from frame 107-06 is glued to the top of shelter E, as shown.

03. Railings and Companionway

Take the two rails FR and FL from the frame 107-07 and bend them twice at right angles to make two mirror-image, almost identical rails.

Take railing J from frame 107-07 and bend along the fold lines as shown. For the exact angle, see step 8 on the next page.

Take the ladder, part I from frame 107-07. Bend the two handrails upwards at right angles. Bend the platform down at right angles, then bend the peg down at right angles (arrow). At the foot of the ladder, bend the peg slightly, as shown.

Use a pair of fine pointed tweezers to bend the six steps on the ladder so that they are horizontal.
Check the fit of the rails **FR** and **FL** on the appropriate side of the signal bridge **107-03**. Glue in place, as shown.

The railing **H** from the frame **107-07** fits at the front of the signal bridge **107-03**, slightly offset to starboard. Glue in place, as shown.

The railing **G** from frame **107-07** fits at the front of the signal bridge **107-03**, slightly offset to port, as shown. Glue in place.

Fit railing **J** from frame **107-07** to the aft side of the signal bridge **107-03**. Check that the angle is correct and glue in place.

Fit the signal bridge **107-03** on to the two supports **AR** and **AL**. When you are happy with the fit, glue in place, as shown.

The ladder **I** runs from the searchlight platform **94-03** up to the aft signal bridge **107-03**. The bent pegs fit into the platform and the signal bridge. When you are happy with the fit, apply glue to the pegs and fix in place.
Glue two of the railings K from frame 107-07 in front of the 15cm twin gun barbette on the port side of the sixth upper deck section 64-01, as shown.

Completed work
The aft signal bridge has been assembled and fitted to the aft superstructure. Another section has been added to the hull (not shown).
STAGE 108
THE SIXTH 15cm GUN TURRET

COMPONENTS CHECKLIST
108-01: Upper starboard hull section
108-02: Connector
108-03: 15cm gun housing (STB III)
108-04: Twin gun barrels
108-05: Base plate of gun turret
108-06: Cog
108-07: Large rope reel
108-08: Four plastic sleeves

- Five PM 2 x 4mm screws (1 spare)
- Two PB 2 x 5mm screws (1 spare)
- Four PB 1.7 x 6mm screws (1 spare)
- Five PB 2.3 x 6mm screws (1 spare)

01. FITTING THE NEXT HULL SECTION

Take the upper starboard hull section 108-01 and fit it against the lower hull section 106-01 as indicated.

Fix the hull section 108-01 to hull section 106-01 using two PM 2 x 4mm screws, as shown.
02. ASSEMBLING AND FITTING THE 15cm GUN TURRET

01

Take the gun housing of the sixth 15cm gun turret 108-03 and place it upside down on your work surface. Fit the gun barrels 108-04 through the holes in the front of the gun housing, as indicated.

02

When correctly fitted, the pegs on the side of the twin barrels 108-04 fit into recesses in the top of the gun housing 108-03 (arrows).

03

Fit the base plate 108-05 on the underside of the turret 108-03. You will need a PB 2 x 5mm screw.

04

Fix the base plate 108-05 in place using the PB 2 x 5mm screw, as shown.

Take the connector 108-02 and fit it over the raised screw sockets on hull sections 103-01 and 108-01, as shown.

Fix the connector 108-02 in place using two PM 2 x 4mm screws.
Put the aft superstructure on your worktop. Identify the barbette for the STB III gun turret (108-03) on the starboard side of the superstructure (arrow).

Fit the 15cm gun turret 108-03 on the barbette 64-02, which is fitted into a hole in the sixth upper deck section 64-01.

Tip up the superstructure so that you can access the base plate 108-05. Fit the cog section 108-06 on the base plate: the screw holes should be aligned and the rectangular tab on the base plate fits into the recess in the cog (arrows).

Fix the cog 108-06 in place using three PB 1.7 x 6mm screws, as shown.

03. ASSEMBLING THE ROPE REEL

Cut the two parts, A and B, from frame 108-07. Check how the parts fit together, as indicated. Use a little superglue to fix the parts together.

Take the ‘rope’ 106-11, supplied with stage 106, and wrap two or three layers around the reel.
Cut the yarn and glue the end in place on the reel with a little superglue.

Identify the fixing point for the rope reel, at the rear of the aft superstructure on deck section 97-05. Glue in place.

**04. FITTING THE SLEEVE GRIPS TO THE 10.5cm AA GUNS**

Take one of the 10.5cm AA guns from stage 86. You will need a sleeve 108-08 and a PB 2.3 x 6mm screw.

