



## Belcher Bits BK5: Westland Lynx (Naval variants)

### HISTORY

An Anglo-French agreement to design and build military helicopters was signed in 1968, and Westland was given design leadership. The requirement was for an armed escort version, an Army utility and a naval helicopter capable of operating from small ships. The latter two proceeded to production; the first prototype flew in March 1971, followed by 13 development aircraft and in 1976, the first production naval Lynx HAS Mk 2 and in 1977, the first production Army Lynx.

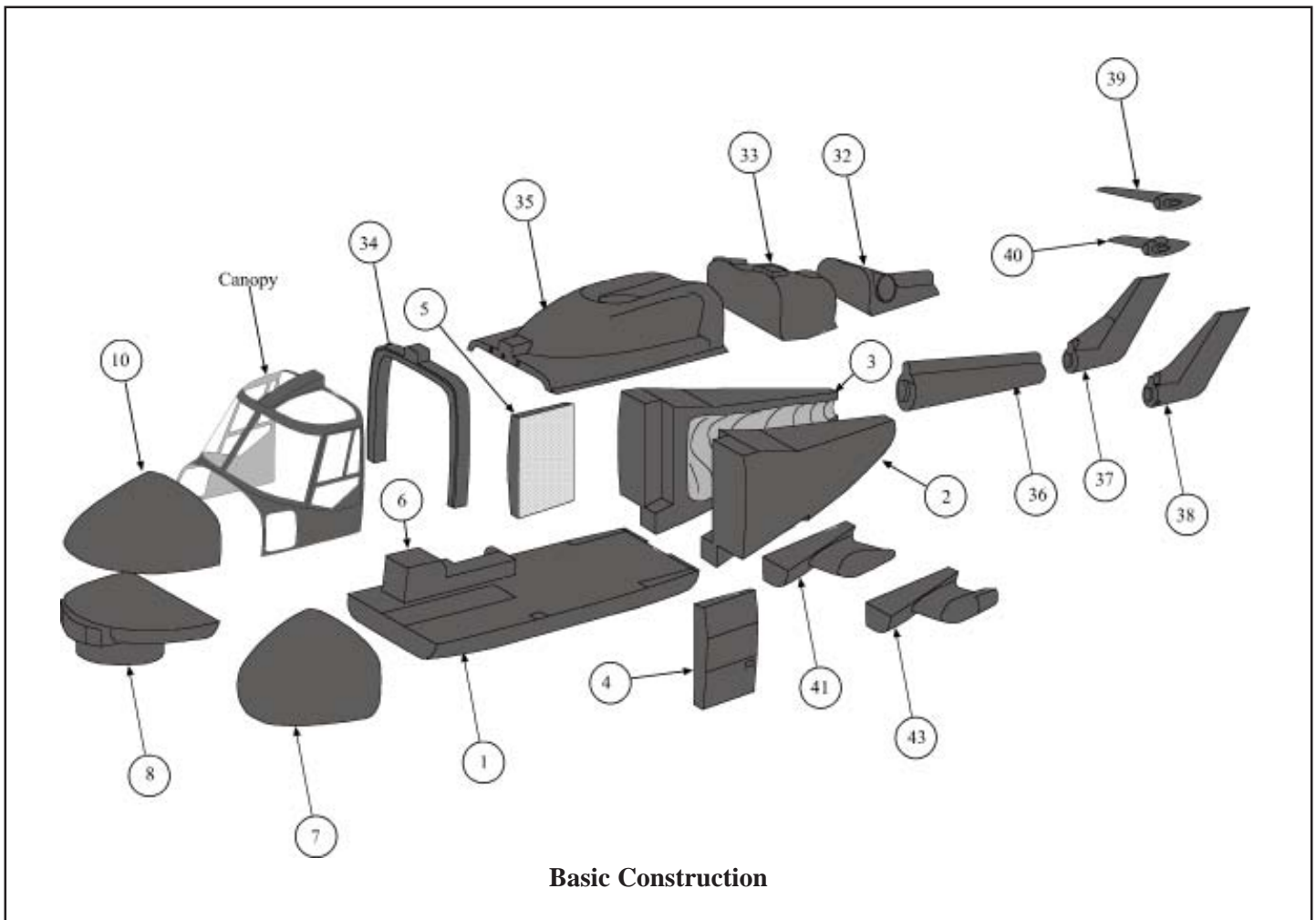
The Lynx was an advanced design from the start and the French-designed rigid rotor system allows exceptional manoeuvrability as well as speed; in 1986, a slightly modified Army Lynx set an absolute speed record for rotary wing aircraft.

The small 'footprint' of the Lynx, folding tail and use of a hydraulic probe for deck landing allows operation from a wide range of naval vessels in fairly severe sea states. It is capable of carrying a useful operational load such as two torpedoes or four anti-shipping missiles. French, Dutch and German machines have been fitted with a dipping sonar, although this does reduce the payload. It has been used as a utility and search and rescue machine as well as in the anti-submarine role.

The Lynx has seen combat, being used in both the Falklands war in 1982 and during the Gulf War in 1991. During that conflict, RN Lynxes using the Sea Skua missile scored 17 direct hits on Iraqi patrol craft, sinking 12 vessels.

The naval Lynx was actually the first in production due to a pressing need to replace the Wasp in RN service. Although the Army Lynx in British Army Air Corps service is more numerous, the naval Lynx has proven to be a popular aircraft and is (or has been) operated by 15 countries. Development continues today and the naval Lynx remains in production as the Super Lynx for foreign customers.

While current machines with their variety of add-on sensors, bumps and protruberances are not as elegant-looking as the first prototypes, their effectiveness as combat machines more than makes up for their appearance, and the Lynx will be remaining in service for a number of years.



### GENERAL INSTRUCTIONS

This kit is designed to be straightforward in construction. However, some experience in building models with non-traditional materials would be an asset.

The instructions are sufficiently detailed to enable one to complete the model. However, if additional detailing is desired, it would be useful to consult some of the references listed at the end of the instruction sheet. Having a few photographs of the real thing on hand while building a kit is always useful.

This kit is made of polyurethane resin. This resin sands slightly easier than polystyrene plastic, so go easy when filing, sanding and filling seams. Breathing polyurethane dust is hazardous so wet sanding is best; the use of a mask is recommended. Effort has been taken to reduce the number of pinholes to a minimum, but if any are present they can be filled with adhesive, putty or even thickened paint.

