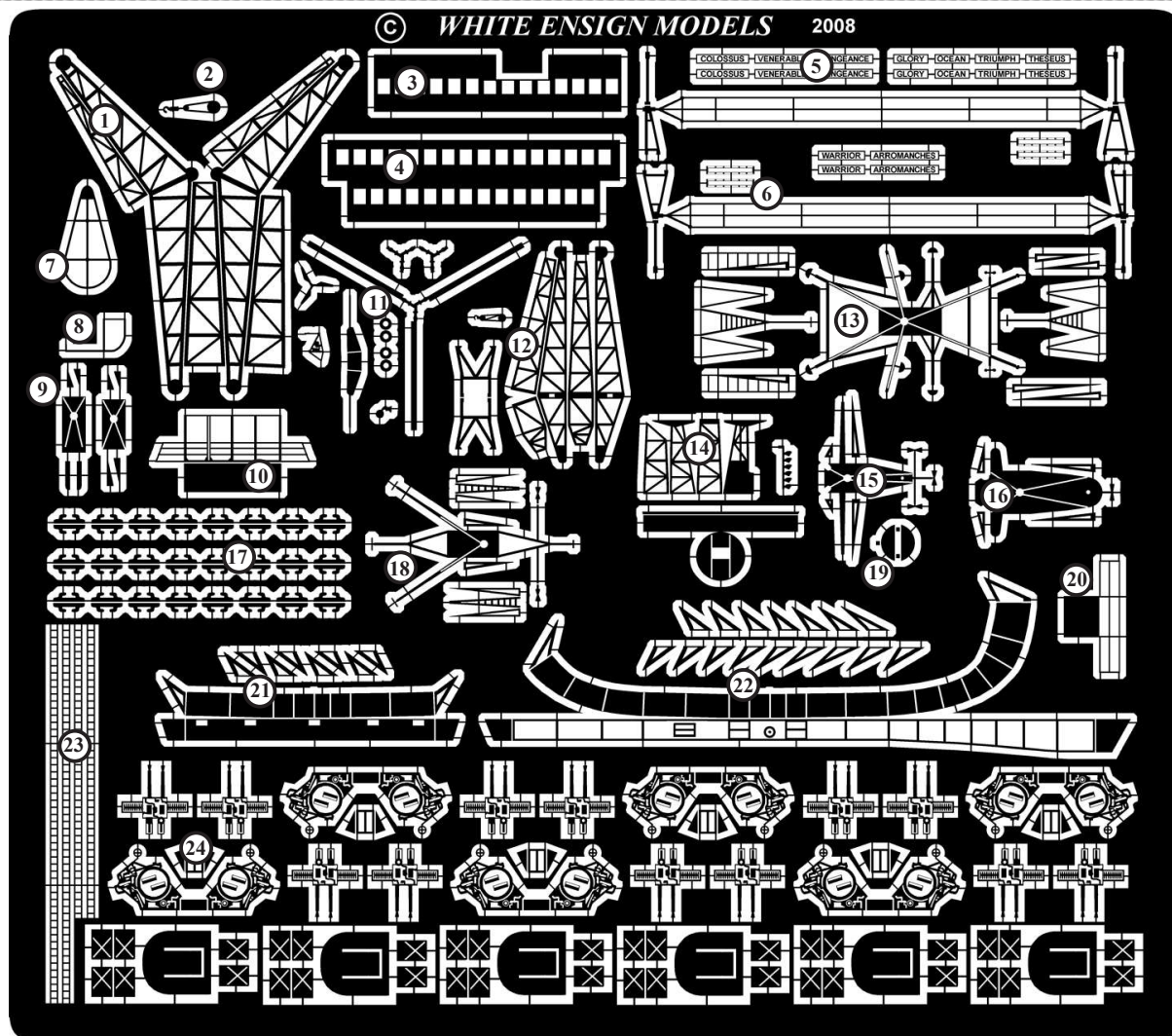


# WHITE ENSIGN MODELS

## HMS Colossus & FNS Arramanches

Photoetched metal detail set for the 1/400 scale Heller Kit



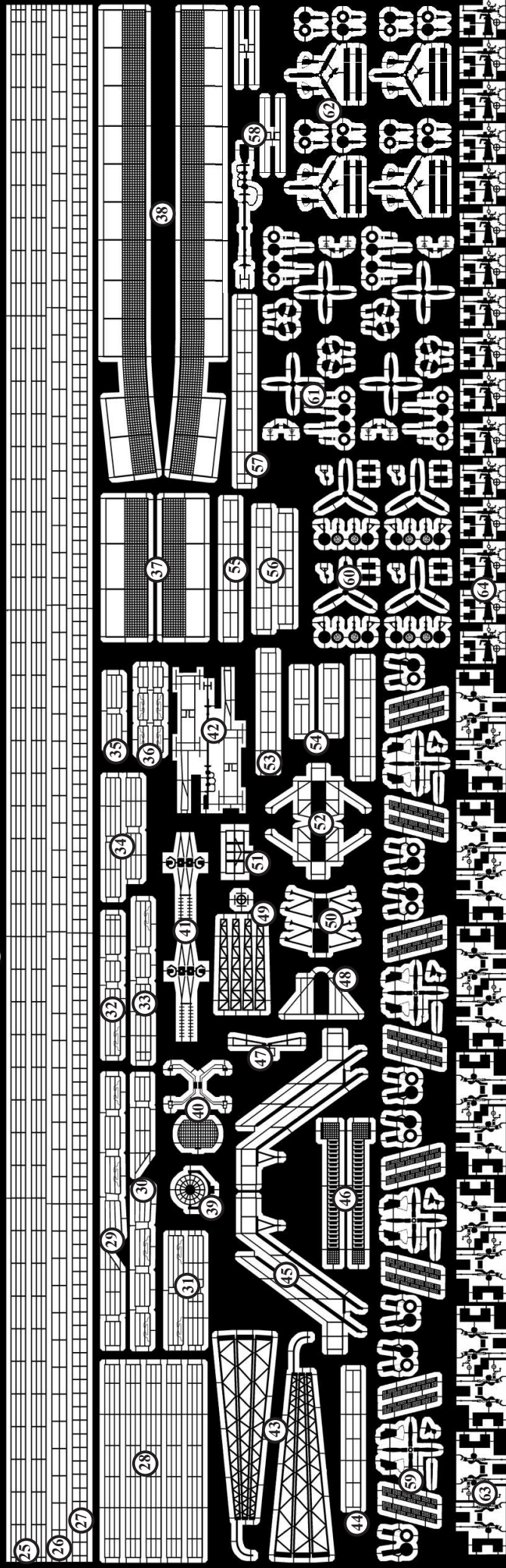
- |                                     |                                  |  |
|-------------------------------------|----------------------------------|--|
| 1. Main Crane Jib                   | 9. 281 Radar Mast Platforms      | 17. Open Fairleads/Chocks                  |
| 2. Crane Hook                       | 10. Additional Stern Platform    | 18. Mast Platform 3 Assembly               |
| 3. Bridge Front ( <i>Colossus</i> ) | 11. S51 Helicopter Parts         | 19. Small Radar Antenna                    |
| 4. Bridge Front (Modified)          | 12. Jumbo Crane Fittings         | 20. Forward Antenna Mast Platform          |
| 5. Ships' Name Plates               | 13. Mast Top Platform 4 Assembly | 21. Replacement Stern Catwalk Part 101     |
| 6. Aircraft Crash Barriers          | 14. Director Tub Mast Assembly   | 22. Full Width Stern Catwalk (Later Ships) |
| 7. Funnel Cap Grille                | 15. Mast Platform 2 Assembly     | 23. Vertical Ladder Stock                  |
| 8. Radar Antenna Waveguide          | 16. Mast Platform 1 Assembly     | 24. 4-Barrelled Pom-Pom Assembly           |