Fit the PB 2.3 x 6mm screw into the hole in the centre of the base plate 86-04. The sleeve 108-08 ensures that the screw head is the right distance from the base of the gun and will provide grip when the gun is fitted to the deck.

Turn the AA gun 86-02 over, and fit the plastic sleeve on to the PB 2.3 x 6mm screw, as shown.

Repeat steps 2 and 3 to fit sleeves on three more PB 2.3 x 6mm screws and fix them to the base of the three remaining AA guns, as shown.
Take the forward superstructure and fit two of the AA guns 86-02 in the appropriate holes on the port side: push the guns down firmly so that the PB screws go through the holes and the sleeves provide grip on the sides of the holes.

Fit the last two guns in place on the starboard side of the forward superstructure in the same way. The guns can rotate, but remain held in place.

**Completed work**

Another section of the hull has been fitted to the model. The sixth 15cm gun turret and another cable drum have been attached to the aft superstructure. The front four 10.5cm anti-aircraft guns have been secured in place with plastic sleeves.
STAGE 109
THE MOTOR FOR THE SIXTH 15cm GUN TURRET

COMPONENTS CHECKLIST
109-01: Swivel motor
109-02: Cable for the swivel motor
109-03: Cable label (C-9)
109-04: Cog
109-05: Motor housing
109-06: Cable label (C-10)
109-07: Switch

Three PB 2 x 5mm screws (1 spare)
Two PWB 2.3 x 5mm screws (1 spare)

01. FITTING THE SWIVEL MOTOR

Take the cog 109-04 and fit it on to the shaft of the motor 109-01, as shown.

Carefully prop up the aft superstructure (a foam block is useful for this, as shown in Completed Work on page 27). Fit the motor 109-01 into the shaped recess on the underside of deck section 64-01, as indicated.
03

Wrap the cable label 109-03 around the end of the cable 109-02, close to a connector, as shown.

04

Take the motor housing 109-05 and fit it over the motor 109-01, as shown. The holes in the tabs on the sides of the cover should align with raised screw sockets in the deck.

05

Fasten the housing 109-05 to the underside of the upper deck using two PB 2 x 5mm screws.

06

Take the cable for the motor 109-02. Remove the backing from the cable label 109-03 (C-9).

07

Wrap the cable label 109-03 around the end of the cable 109-02, close to a connector, as shown.

08

Fit the connector on the other end of the cable (without a label) into the socket on the circuit board of the motor 109-01.
02. FITTING THE SWITCH FOR THE MOTOR

01
Take the switch and cable 109-07. Remove the label 109-06 (C-10) from the backing.

02
Wrap the label 109-06 around the cable 109-07 near the connector, as shown.

03
Fit the switch 109-07 into the recess on the underside of the upper deck, near the cog 108-06, so that the end of the switch meets the edge of cog 108-06.

04
Fix the switch mechanism in place using a PWB screw. The rim of the washer on the screw holds the mechanism in place.

Completed work
The swivel motor and switch for the sixth 15cm gun turret have been fitted to the underside of the upper deck, beneath the aft superstructure.
**STAGE 110**
**THE THIRD 38cm GUN TURRET**

**COMPONENTS CHECKLIST**
- **110-01**: Motor
- **110-02**: Connector for barrels
- **110-03**: Motor mounting (upper part)
- **110-04**: Twin barrel cradle with base plate
- **110-05**: Clutch shaft
- **110-06**: Motor mounting (lower part)
- **110-07**: Ring
- **110-08**: Two gun barrels
- **110-09**: Tension spring
- **110-10**: Cable label

Five PB 2 x 5mm screws

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**01. ASSEMBLING THE TWIN BARRELS**

**01**
Take the connector **110-02** and the two gun barrels **110-08**. Apply a little superglue to the peg on the end of one of the barrels **110-08**, as shown.

**02**
Fit the gun barrel **110-08** into one of the sockets in the connector **110-02**, as shown.
Glue the second gun barrel 110-08 into the second socket in the connector 110-02, as shown.

Fit the ring 110-07 onto the clutch shaft 110-05, as shown.

The shaft of part 110-05 goes through the hole in the connector 110-02 and fits down the centre of the spring 110-09, as shown.

Fit the barrels through the sockets in the barrel cradle 110-04: slide them in from the rear, as indicated by the arrow.

Fit the tension spring 110-09 into the barrel assembly between the connector piece 110-02 and the cradle 110-04. Fit the shaft of part 110-05 into the assembly (see next step).