Parts are trimmed but not finished. Some pour or vent areas will require cleanup. This is especially important where

these fall on mating surfaces. There is a little flash in some areas to remove. It is best to go through the kit and clean up all the parts at once; this gets the most boring job out of the way early. The builder will be required to construct certain items which are too small or delicate to mould.

There are few register marks to positively align parts; use care in fitting the parts. A few minutes spent at this stage will prevent hours of staring at a painted model with the tail out of line with the fuselage. Even where there are register or keys, it is imperative to test fit parts. Resin parts are made in rubber moulds and there can be small distortion of the moulds during the casting process. As a result, surfaces that were flat on the master may not be as flat in the finished product. The instructions list areas where special care needs to be taken, and this information comes from test assembly of the kit.

Assembly requires the use of either epoxy or cyanoacrylate (super glue) adhesives. It is always a good idea to wash the

parts in lukewarm water and mild detergent before assembly and definitely before painting.

It is important to prime the model before painting. Most polyurethane resins accept model paints well, but a lacquer based primer will have a better 'tooth' to adhere to the material.

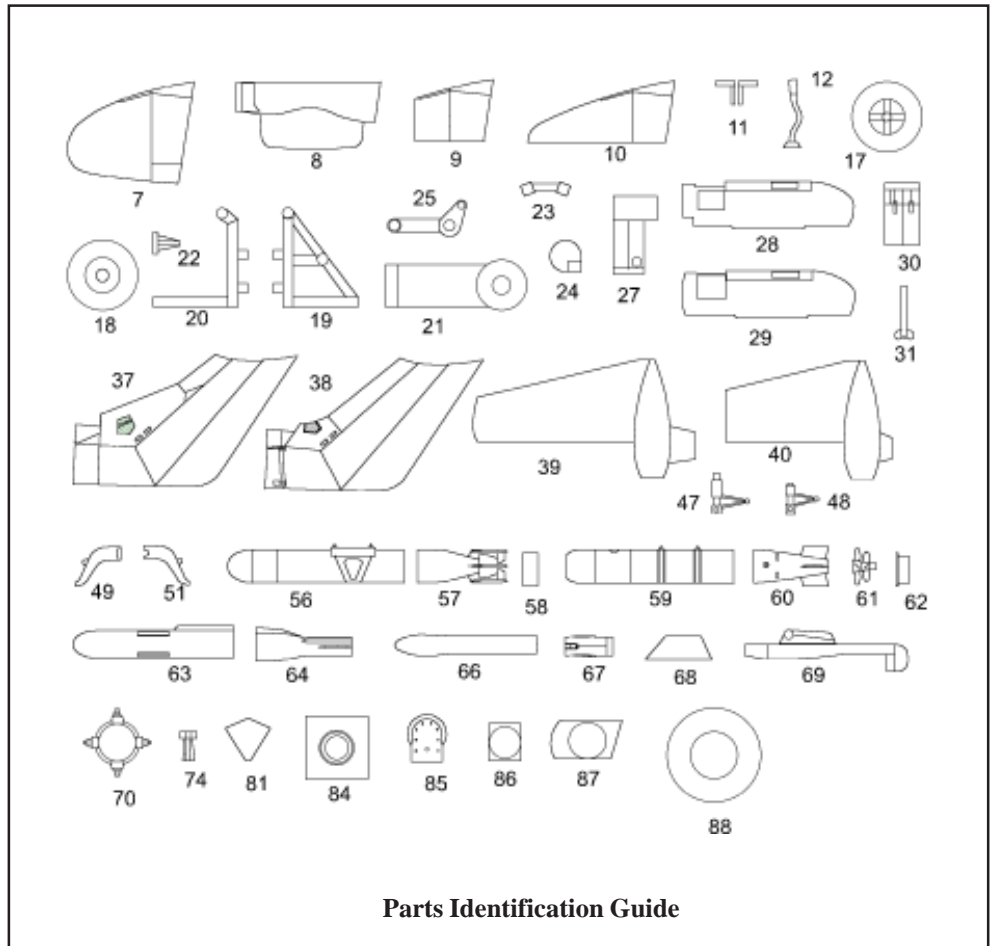
Belcher Bits is run by a modeller and has developed a reputation for high quality products and excellent after-sales support. If you experience any problems with this kit, are missing any parts or have accidentally ruined anything during construction, do not hesitate to contact us for a prompt replacement at no charge. All constructive criticism is also welcomed; suggestions to improve products are always useful.

I am proud of my products and hope you will enjoy this latest Belcher Bits kit.