### General Instructions

- Do not remove the etched parts from the fret until you are ready to use them.
- Before assembly, soak the etched parts in a suitable solvent, such as white spirit, to de-grease the surfaces for painting.
- Cyanoacrylate adhesive (super glue) or contact adhesive such as Elmers white glue may be used. These can be applied with a pin or piece of stretched sprue.
- When removing parts from the fret, place the fret on a hard surface, such as a smooth ceramic tile, in order to prevent parts bending whilst cutting through the holding tabs. We suggest using a #11 type of modelling knife blade for this purpose.
- When shaping or bending a part, a straight edged blade such as a chisel blade #17 or #18 will give a good sharp corner, or alternatively a small pair of smooth jawed pliers may be used.
- If a part is bent incorrectly, lay it on a hard flat surface and roll it flat with a cylindrical object such as a modelling knife handle.
- We suggest that rails are pre-measured, where practical, using a pair of compass dividers & then tacked to the deck edge every third or fourth stanchion with a small drop of glue. When a section is complete, run a thin line of glue along the inside edge to attach it firmly to the deck.

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Unit 5, Cobnash Industrial Estate, Kingsland, Leominster, HR6 9RW, U.K. Tel. 01568 709149 or Fax 01568 709182  
E-mail: [info@whiteensignmodels.com](mailto:info@whiteensignmodels.com) Website: <http://WhiteEnsignModels.com>



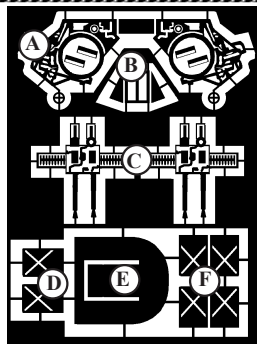
- 25. Stock 3-Bar Railings
- 26. Stock 2-Bar Railings
- 27. 2-Bar Close Stanchion Railing
- 28. Boat Deck Railings
- 29. Quarterdeck Railings (Starboard)
- 30. Quarterdeck Railings (Port)
- 31. Aft Weatherdeck Railings
- 32. Mid Weatherdeck Railings (Starboard)
- 33. Mid Weatherdeck Railings (Port)
- 34. Upper Weatherdeck Railings (Port & Starboard)
- 35. Triangle Opening Railings (Port & Starboard)
- 36. Forward Berthing Bay Railings
- 37. Aft Flight Deck Safety Nets

- 38. Forward Flight Deck Safety Nets
- 39. 277 Radar Antenna (Early)
- 40. 277 Radar Antenna (Late)
- 41. 282 AA Gunnery Radar Antenna
- 42. 281 Radar Antenna
- 43. Folding Wire Antenna Masts
- 44. Side Catwalk Railings Parts 18
- 45. Accommodation Ladder Rails
- 46. Accommodation Ladder Steps
- 47. Bridge Front DF Antenna
- 48. Bow Towing Platform
- 49. Starboard Forward Antenna Mast
- 50. Forward Anchor Platforms
- 51. YE Radar Antenna

- 52. Forward Berthing Platforms
- 53. Railing Mast Platform 3
- 54. Railing Mast Platform 2
- 55. Railing Mast Platform 4
- 56. Railing Radar Mast Platforms
- 57. Railing Mast Platform 1
- 58. 271 Radar Antenna Assembly
- 59. Curtiss SB2C Helldiver Parts
- 60. Corsair IV Parts
- 61. Barracuda Parts
- 62. F6F Hellcat Parts
- 63. Twin 20mm Oerlikon Mounts
- 64. Single 20mm Oerlikon Mounts



## 4 BARRELLED POM POM ASSEMBLY

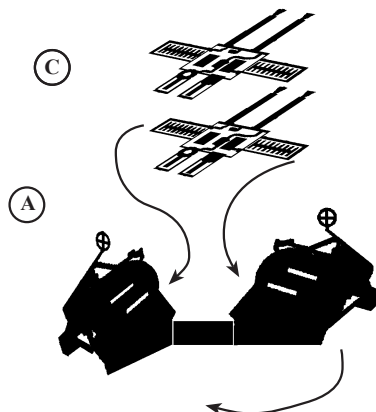


(24)

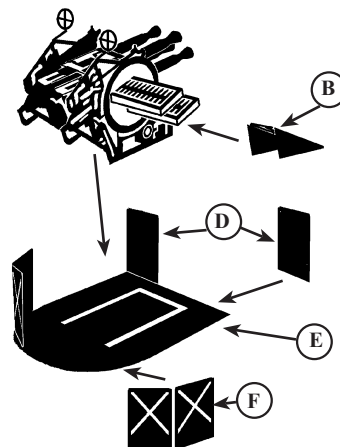
This assembly has been provided to either replace or enhance the parts 88, 106, 107 and 162 provided in the kit.  
It is recommended that the plastic bases of kit parts 88 and 162 be used as foundation parts for the etched base part 24E after first removing the moulded splinter shields.

To assemble fold the sides of etched part 24A round so that they are parallel and at the same time pass the ammo trays on the gun clusters 24C, through the slots from the inside as shown right.

The ammunition trays may be given additional depth by adding strips of plasticard to the undersides of the trays then trimming back to the shape of the tray.

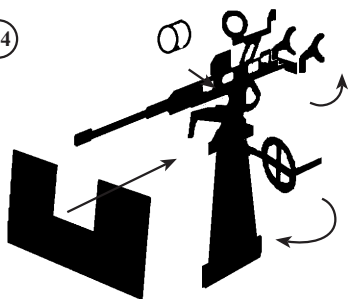


Fit assembled gun mounting to base part 24E.  
Fit spent case chute 24B to the front of the mounting after folding down the support sides.  
Fit the splinter shields, parts 24D and 24F in to place as shown right.



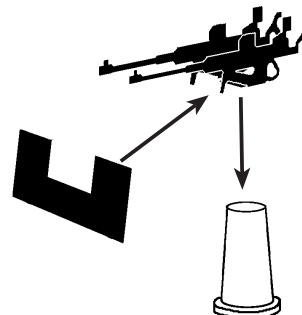
## 20mm SINGLE & TWIN OERLIKON ASSEMBLY

(64)



To assemble the 20mm mount, twist the base of the shoulder braces to 90° then fold the shoulder braces rearwards 90° so that they appear as shown. Fold the hand wheel around so that it fits onto the pintle. Fit the gun shield so that the attachment bracket locates into the etched slot on the shield. An ammunition magazine may be cut from plastic rod & fitted as shown.