Position the top of the motor mounting 110-03 on the plate of the cradle 110-04 as shown. You will need two PB screws.
Completed work
The first stage of assembly of the third 38cm twin turret has been completed.
STAGE 111
HULL SECTION AND TURRET HOUSING

COMPONENTS CHECKLIST

111-01: Twelfth keel section
111-02: Connector
111-03: Turret housing
111-04: Turret base plate

Seven 2 x 4mm PM screws (1 spare)
Seven 2 x 5mm PB screws (1 spare)

01. FITTING THE KEEL SECTION

Take the hull assembly from stage 109. Fit the raised screw sockets on the edge of the keel section 111-01 into the sockets on the edge of part 104-01, as indicated.

This shows part 111-01 in place, flush with part 104-01.
Fix the keel section 111-01 in place using two PM screws, as shown.

Fit the connector 111-02 over the screw sockets on parts 104-01 and 111-01. Note the position of the circular detail on the connector.

When you are happy with the fit, fix the connector 111-02 to the keel sections 104-01 and 111-01 using four PM screws.
02. HOUSING FOR THE THIRD 38cm TWIN GUN

01. Take the barrel assembly from the previous stage. Fit the twin barrels through the holes in the gun housing 111-03.

02. When the barrel assembly is correctly fitted, pegs on the sides of the cradle pins fit into recesses in the housing 111-03 (arrows).

03. Take the turret base plate 111-04 and feed the motor cable 110-01 through the large opening as shown. You will need six PB screws.

04. Fit the turret base plate 111-04 on the underside of the housing 111-03 so that screw holes are aligned.

05. Fix the base plate 111-04 to the housing 111-03 using six PB screws, as shown.

Completed work
The third 38cm twin turret has been built. A keel section has been added to the hull assembly (not shown).
**STAGE 112**

**HULL SECTION AND GUN PARTS**

**COMPONENTS CHECKLIST**

- **112-01**: Upper port hull section
- **112-02**: Connector
- **112-03**: Barbette
- **112-04**: Gun turret base
- **112-05**: End plate for base of gun turret
- **112-06**: Left side rangefinder arm hood
- **112-07**: Right side rangefinder arm hood
- **112-08**: Two periscopes
- **112-09**: Cog
- **112-10**: Two ladders

**PM**: Five 2 x 4mm PM screws

**PB**: Six 2 x 5mm PB screws

**PB**: Three 2.3 x 6mm PB screws

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**01. FITTING THE HULL SECTION**

Take the upper port hull section **112-01** and fit it against the keel section **111-01** so that the screw holes are aligned, as indicated.

Fix the hull section **112-01** to the keel section **111-01** using two **PM** 2 x 4mm screws, as shown above.
03. DETAILS FOR THE THIRD 38cm TWIN GUN TURRET

01. Take the third gun turret, from stage 111. Place the left and right side rangefinder arm hoods 112-06 and 112-07 on your worktop.

02. Check the fit of the rangefinder arm hood 112-06 on the left side of the turret 111-03. Glue in place.

03. Check the fit of the rangefinder arm hood 112-07 on the right side of the turret 111-03. Glue in place.

04. On the right side of the turret 111-03, check the fit of one of the ladders 112-10 in front of the protective hood. Glue in place on the wall of the turret.

Fit the connector 112-02 over the raised screw sockets of the hull sections 107-01 and 112-01, as shown.

Fix the connector 112-02 to the two fuselage sections 107-01 and 112-01 using two PM 2 x 4mm screws.
**03. FITTING THE GUN TURRET TO THE BARBETTE**

01. Turn the turret upside down and pass the cable of the motor 110-01 through the opening of the turret base 112-04.

02. Position the turret base 112-04 on the turret base plate 111-04 and fix it in place using two PB 2.3 x 6mm screws. Check that the parts are correctly aligned, as shown.

03. Take the gun turret end plate 112-05 and position it on the turret base 112-04, checking that it is correctly aligned.

04. Fasten the gun turret end plate 112-05 in place using three PB 2 x 5mm screws.

Check the fit of the first periscope 112-08 on the side of the turret 111-03, as shown. Glue in place.

On the left side of the turret, check the fit of the second ladder 112-10 and the second periscope 112-08 and glue in place, as shown.
Place the aft superstructure on your worktop. Take the barbette 112-03 and fit it in the opening in upper deck section 99-01 as indicated.