Mike Belcher

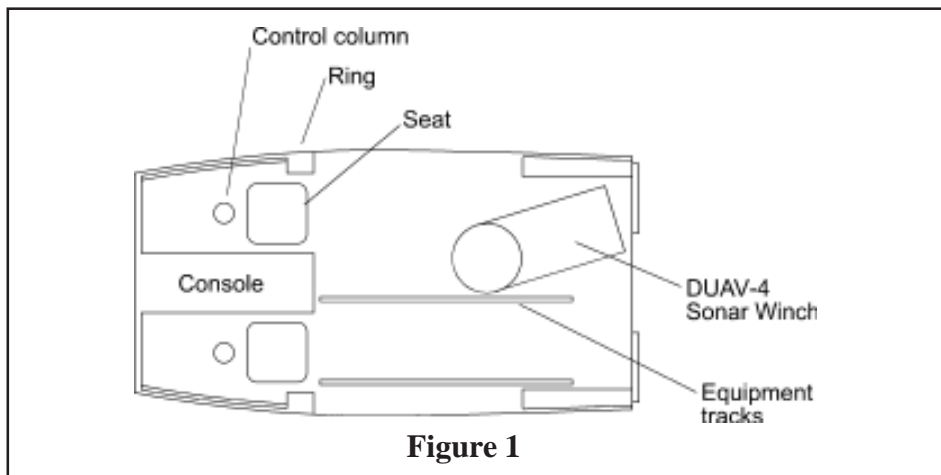
## Parts List

- |   |  |  |
|---|--|--|
| <ol style="list-style-type: none"> <li>1. Floor</li> <li>2. Left fuselage</li> <li>3. Right fuselage</li> <li>4. Left side</li> <li>5. Right side</li> <li>6. Console</li> <li>7. Early nose</li> <li>8. Super Lynx lower nose</li> <li>9. Super Lynx upper nose rear</li> <li>10. Super Lynx upper nose</li> <li>11. Rudder pedals</li> <li>12. Control column</li> <li>13. Aircrew seat (3)</li> <li>14. Inflatable troop seat</li> <li>15. 6 place sling troop seat</li> <li>16. 3 place sling troop seat</li> <li>17. Cable reel outer ring</li> <li>18. Cable reel</li> <li>19. Left winch frame</li> <li>20. Right winch frame</li> <li>21. Base winch</li> <li>22. Dome support strut (2)</li> <li>23. Cable lead</li> <li>24. Winder reel</li> <li>25. Winder drive</li> <li>26. Sonar display console</li> <li>27. Centre console panel</li> <li>28. Early instrument panel</li> <li>29. Late instrument panel</li> <li>30. Overhead panel</li> <li>31. AS.12 sight</li> <li>32. Exhaust section</li> <li>33. Engine section</li> <li>34. Cockpit ring</li> <li>35. Cabin roof</li> <li>36. Tailboom</li> <li>37. Non-folding tail</li> <li>38. Folding tail</li> <li>39. Early stabilizer</li> <li>40. Late stabilizer</li> <li>41. Left sponson (early)</li> <li>42. Right sponson (early)</li> <li>43. Left sponson (late)</li> <li>44. Right sponson (late)</li> <li>45. Main gear wheel (2)</li> <li>46. Nose gear wheel (2)</li> <li>47. Main gear leg (2)</li> <li>48. Nose gear leg</li> <li>49. Left forward pylon strut</li> <li>50. Right forward pylon strut</li> <li>51. Left rear pylon strut</li> <li>52. Right rear pylon strut</li> <li>53. Single station pylon (2)</li> <li>54. Dual station inner pylon (2)</li> </ol> | <ol style="list-style-type: none"> <li>55. Dual station outer pylon (2)</li> <li>56. Sting Ray forward section (2)</li> <li>57. Sting Ray aft section (2)</li> <li>58. Sting Ray parachute (2)</li> <li>59. Mk 46 forward section (2)</li> <li>60. Mk 46 aft section (2)</li> <li>61. Mk 46 props (2)</li> <li>62. Mk 46 parachute (2)</li> <li>63. Sea Skua forward section (4)</li> <li>64. Sea Skua aft section (4)</li> <li>65. Sea Skua electronics</li> <li>66. AS.12 forward section (4)</li> <li>67. AS.12 aft section (4)</li> <li>68. AS.12 fins (16)</li> <li>69. AS.12 launcher (4)</li> <li>70. Pitch control spider</li> <li>71. Rotor head</li> <li>72. Rotor blade (4)</li> <li>73. BERP blade tips (4)</li> <li>74. Tail rotor hub</li> <li>75. Tail Pitch control</li> </ol> | <ol style="list-style-type: none"> <li>76. Early tail blade (4)</li> <li>77. Late tail blade (4)</li> <li>78. Left cabin door</li> <li>79. Left cabin door (aft window)</li> <li>80. Right cabin door</li> <li>81. Orange Crop nose structure</li> <li>82. Orange Crop side mount (2)</li> <li>83. Orange Crop antennas (4)</li> <li>84. Crash position indicator</li> <li>85. Sea Owl sides (2)</li> <li>86. Sea Owl base</li> <li>87. Sea Owl sensor</li> <li>88. DUAV-4 sonar bellmouth</li> <li>89. AS.12 roof mounted sight</li> <li>90. Collective lever</li> </ol> <p style="text-align: right; margin-right: 20px;">plus</p> <p>Vacuform canopy (2)</p> <p>EZ Mask</p> <p>Decal</p> <p>Instruction sheet</p> |
|---|--|--|



### Note

This kit may be one of the most complex resin kits made, primarily because it allows so many different options. That being said, every effort has been made to make the construction as easy as possible, with most parts having keys to assist in fitting together. However, it is imperative that you decide at the outset what version you wish to make, and read the instructions carefully. Set out the parts required for the version desired, and test fit prior to gluing. Because of the detailed interior options, you will be required to paint many of the internal components before final assembly.



### Initial Construction

1. (Decision required) The fuselage floor (part 1) has two equipment tracks moulded on the port side, which are only used for those a/c with dipping sonar. If not required, sand these off flush with the level of the floor. The pouring sprue is at the front of the floor piece; note that when this is removed the front is not perpendicular to the top.
2. On a flat piece of sandpaper, LIGHTLY sand the mating surfaces of left and right fuselage halves (parts 2&3), just enough to ensure they are flat. Hold together and glue.
3. The floor piece is glued to the fuselage halves, the notch on the aft end positioning it. **IMPORTANT!** Use a small square to ensure the floor is at right angles to the rear bulkhead. Everything will fit well together if you start out square here!
4. For the left and right sides (parts 4 & 5), mark the side with a soft pencil and remove from their casting bases, filing the cut surface smooth. Glue these in the appropriate corner; there is a recess in the floor panel, and the sides fit flush to the rear fuselage.
5. Glue the centre console base (part 6) in the recess shown in Figure X.
6. (Decision required) Time to hang the nose on the front of the console. For early navy machines, use part 7. The slot

in the back of the nose should sit on the centre console and butt up to the front of the floor piece.

7. If a Super Lynx variant with the under-nose radar is desired, further work is required. The lower nose (part 8) is common to all Super Lynx variants.
8. (Decision required) If you wish to model a machine with the full upper nose fairing, select part 10. Use that part to trace out a shim of 0.15" (0.4mm) sheet plastic. Sandwich that shim between upper and lower halves. Install the nose as above.
9. (Decision required) If you wish to model an HMA.8 with the Sea Owl sensor, you will need the rear upper portion only (part 9). Make the same shim as described above, glue that to the lower half, then glue on the upper half. Sea Owl installation is described separately later. Install the nose as above.
10. Glue the rudder pedals (part 11) and control column (part 12) in the spaces indicated. The collective lever (part 90) attaches to the rounded area at the rear of the slot in the centre console. The sub-assembly can now be painted the interior colour, medium grey.