(63)

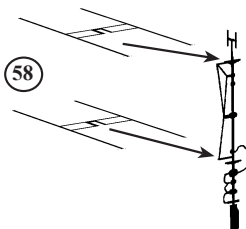


Ships of the *Colossus* class were fitted with a variety of light AA weapons during their early years of service according to availability. Single or twin Oerlikon mounts were fitted to some of the sponsons in lieu of the 40mm Bofors which are represented by kit parts 95 and 117.  
Further research must be done to establish which ships of the class were fitted with what weapons & their locations.

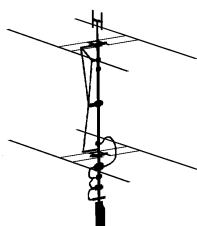
To assemble the twin mount, fold the guns up to 90° on each side of the centre bar so that they are parallel.  
Fit the gun shield to the locating spigots below each breech area.  
The assembly can now be mounted onto a scratch built pintle made from a 3mm length of 30-thou diameter (.75mm) plastic rod or even stretched sprue.

## 279 & 281 RADAR ANTENNA ASSEMBLY

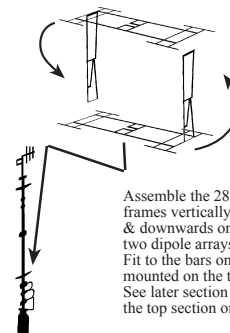
(58)



Assemble the 297B antenna as shown left by passing the centre pole into the slots in each of the dipole centre spans.  
This antenna was mounted to the top of the forward top pole of the main mast, replace kit part 171 with this item.



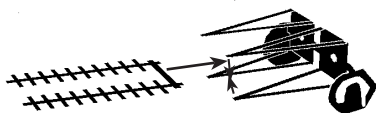
(42)



Assemble the 281 radar antenna by folding the side frames vertically upwards on the lower dipole array & downwards on the upper array, then joining the two dipole arrays as shown above.  
Fit to the bars on the centre pole. This antenna was mounted on the top of the aft radar mast, kit part 148.  
See later section on replacing this mast or remove the top section only and replace with etched part 42.

## 282 AA GUNNERY ANTENNA

(41)



Assemble the 282 Yagi AA Armament Director Antenna as shown above.  
Ensure the 'V' shaped points are pinched together after the dipoles are fitted into place. Fold down the mounting plates each side into the position shown.  
These parts fit into the tubs on the top of the bridge and aft of the funnel on a small lattice mast.

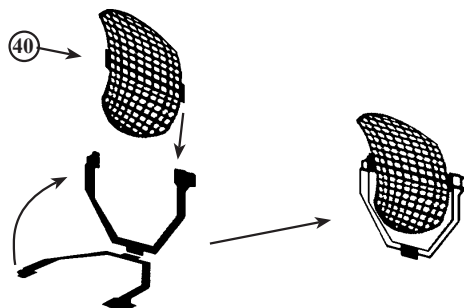
## 277 RADAR ANTENNA ASSEMBLIES

(39)



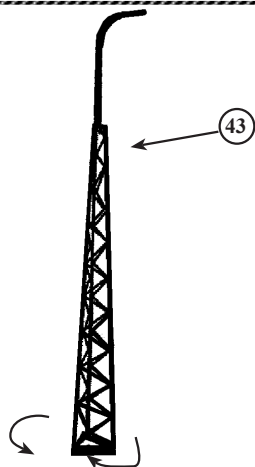
This radar antenna assembly is a direct replacement for kit part 174, though the base of the kit part may be used as a means of mounting the etched part.

(40)



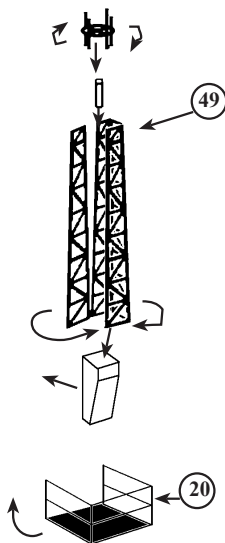
This assembly is of a later variant of the 277 radar, & is again used as a direct replacement for the kit part 174. Further research will be required to establish which ships of the class had this version of the antenna fitted.

## FOLDING DECK EDGE ANTENNA



Fold the sides of etched parts 43 around to form a triangular section lattice mast as shown above. Secure the edges with super glue & use these assemblies to replace kit parts 136. The curved upper part points outboard when fitted vertically. These parts may also be fitted horizontally by cutting away the plastic base part from the edge of the flight deck & fitting the antenna directly to the side of the hull.

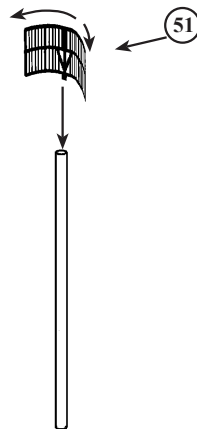
## FORWARD ANTENNA MAST



Assemble etched part 49 by folding the sides around to form a square sectioned lattice mast. Secure the edges into place. Remove upper part of kit part 135 & discard. Shape the lower part as shown left & fit the etched part into place. Fit to the side of the hull as shown in the kit instructions section 20. Discard kit part 99 & replace with etched part 20 as shown left.

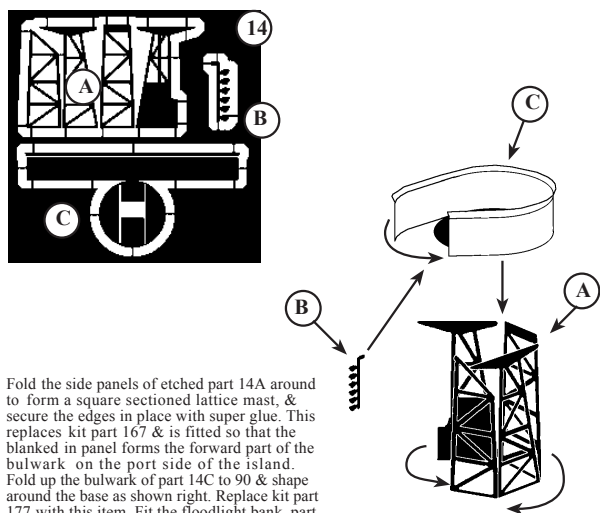
Cut a 3mm length of .5mm diameter plastic rod & fit to the top of the mast. Twist the dipoles on the antenna loop so that they are vertical then fit to the top of the rod.

## YE RADAR ANTENNA



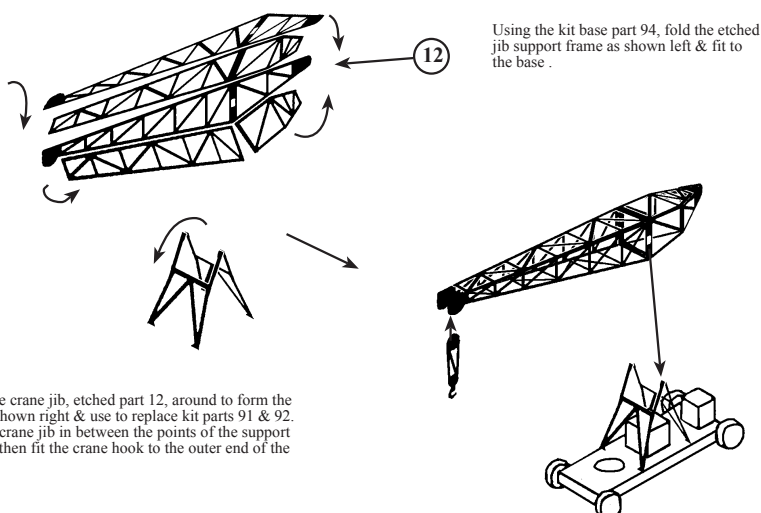
Remove the moulded plastic YE antenna from the top of kit part 128, & replace with etched part 51, shaped as shown above.