Carefully push the barbette 112-03 into the opening in the upper deck section 99-01 so that the four tabs on the lower edge of the barbette snap into corresponding recesses in the deck.

Pass the cable of the motor 110-01 down through the opening of the barbette 112-03 and fit the third 38cm gun turret 111-03 on the barbette.
Hold the turret in place and carefully turn the aft superstructure so that you can access the underside. You can hold it in place with an arrangement of brackets, as described in stage 84. Fit the cog 112-09 on the underside of the upper deck 99-01 as shown. The cog is aligned so that the small triangle (circled in red) and barrels point aft – in this photo, the triangle and barrels are pointing to the left.

Fix the cog 112-09 in place using two PB 2 x 5mm screws. They fit through the cog and into screw holes in the gun turret end plate 112-05.

Completed work
Another section has been added to the hull (not shown) and details have been fitted to the third 38cm gun turret, which has been fitted in place on the aft superstructure.
STAGE 113
GEARBOX FOR THE NEXT 38cm TWIN TURRET

COMPONENTS CHECKLIST

113-01: Motor and cable
113-02: Left support bracket (L)
113-03: Right support bracket (R)
113-04: Gear housing
113-05: Gear housing
113-06: Cog
113-07: Cog
113-08: Hub
113-09: Gear arm
113-10: Shaft
113-11: Cable label
PB Six 2 x 6mm PB screws
PB Seven 2 x 4mm PB screws
PB Three 1.7 x 6mm PB screws

01. MECHANISM FOR THE ELEVATION CONTROL OF THE 38cm GUN

Take the gear housing 113-05. Fit the cog 113-07 into the large hole in the housing.

Fit the large cog 113-06 into the centre of the housing 113-05 so that the teeth interlock with those on cog 113-07. Then fit the hub 113-08 into the centre of cog 113-06 (arrow). You will need a 2 x 6mm PB screw for step 3.
03

Fix the hub in place so that it holds the cog 113-06 in place in the centre of the housing, using a 2 x 6mm PB screw. Do not overtighten: the cogs should be able to rotate.

04

Fit the gear arm 113-09 into the gear housing 113-05. Note that the peg on cog 113-06 is fitted into the slot in the gear arm (arrow).

05

Insert the shaft 113-10 into the hole in the centre of cog 113-07, as shown.

06

Fit the other half of the gear housing, 113-04, onto part 113-05. Fasten the two halves of the housing together using four 2 x 6mm PB screws.

07

Turn the gearbox over and attach the right gearbox support bracket 113-03 to the housing part 113-05 using a 2 x 4mm PB screw, as shown.

08

Turn the gearbox housing over again and fix the left gearbox bracket 113-02 in place on part 113-04 using a 2 x 4mm PB screw.
Take the aft superstructure and position it, carefully supported, so that you can access the underside. Fit to the angled end of the round motor mounting 110-06. Pegs at the end of the arm snap into position (arrow). It may be easier if you tilt the gun barrels upwards.

Take the elevation motor 113-01 and the cable label 113-11. Remove the label from its backing and wrap it around the cable near the connector, as shown.

Fix the motor 113-01 on to the gear housing 113-05 using two 1.7 x 6mm PB screws.

Use two 2 x 4mm PB screws to fix each of the support brackets 113-02 and 113-03 in place: the screws fit into screw sockets in the cog 112-09, as shown.

Fit the motor 113-01 on to the gear housing: the shaft on the motor fits into cog 113-07, as indicated by the arrow.

Completed work
The gearbox and elevation motor have been fitted to the third 38cm gun, on the aft superstructure.
STAGE 114
THE BILGE KEELS

COMPONENTS CHECKLIST
114-01: Upper starboard hull section
114-02: Connector
114-03: Forward starboard bilge keel (R1)
114-04: Aft starboard bilge keel (R2)
114-05: Forward port bilge keel (L1)
114-06: Aft port bilge keel (L2)
114-07: Eight vents (2 x A to D)
114-08: Eight grilles (4 x E, 2 x F, 2 x G)
PM: Five 2 x 4mm PM screws

01. FITTING THE NEXT HULL SECTION AND THE BILGE KEELS

Take the upper starboard hull section 114-01 and fit it next to keel section 111-01 so that screw holes are aligned, as shown.
Fix the hull section **114-01** in place using two 2 x 4mm PM screws, as shown.

Take the connector **114-02** fit it over the raised screw sockets of hull sections **108-01** and **114-01**, as shown.

Fit the connector **114-02** to the two hull sections **108-01** and **114-01** using two 2 x 4mm PM screws.