### Basic Interior

11. The pilots and copilot seat (part 13) can be painted. The basic colour is medium grey, with a yellow survival pack,

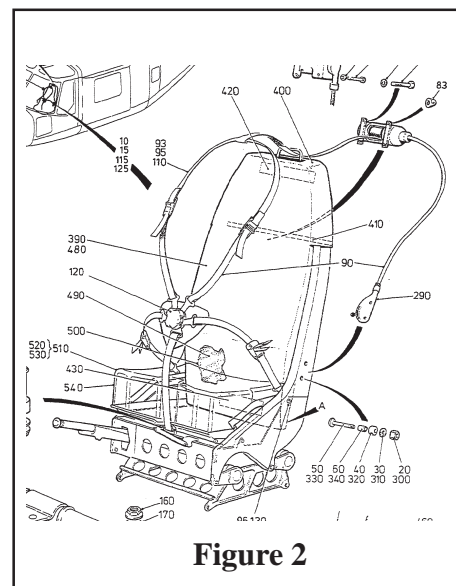


Figure 2

green seat cushion and buff sheepskin cover. The back support cover (which covers the top of the seat and stretches over the back at the top is generally red. Seat belts are dark green or black. The two seat positions are marked on the floor.

12. (Decision required) If a dipping sonar is fitted, you will need the third seat. It is installed between the equipment tracks, centred 0.5" (13mm) from the aft end of the tracks.
12. (Decision required) Several rear troop seating options are included. Many machines are fitted out as utility machines and have no rear seating ... easy option.
13. RN machines use the inflatable troop seat (part 14). Drill four holes in the base of the seat at the corners and glue in a short length of 0.030" (0.75mm) rod in each hole, leaving 1/8" (3mm) sticking out. The seat is overall light grey with blue-grey back panels. Seat belts are dark

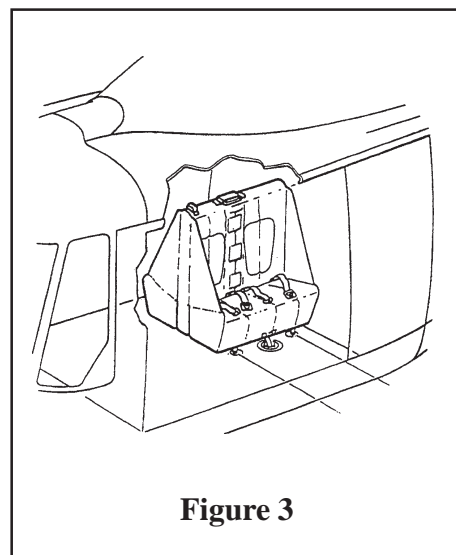


Figure 3

green. You may wish to mark the position of the legs on the floor and drill shallow holes to attach the seat.

14. Some other navies use a sling-type rear troop seat (part 15). You will need to build the seat supports from 0.030" (0.75mm) rod or brass wire. I would suggest making a jig from sheet plastic, drilling a hole pattern with the seat template, fit the uprights into the jig, attach the seat and additional braces and then remove the whole assembly from the jig. The after sling seat (part 16) also requires you to build the seat supports per Figure 4. However, when completed it will be attached to after bulkhead, so no

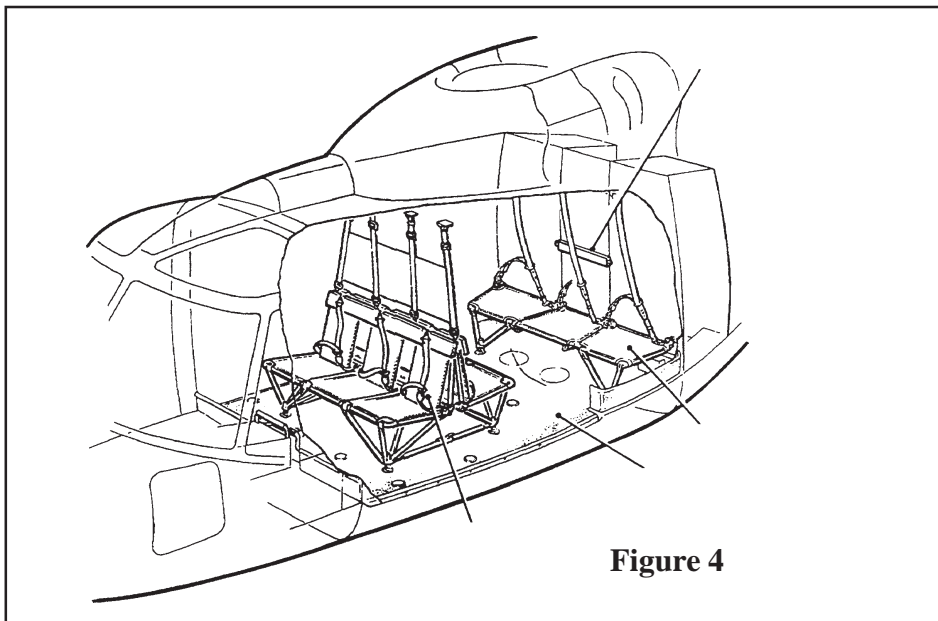


Figure 4

predrilling of the floor is required.

Support tubing is light grey, fabric slings are dark green, seatbelts are dark green.

15. Those aircraft fitted with a dipping sonar also have a single sling seat facing aft behind the pilot, but no other passenger seating. Cut the middle out of the after troop seat, clean up the edges and build up the seat supports from 0.030" (0.75mm) rod beneath the sling seat and install behind the pilot seat.. Colours as above.

#### DUAV-4 Dipping Sonar Winch

16. Glue the outboard flange of the cable reel (part 17) to the reel (part 18). Clean up the left and right halves (parts 19 and 20) and base (part 21). Glue the left half to the base, aligning the ends. Glue the cable reel assembly to the inside of the left half, aligning the centre of the reel with the boss on the frame per Figure 5a.

Glue the right frame to the base and cable reel. Drill a 0.04" (1mm) hole through the centres of the winder reel supports (the upper ends of the frames).

17. Glue the dome support struts (parts 22) between the tabs on the frames; the outer ends should rest on the two bars on the top of the dome support .

18. Glue the cable lead (part 23) to the level winder reel (part 24). Drill a 0.04" (1mm) hole through the centre of the winder reel. Cut a length of 0.040" (1mm) rod and insert as an axle for the winder reel through the frames. The cable lead should be facing forward, and the bottom should be glued to the top of the

dome support.