## 282 RADAR ANTENNA TUB ASSEMBLY



Fold the side panels of etched part 14A around to form a square sectioned lattice mast, & secure the edges in place with super glue. This replaces kit part 167 & is fitted so that the blanked in panel forms the forward part of the bulwark on the port side of the island. Fold up the bulwark of part 14C to 90° & shape around the base as shown right. Replace kit part 177 with this item. Fit the floodlight bank, part 14B to the aft underside edge of the director tub.

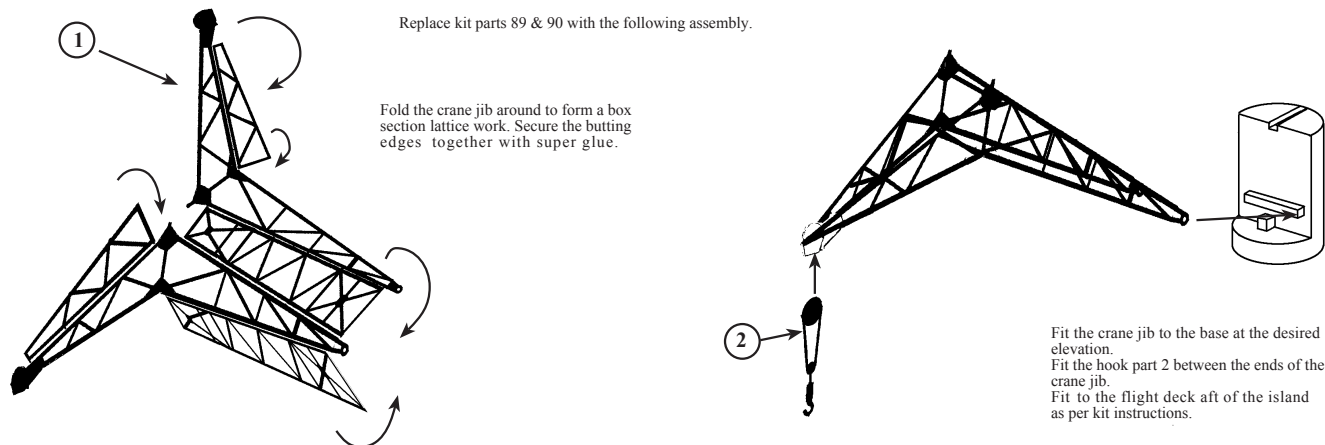
## "JUMBO" SALVAGE CRANE ASSEMBLY



Using the kit base part 94, fold the etched jib support frame as shown left & fit to the base.

Fold the crane jib, etched part 12, around to form the shape shown right & use to replace kit parts 91 & 92. Fit the crane jib in between the points of the support frame, then fit the crane hook to the outer end of the jib.

## MAIN BOAT CRANE ASSEMBLY

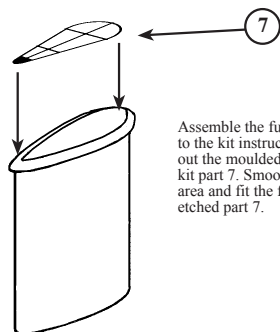


Replace kit parts 89 & 90 with the following assembly.

Fold the crane jib around to form a box section lattice work. Secure the butting edges together with super glue.

Fit the crane jib to the base at the desired elevation. Fit the hook part 2 between the ends of the crane jib. Fit to the flight deck aft of the island as per kit instructions.

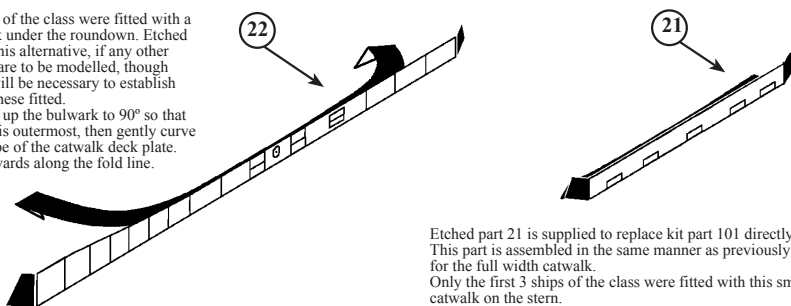
## FUNNEL CAP GRILLE



Assemble the funnel according to the kit instructions, then clean out the moulded grille from kit part 7. Smooth the remaining area and fit the funnel cap grille, etched part 7.

## ROUNDOWN CATWALK ASSEMBLY

Some of the ships of the class were fitted with a full-width catwalk under the roundown. Etched part 22 provides this alternative, if any other ships of the class are to be modelled, though further research will be necessary to establish which ships had these fitted. To assemble, fold up the bulwark to 90° so that the relief-etching is outermost, then gently curve around to the shape of the catwalk deck plate. Bend the ends inwards along the fold line.