Align the two port bilge keels **114-05** (L1) and **114-06** (L2) along the port side of the hull. Pegs on the keels fit into holes in the hull, as indicated.

Fit the forward port bilge keel **114-05** (L1) by carefully pushing the three pegs into the three holes in the keel. This is a push-fit connection.

Fit the aft port bilge keel **114-06** (L2) in line with bilge keel **114-05** (L1), as shown.
On the starboard side of the hull, fit the forward starboard bilge keel 114-03 (R1) in place as shown.

The aft starboard bilge keel 114-04 (R2) is fitted in line with part 114-03 (R1), as shown.

**02. FITTING VENTS TO THE BARBETTE**

Cut the two vents C from frames 114-07 and two grilles F from frame 114-08. Bend the tabs on the grilles back at right angles (arrows). Note that the pattern should face outwards (see step 2).

Glue one of the grilles F to each of the two vents C: the tab on each of the grilles fits in the upper hole of the fan, as shown.

Identify the positions for the vents on the side of the barbette 112-03, on deck section 99-01. Glue in place.

Take the two vents A from frames 114-07 and two of the grilles E from frames 114-08. Bend the tabs on the grilles at right angles.
Glue one of the grilles E to each of the two vents A: the tab on each of the grilles fits in the upper hole of the fan, as shown.

Identify the positions for the vents on the side of the barbette 112-03, on deck section 99-01, next to the vents C. Glue in place.

Take the two vents B from frames 114-07 and the remaining two grilles E from frame 114-08. Bend the tabs on the grilles at right angles.

Glue one of the grilles E to each of the two vents B: the tab on each of the grilles fits in the upper hole of the fan, as shown.

Identify the positions for the vents on the side of the barbette 112-03, on deck section 99-01, next to the vents A. Glue in place.

Take the vents D from the frames 114-07 and glue a grille G from frame 114-08 to each of them as shown.
Glue the first vent D to the aft superstructure deck 102-02, on deck section 99-01, close to the previously fitted vents, as shown.

The second vent D is glued to the aft superstructure deck 102-02 on the upper deck section 99-01 on the other side of the barbette.

**Completed work**
Eight vents have been attached to the barbette of the third 38cm twin turret. Another section has been added to the hull and the bilge keels have been fitted (not shown).
STAGE 115
TWO HULL SECTIONS

COMPONENTS CHECKLIST

115-01: Aft keel section
115-02: Connector (L)
115-03: Connector (R)
115-04: Propeller housing
PM: Nine 2 x 4mm PM screws

01. FITTING THE HULL SECTION

Place the model on your worktop so that you can access the stern end of the hull. Take the aft keel section 115-01 and fit it against keel section 111-01, as indicated.
02
Fix the connector 115-02 (L) into the recess on the port side recess of parts 111-01 and 115-01. Note the connector is not symmetrical, and ensure you fit it the correct way round, as shown.

03
This shows keel section 115-01 correctly positioned against keel section 111-01. It will be fixed in place with the connector 115-02.

04
Fix the connecting piece 115-02 to parts 111-01 and 115-01 using two PM 2 x 4mm screws, as shown.

05
Fix the connector 115-03 (R) in the other recess on parts 111-01 and 115-01. Again, ensure it is in the correct position.

06
Fix the connector 115-03 in place using two PM 2 x 4mm screws, as shown.

07
Fit the propeller housing 115-04 in position on the underside of keel section 115-01, so that it covers the opening, as indicated. You will need four PM 2 x 4mm screws to fix it in place.
Completed work
With two more sections fixed in place, the hull is almost complete.
STAGE 116
TWO HULL SECTIONS

COMPONENTS CHECKLIST

116-01: Upper port hull section
116-02: Upper starboard hull section
116-03: Connector (3-L)
116-04: Connector (3-R)
PM: Nine 2 x 4mm PM screws

01. EXTENDING THE HULL

Place the model on your worktop so that you can access the stern end of the hull assembly. Take the upper port hull section 116-01 and position it along the upper edge of part 115-01, aligning the screw holes as indicated.
Fix the lower edge of hull section 116-01 to the section 115-01 using two PM screws.

Fit the screw sockets on connector 116-03 over the raised screw sockets on the upper port hull sections 116-01 and 112-01. Fix in place with two PM screws, as shown.

Moving to the other side of the hull, take the upper starboard hull section 116-02 and fit it along the top of hull section 115-01 with screw holes aligned, as shown.
Completed work
Two more sections have been fitted to the hull: there is only one more section to fit, forming the stern.