19. Glue the level winder drive (part 25) to the outside of the right side frame; the end of the longer arm should be aligned with the winder reel axle.

20. The assembly is light grey overall, with dark grey boots on the cable lead and material surrounding the dome support.

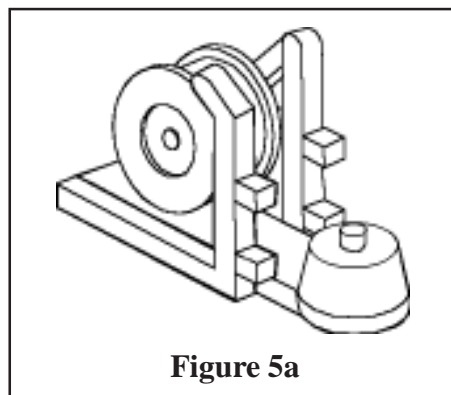
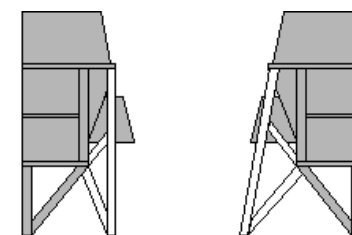
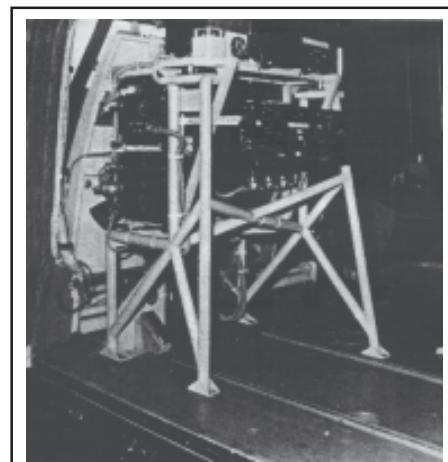


Figure 5a



Outboard

Inboard

Figure 5b

#### DUAV-4 Sonar Rack

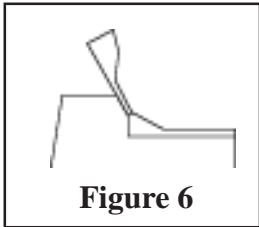
21. The sonar display console (part 26) needs some parts made from sprue to complete. Clean up the flash between the side frames. Use 0.035" (0.9mm) rod to construct front legs and cross bracing per Figure 5b. Note the outboard leg is vertical, while the inboard leg extends 1/8" (3mm) further aft at the bottom. Add rectangular feet; the rack faces aft and is centred on the tracks in the interior. Equipment is very dark grey with black details, and the frame is light grey.

#### Cockpit detailing

22. Paint the centre console instrument panel (part 27) very dark grey with black and aluminum details. Glue it in place on the base.

23. (Decision required) There are two different instrument panels; early navy (28) and late navy (29). To be truthful, there are probably lots of variations, depending on user and era, but the basic layouts boil down to two. Pick the instrument panel desired and paint. Generally, the panel itself is interior colour with black bezels and details. The anti-glare screen around the panel is black.

When finished, glue the panel to



**Figure 6**

the centre console base as shown in Figure 6.

24. Paint the overhead console (part 30) very dark

grey with black details. Set aside ... this will be glued into the clear canopy prior to installation.

25. (Decision required) For early Aeronavale machines carrying the AS.12 missile, paint the overhead sight (part 31) dark grey. Set this aside as well for later installation.

26. (Decision required) For RN machines carrying Sea Skua missiles, there is an electronic pack (part 65) installed behind the co-pilot seat. Colour is very dark grey with black details. Heavy cables run (2/side) from somewhere in the front of this unit (sorry, no better info) to small terminal boxes at the lower front corner of the cabin door opening. These cables enter the tops of the terminal boxes, and there are two plugs coming out the sides where the missile wiring is attached. Cables are red, terminal boxes are black.

### Fuselage construction

27. Glue the exhaust section (part 32) on top of the rear fuselage, aligning the after ends.

28. Glue the engine compartment (part 33) directly ahead of the exhaust section.

29. The cockpit ring (part 34) has its interior flashed over for support. Remove this flash, trim the ring interior and paint interior colour.

30. Paint the underside of the cabin roof (part 35) interior colour. It is installed directly ahead of the engine compartment; test fit and if necessary, file the after end a bit to achieve a good fit. Tape the ring to the front of this part, using the three mounting studs to position it.

31. Place the taped assembly in position. The after end of the roof should be taped to the engine compartment and the bottom of the ring arms should fit in the recesses in the floor. When everything is lined up properly, glue into position, remove the tape and finish gluing the joints.

32. A note about the screened inlet cover which is fitted to nearly all ma-

chines. This kit does not include these covers because there is no good way to make a representation. Solid resin would make the kit look toy-like, and photo-etched screen would be impossible to form to the complex three-dimensional shape. I recommend one of two options; either leave the inlets open, or build up the shape with an epoxy putty and cover with tissue to represent a protective covering, often seen on parked machines. I recognize this may not be an ideal solution, and if anyone has any constructive ideas on how to represent these items, I would welcome hearing from you.

### Tail(s)

33. File the after end of the fuselage slightly to get a flat surface. Use a drill or grinder and clean up the rear hole; the tailboom will fit better if the hole is slightly enlarged upwards. Fit the tailboom (part 36) into the hole, lining up the tail rotor shaft housing. Sighting down the fuselage to keep the tailboom straight, glue when satisfied.

34. (Decision required) Select the tail desired. German machines have an Army-style non-folding tail (part 37), while other have the folding tail (part 38). Fit in position, again aligning the driveshaft cover. Ensure the tail is vertical and glue into position. Fill the seam.

35. (Decision required) Select the horizontal stabilizer desired. Early machines have the original gearbox and longer stabilizer (part 39); Super Lynxes and RN HMA.8 machines have the new gearbox and shorter stabilizer (part 40). Place in position with the forward end of the gearbox housing protruding 0.08" (2mm) forward of the leading edge of the fin. Admittedly, the fit is not great, so it would help to put a pin in the top of the tail and match it up with the gearbox. Note that the stab has a slight nose down angle of attack. Ensure the stabilizer is horizontal (viewed from the rear) glue into position, and fill the seam.