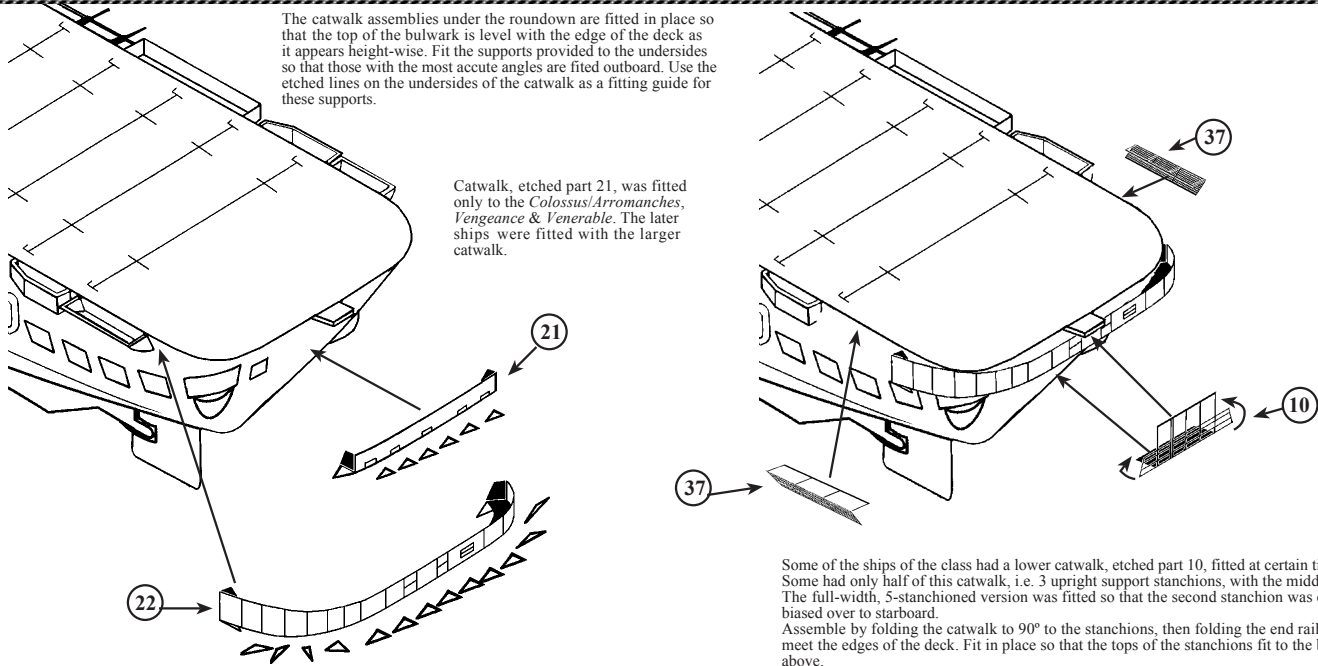


Etched part 21 is supplied to replace kit part 101 directly. This part is assembled in the same manner as previously described for the full width catwalk. Only the first 3 ships of the class were fitted with this smaller catwalk on the stern.

## ROUNDOWN CATWALK ASSEMBLIES

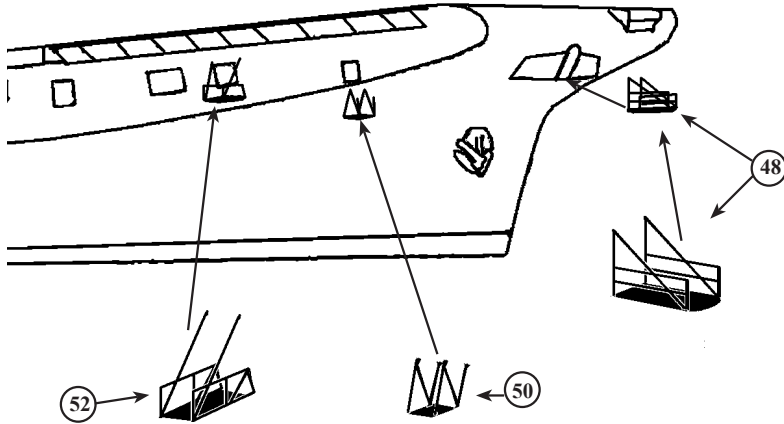
The catwalk assemblies under the roundup are fitted in place so that the top of the bulwark is level with the edge of the deck as it appears height-wise. Fit the supports provided to the undersides so that those with the most acute angles are fitted outboard. Use the etched lines on the undersides of the catwalk as a fitting guide for these supports.

Catwalk, etched part 21, was fitted only to the *Colossus/Arromanches*, *Vengeance & Venerable*. The later ships were fitted with the larger catwalk.



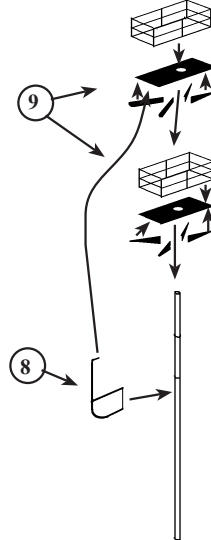
Some of the ships of the class had a lower catwalk, etched part 10, fitted at certain times during their career. Some had only half of this catwalk, i.e. 3 upright support stanchions, with the middle stanchion fitted centre. The full-width, 5-stanchioned version was fitted so that the second stanchion was centre with the catwalk biased over to starboard. Assemble by folding the catwalk to 90° to the stanchions, then folding the end railing sections around to meet the edges of the deck. Fit in place so that the tops of the stanchions fit to the bottoms of the catwalk above.

## FORWARD BERTHING PLATFORMS



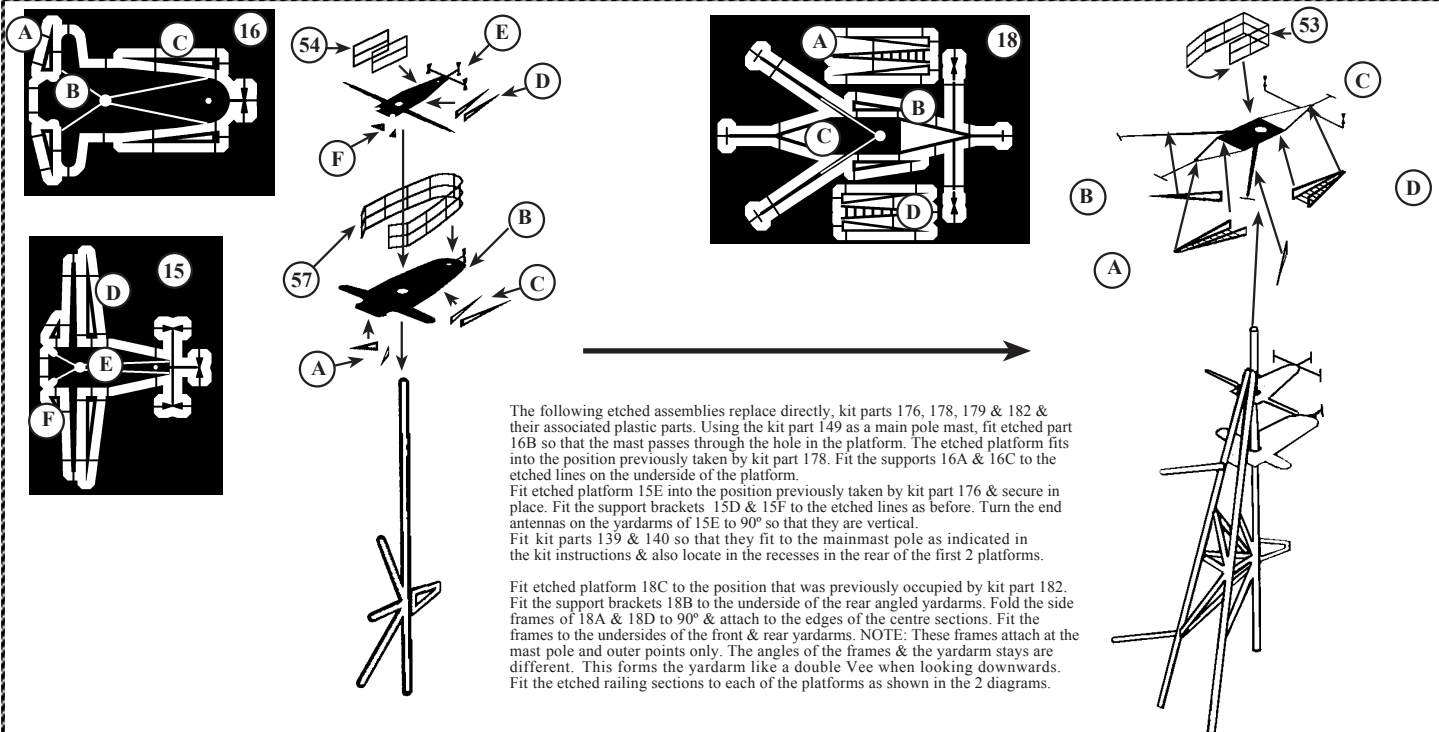
Fold the side frames of the berthing platforms, etched parts 48, 50 and 52 to 90° so that they are parallel on each platform. These platforms can be fitted as desired, but in some cases were left deployed for the duration that the ship was at sea. Only the forward platform seemed to be retracted upwards at most times. The side platforms were fitted to both sides at the same locations.