36. (Decision required) If you wish to model a machine fitted with the Orange Crop ESM sensors, there are several steps involved. On machines with the original navy nose, the O/C forward sensor is housed in a triangular box on the nose (part 81). Clean up, profile the base to match the nose shape and install on the centreline 0.1" (3mm) back from the nose.

37. The Super Lynx lower nose has the mounts for the O/C sensors but not the antennas themselves (since some users of the Super Lynx do not use Orange Crop). The antenna plates (part 83) are installed on the outer panels on the lower nose.

38. Orange Crop sensors are also installed on the rear fuselage. The sensor and mounting plates (part 82) are glued in position (use colour scheme drawings for position).

39. Finally, more antenna plates are required on the rectangular panels on the rear of the later style sponsons.

### Canopy

40. Carefully cut out the vacuform canopy and fit it to the fuselage. Remember the old tailor's adage: measure twice, cut once. The canopy is designed to fit over the lips moulded into the floor, ring and nose. Use some relatively coarse wet and dry sandpaper on a small block to sand the edges of the part to achieve a good fit. The canopy is made from PETG which can be polished (carefully) to improve the clarity but be careful; the deep draw of the canopy means the top section is fairly thin.

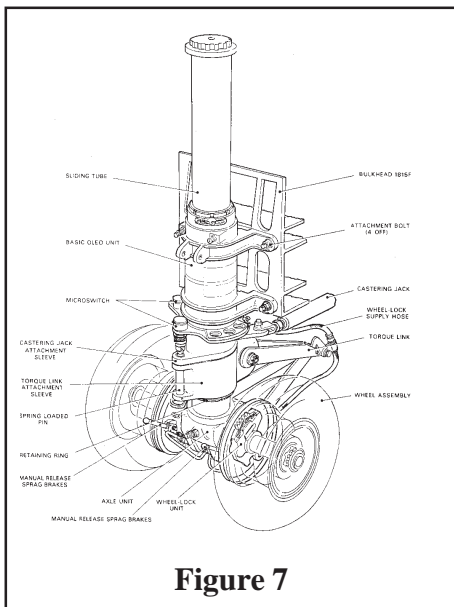
41. Glue the overhead console in place using white glue.

42. If you are building an early French machine, glue the missile sight (part 85) in place on the inner side of the left clear section. On the inside, glue the overhead sight in place directly under the missile sight.

43. (Assuming all interior painting is now done!) glue the canopy in place. I find taping and tacking with white glue works best, followed by finishing all edges with more white glue, which dries clear and can be smoothed with a water dipped pad or Q-tip. Some people swear by cyanoacrylates, but run the risk of fogging the interior.

### Landing Gear

44. (Decision required) Early machines had the original sponsons (part 41 left and 42 right), while many later machines have the sponsons with the box-like extensions for the Orange Crop sensors (parts 43 left and 44 right). Choose the appropriate set, clean up the inside edges and test fit in position in the recesses in the rear fuselage. The fit is good but a little checking and shimming



**Figure 7**

may be required. Make sure the sponsons are horizontal. Sponsons are fuselage colour, but the flotation gear cover is normally medium green.

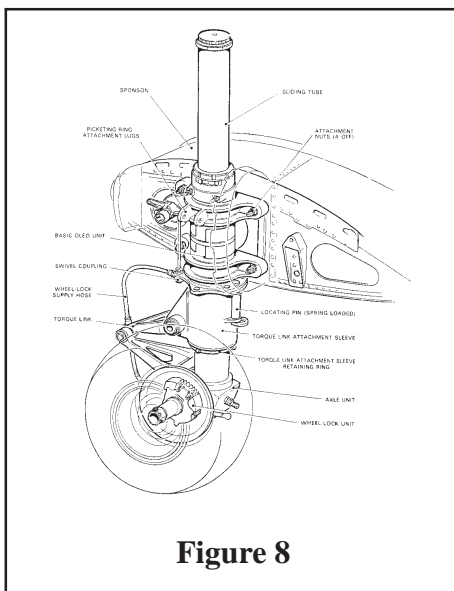
45. Drill a 0.060" (1.5mm) hole straight down through the sponson outer boom, in line with the tie-down ring.

Because it is important that this hole be vertical from the side and ends, it may be better to drill undersize from above and below and check the alignment prior to final sizing the hole.

46. Remove the nose wheel (part 46) and main wheel (part 45) from their base. There are two sets. Wheels hubs are light grey or white.

47. Remove the main gear (part 47) and nose gear (part 48) from their flashing and clean up. Gear legs are light grey.

48. Drill a 0.020" (0.5mm) hole



**Figure 8**

through the nose gear, install a length of brass or steel wire and fit the nose wheels. For details, see Figure 7.

49. Drill a 0.030" (0.75mm) hole through the main gear. Install a length of brass wire as an axle. Note that this axle protrudes about 3/16" (4.7mm) on the inside (other side from the wheel) as well. Drill the wheel to suit the axle and install. For details, see Figure 8. It is best to leave off the landing gear until final assembly.

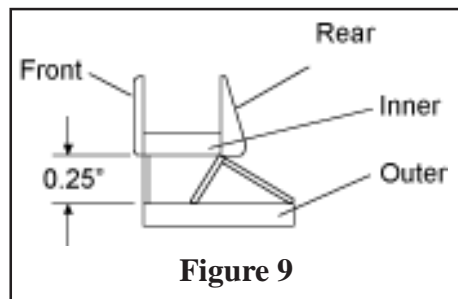
### Weapons

50. You need to decide what, if any, will be the weapons load. RN machines could carry 2 or 4 Sea Skua or 2 Sting Ray torpedoes. Other navies would typically carry 2 Mk 46 torpedoes. Early French machines were armed with 4 SS.12 missiles; these were eventually declared obsolete, and current Aeronavale machines carry Mk 46s. This kit provides the builder with either single or dual station weapons pylons. Note that some machines have been seen with single on one side and dual on the other.

### Single Station Pylons

51. Glue the left forward (part 49) and left rear (part 51) pylon struts to the single station pylon (the one WITH the little projections at the ends; part 53) with pylon detail facing out. Repeat for the right side. Remove the small lugs on the weapons points on the floor section, leaving the flat pads. The pylon assemblies mount on these pads. I would recommend drilling a small hole in the strut mounting points and inserting a short length of wire to reinforce the joints. Again, leave the installation of these until after painting.

52. Insert a length of 0.03" (0.75mm) rod 1/4" (6.3mm) long in the indicated hole in the forward portion of the pylon struts ... I believe this is used to support wiring for arming the weapons. Pylons are generally light grey overall.



**Figure 9**

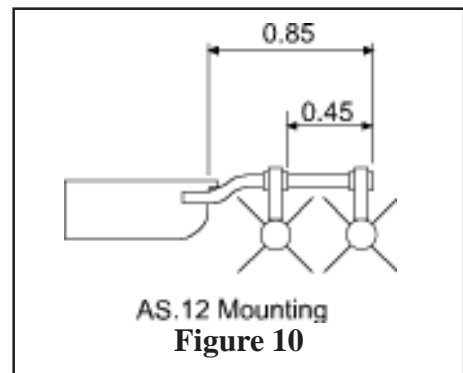
### Dual Station Pylons

53. Glue the left forward (part 49) and left rear (part 51) pylon struts to the dual station pylon (the one WITHOUT the little projections at the ends; part 54) with pylon detail facing out. Repeat for the right side. Now the tricky part. The outer pylon (part 55) is mounted 0.25" (6.3mm) outboard of the inner and about 0.030" (0.75mm) higher. They are aligned at the front. I recommend making a small jig to hold things in position while the struts between the two are installed. Use lengths of 0.030" x 1/8" strip and install according to Figure 9.

54. Mounting is as described for the single station pylons.

### AS.12 Pylons

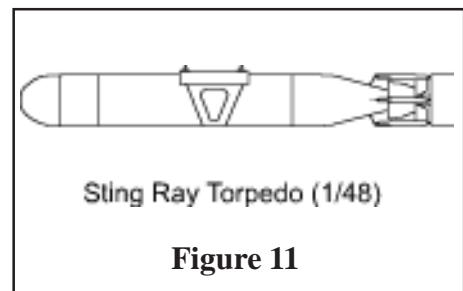
55. This is a guess, since I have only ever seen one photo of a Lynx with these installed and it wasn't clear. It appears that the AS.12 pylons are clamped on a cylindrical tube cantilevered out from the lower fuselage. I would recommend using a length of 0.060" (1.5mm) brass wire, bent as shown in the Figure 10 and inserted at a point Xmm ahead of the rear of the door opening, just below the door. If anyone has better information on this installation, I would appreciate details and will update the kit if required.



**AS.12 Mounting  
Figure 10**

### Sting Ray Torpedo

56. Cut the forward (part 56) and aft (part 57) sections off their bases and file the ends square. Glue them together and



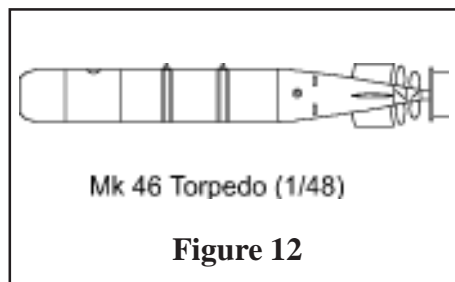
**Figure 11**

fill the seam. The torpedo is generally either dark green or black with light grey launcher assembly (that complex thing around the middle of the torpedo).

57. The parachute (part 58) is a simple cylinder. Carefully drill four small shallow holes to match up with the points extending from the torpedo fins. Glue in place. The parachute is normally the same colour as the torpedo.

#### Mk 46 Torpedo

58. Cut the forward (part 59) and aft (part 60) sections off their bases and file the ends square. Glue them together; the seam falls on a panel line. The torpedo is generally natural metal sometimes with a



coloured nose. The launcher bands are bright natural metal.

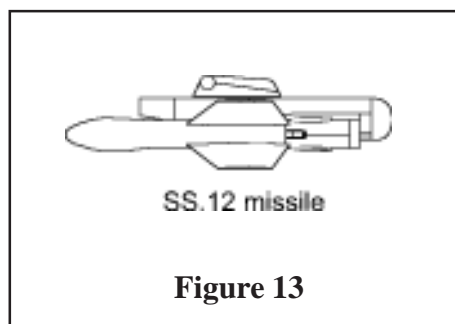
59. Carefully remove the propeller (part 61) from its base, paint a brass or bronze colour and attach to the tail.

60. The parachute pack (part 62) is painted white and attached to the end of the propeller piece, the central shaft fitting the small hole on the pack.

#### AS.12 Missile

61. Clean up the forward (part 66) and aft (part 67) ends of each missile, and glue together. Clean up the missile fins (part 68) and glue four at ninety degrees as shown in the Figure 10.

62. Clean up the missile launcher (part 69) and drill 0.060" (1.5mm) holes through the hub. Glue these to the completed missiles, noting that the rocket exhausts go on the sides and the pointed



projections (aiming flares?) go top and bottom. Paint the missiles and launchers white.

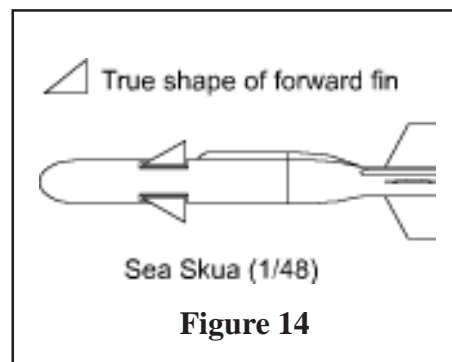
63. When all is completed, these missile assemblies can slide over the wire pylon. The spacing is shown in Figure 10.

#### Sea Skua Missile

64. Cut the forward (part 63) and aft (part 64) sections off their bases and file the ends square. Glue them together, matching the cable duct on top and fill the seam.

65. Cut fins from 0.015" (0.4mm) sheet. Note the forward fins attach to the pads in an X arrangement, while the aft fins are in a + arrangement.

66. Operational missiles are either overall white or lately, medium grey.



#### Sea Owl Sensor

67. Carried only on HMA.8 Lynxes of the RN, this adds a certain amount of character to the machine. Locate and clean up the two sensor sides (part 86) and the base (part 87). Glue the sides to the side of the base; the disc is on the bottom of the base.

68. Clean up the sensor (part 88) and glue it between the sides, matching the discs on the side of the sensor with the side pieces.

69. The completed assembly is glued on the shim section of the nose, centred 0.37" (9.5mm) forward of the front face of the rear of the nose.