## RADAR ANTENNA MAST ASSEMBLY



The 2 platforms, etched parts 9, that have been provided are to replace the moulded plastic platforms on kit part 148. Remove all the detail from kit part 148 so that all that is left is a straight pole. The platforms can now be assembled as shown left with the smaller platform as the lower. Fit the adjacent support brackets to the under side of the platforms using the etched lines as fitting guides. The 281 radar antenna assembly etched parts 42 may be fitted to the top platform.

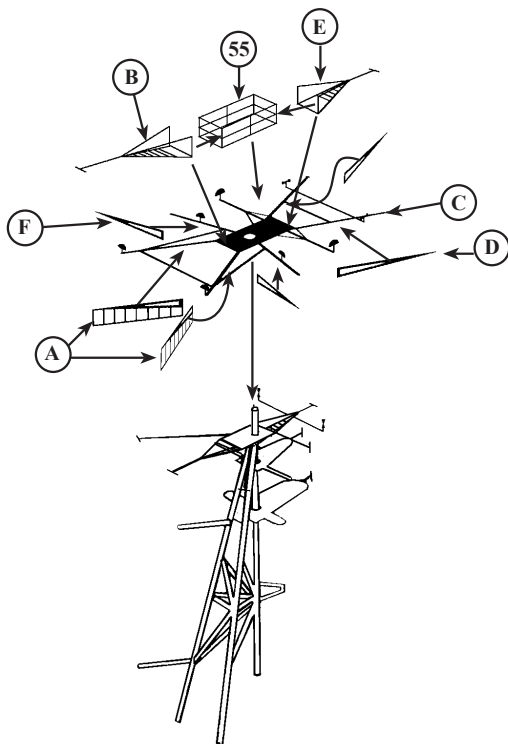
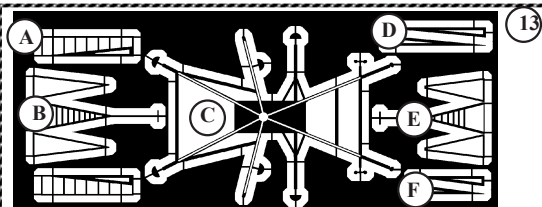
## MAINMAST PLATFORMS 1, 2 & 3 ASSEMBLY



The following etched assemblies replace directly, kit parts 176, 178, 179 & 182 & their associated plastic parts. Using the kit part 149 as a main pole mast, fit etched part 16B so that the mast passes through the hole in the platform. The etched platform fits into the position previously taken by kit part 178. Fit the supports 16A & 16C to the etched lines on the underside of the platform. Fit etched platform 15E into the position previously taken by kit part 176 & secure in place. Fit the support brackets 15D & 15F to the etched lines as before. Turn the end antennas on the yardarms of 15E to 90° so that they are vertical. Fit kit parts 139 & 140 so that they fit to the mainmast pole as indicated in the kit instructions & also locate in the recesses in the rear of the first 2 platforms.

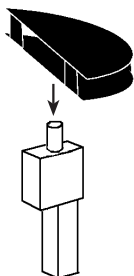
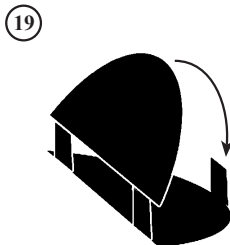
Fit etched platform 18C to the position that was previously occupied by kit part 182. Fit the support brackets 18B to the underside of the rear angled yardarms. Fold the side frames of 18A & 18D to 90° & attach to the edges of the centre sections. Fit the frames to the undersides of the front & rear yardarms. NOTE: These frames attach at the mast pole and outer points only. The angles of the frames & the yardarm stays are different. This forms the yardarm like a double Vee when looking downwards. Fit the etched railing sections to each of the platforms as shown in the 2 diagrams.

## MAIN MAST PLATFORM 4 ASSEMBLY

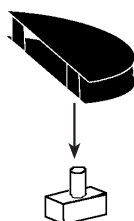


Fit the etched platform assembly 13 in the place of kit part 179. This platform fit to the very top of the mast pole. Fold & fit the section of railings 55 to the centre of the platform. Fold the side frames of etched parts 13B & 13E up to 90° then fix the edges to the centre frames. Fit the uprights of parts B & E to the corner stanchions of the railings. Fit parts 13A to the under side of the rear yardarms. Fit support brackets D to the undersides of the forward yardarms. Fit the small supports F to the small angled side yardarms.

## 293 RADAR ANTENNA ASSEMBLY

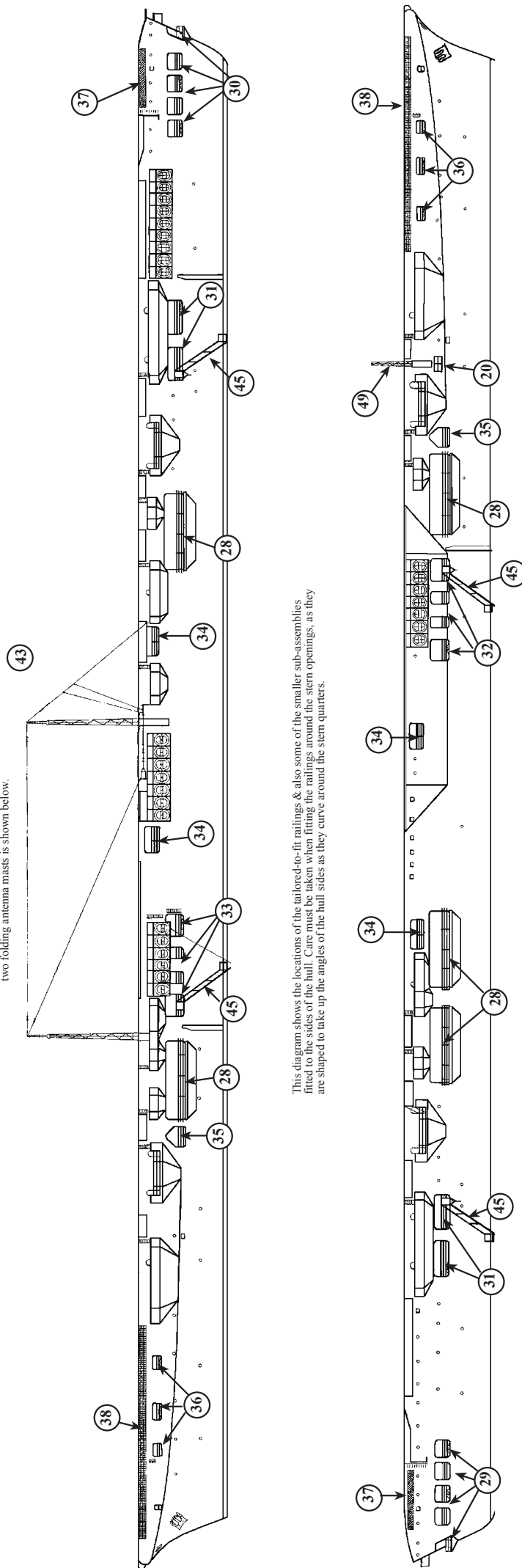


Fold the two 293 antenna parts over so that the top & bottom plates are parallel. These items now replace kit parts 157 & can either be fitted to the existing mounts kit parts 155 or new ones can be made as shown below. The taller of the mountings fitting on platform 1 of the mainmast.



## RAILINGS AND SMALL FITTINGS LOCATION

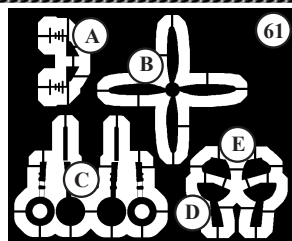
Basic rigging of the wire antennas between the two folding antenna masts is shown below.



This diagram shows the locations of the tailored-to-fit railings & also some of the smaller sub-assemblies fitted to the sides of the hull. Care must be taken when fitting the railings around the stern openings, as they are shaped to take up the angles of the hull sides as they curve around the stern quarters.



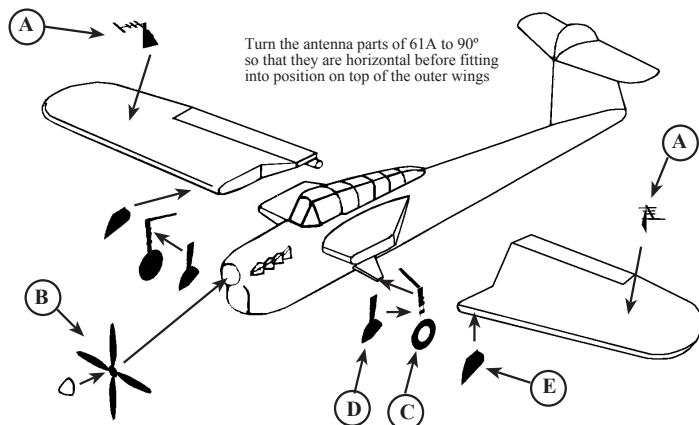
## FAIREY BARRACUDA ASSEMBLY



61



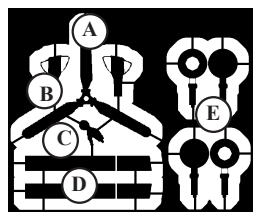
Before assembling the undercarriages, first fold in half to double the thickness making sure the relief-etch is outermost.



Turn the antenna parts of 61A to 90° so that they are horizontal before fitting into position on top of the outer wings

Shape the main undercarriage legs & fit in place as shown above. The moulded plastic landing gear will first need to be cut down so that only the angular stubs are left. Fit the undercarriage doors to the insides of the main legs & the outer wing panels as shown above. Cut the spinner from the kit propeller & use to fit onto the replacement etched part.

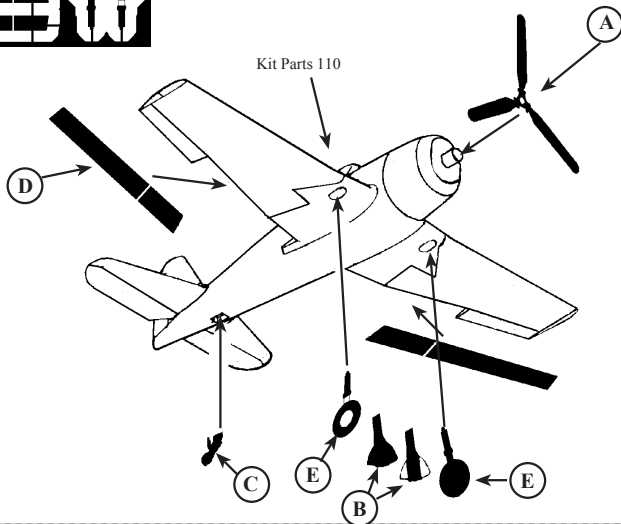
## GRUMMAN F6F HELLCAT ASSEMBLY



62

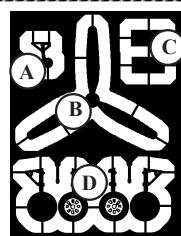
If the wing flap replacements, etched parts 62D, are to be used, first cut away the trailing edges of the wings to the same size & shape as the wing flaps. Fit the etched wing flaps into the recesses at the desired angle. Replace the kit propeller part 96 with etched part 62A.

Remove the moulded plastic undercarriage stubs from under the wings & replace with etched parts 62B and E as shown below. Add tail wheel 62C.



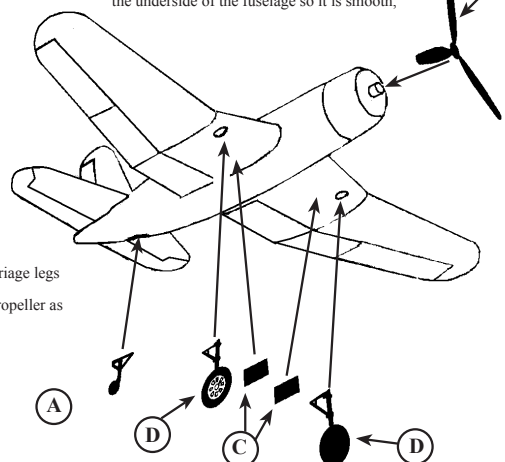
Kit Parts 110

## VOUGHT F4U CORSAIR ASSEMBLY



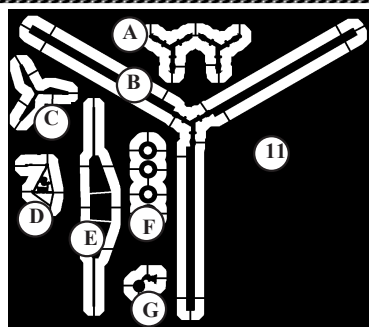
60

To assemble the F4U Corsair using the etched parts 60, first remove the plastic stubs that are meant to represent the undercarriage & fill the underside of the fuselage so it is smooth,



Fit the replacement undercarriage legs & doors as shown right. Fit the replacement etched propeller as a replacement for kit part 90.

## SIKORSKY S51 / WESTLAND DRAGONFLY

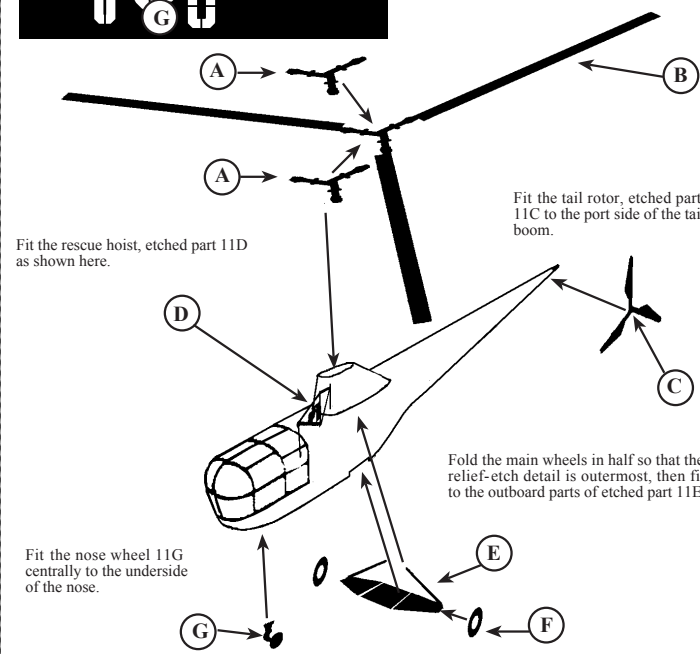


11

Before fitting the etched parts 11 to the kit part 159, first fill the rectangular recess in the underside of the fuselage, & smooth to shape.

Angle the outer sections of etched part 11E downwards, then fold the outer struts back upwards. Fit to the lower fuselage over the area that has been filled, attaching the struts to the sides of the upper fuselage.

Fit the rotor head doublers, etched parts 11A to the top & bottom surfaces of the rotor head on etched part 11B. Fit to the top of the fuselage



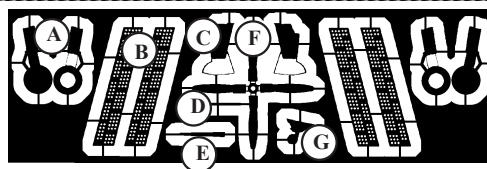
Fit the rescue hoist, etched part 11D as shown here.

Fit the tail rotor, etched part 11C to the port side of the tail boom.

Fold the main wheels in half so that the relief-etch detail is outermost, then fit to the outboard parts of etched part 11E.

Fit the nose wheel 11G centrally to the underside of the nose.

## CURTISS SB2C HELLDIVER PARTS ASSEMBLY

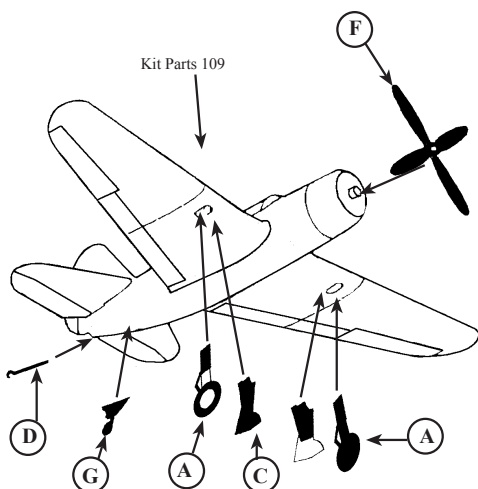


59

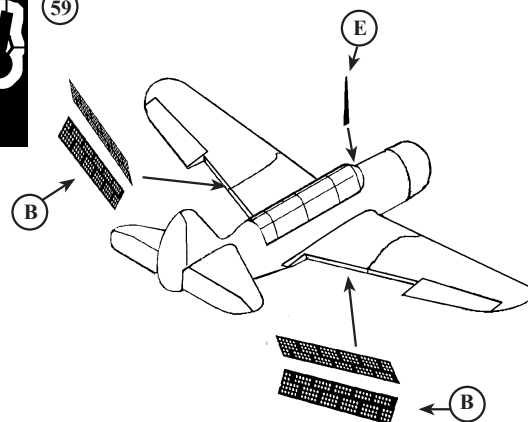
Before fitting any etched parts to the kit parts 109, remove any moulded plastic undercarriage detail, & if the dive brakes are to be displayed in the open position, cut away the trailing edges of the wings to the size & shape of the dive brakes.

Fold & fit the undercarriage parts 59A & C as shown left. Fit the tail hook 59D to the lower part of the rudder. Fit the etched propeller as a replacement for kit part 98. Fit the tail wheel 59G centrally to the rear fuselage.

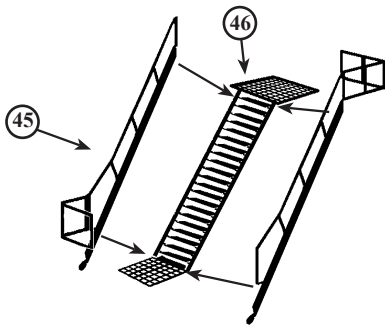
Fit the dive brakes, etched parts 59B, in the open position to the inner wing sections that have been cut away as shown right. Fit the wire antenna mast 59E offset to the left of the windshield.



Kit Parts 109

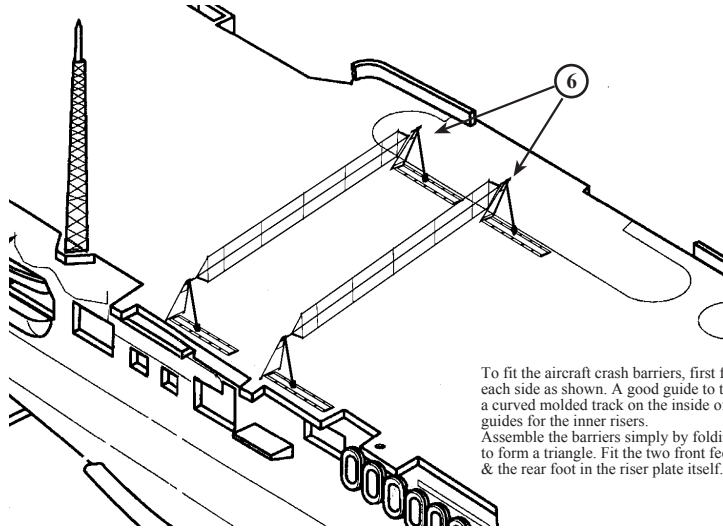


## ACCOMMODATION LADDER



If accommodation ladders are to be fitted to the amidships or aft stations, assembly is as shown above.  
Parts 46 are a port and starboard pair with the top landing extending inboard to the main deck when fitted.

## FLIGHT DECK CRASH BARRIER ASSEMBLY



To fit the aircraft crash barriers, first fit the riser plates to the deck on each side as shown. A good guide to the exact position is indicated by a curved molded track on the inside of the island. These tracks are guides for the inner risers.  
Assemble the barriers simply by folding the barrier risers at the points to form a triangle. Fit the two front feet at the front of the riser plate & the rear foot in the riser plate itself.

## OTHER INSTRUCTIONS

1. Sufficient stock railings of both the 2- & 3-bar varieties has been supplied to finish of any runs of railing or platforms that have not be covered by the tailored-fit sections. These are items 25, 26 & 27 on the larger fret.
2. Two panels have been provided, etched parts 3 and 4, to wrap around the front of the bridge superstructure to overlay or replace the bridge fronts. Item 3 is for the *Colossus* or early ships of the class. Item 4 is for the *Arromanches* or later ships of the class that had the top deck area closed in.
3. Name plates have been included, etched parts 5, for every ship of the class in case ships other than the kitted ones are being modeled. These are located on the sides of the island below the lower bridge platform.
4. Etched parts 17 are fairleads that are folded in half to give extra thickness. These can be used to thicken up the fairleads etched in to the railing sections, or to provide for any additional items needed.
5. Item 23 is stock vertical ladder which is used in short sections as access ladders to the flight deck catwalks & gun sponsons, or in longer lengths on masts.
6. An excellent reference for ships of this class is in the Fan publication *The Colossus Class Aircraft Carriers 1944 - 1972* by Neil McCart. Also by Neil McCart is the sister Fan publication *HMS Glory 1944 - 1961*.