#### Rotary Wing

70. Clean up the rotor head (part x71) and the pitch control spider (part 70). The rotor head is glued on top of the pitch control spider (its arms point down) with the ends of the arms lined up with the pitch control links of the rotor head. Glue small lengths of sprue from these links to the ends of the spider arms.

71. Carefully remove the rotor blades (part 72) from the base and clean up.

72. (Decision required) If you are building an later machine with the new BERP blades, you will need to cut 1.0" (25.4mm) off the end of each blade and glue on a BERP tip (part 73). For strength purposes, it may be a good idea to reinforce each joint with a drilled hole and a short length of wire. Fill the seams.

73. Attach the blades to the hub. Note that the wing turns counter-clockwise viewed from the top.

74. Paint the blades medium grey on top, black below. The rotor hub and spider are lighter grey, with dark grey boots on the spider arms.

#### Early Tail Rotor

75. Trim 0.1" (3mm) off the base of the tail rotor shaft/hub (part 74)...this is because the fairing on the gearbox housing is longer and covers more of the shaft.

76. Clean up the early rotor blades (part 76: without the little plate at the root) and glue to the hub. This rotor turns counter-clockwise when viewed from the left side of the aircraft.

77. Cut a 1/16" (1.5mm) long piece of small diameter sprue to the centre of the hub and sand the end square.

78. Clean up the small pitch control arm (part 75) and glue it to the sprue, rotating it slightly forward of the blades. Glue short lengths of sprue representing the pitch control links, from the arm ends to a point on the leading edge of the blade root arm.

79. Blades are black, with 6" red/white/red stripes at ends. Rotor hub is medium grey.

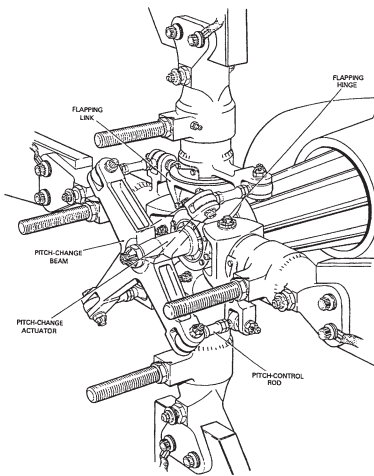
#### Late Tail Rotor (Super Lynx & HMA.8)

80. Clean up the late rotor blades (part 77: with the little plate at the root) and glue to the hub. This rotor turns clockwise when viewed from the left side of the aircraft.

81. Cut a 1/16" (1.5mm) long piece of small diameter sprue to the centre of the hub and sand the end square.

82. Clean up the small pitch control arm (part 75) and glue it to the sprue, rotating it slightly forward of the blades. Glue short lengths of sprue representing the pitch control links, from the arm ends to a point on the leading edge of the blade





**Figure 15**

root arm.

83. Blades are black, with 6" red/white/red stripes at ends. A 6" section on the hub end of the blade is also red. There is a thin metal strip on the outer 24" of the leading edge. Rotor hub is medium grey.

### Cabin Doors

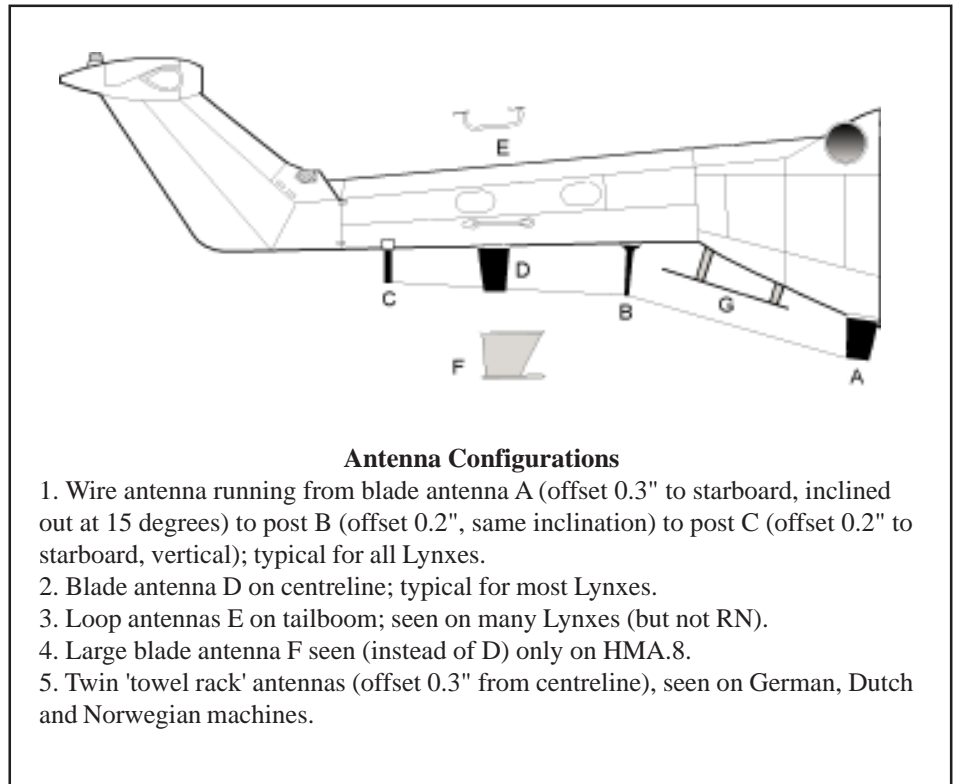
84. Cabin doors can be painted and installed after the fuselage is painted, if desired. They can be attached in a closed or open position; they fit between the underside edges of the cabin roof and the rail on the edge of the floor. If installing them in a closed position, the leading edge is flush with the ring, but the after edge extends out from the cabin sides the thickness of the door.

85. The right side door (part 80) is the same for all versions. The interior is interior colour. Use the small piece of clear plastic supplied and cut a window to fit the lipped hole in the inside of the door.

86. (Decision required) For most machines, the left side door (part 78) is a mirror image of the right. For those machines with the DUAV-4 sonar, there is a modified door with the window positioned further aft (part 79).

### Painting

87. This kit includes a set of EZ Mask pre-cut vinyl canopy masks. They stick well so the procedure to apply them is to peel them from the backing, dip in water with a bit of detergent added, and ma-



### Antenna Configurations

1. Wire antenna running from blade antenna A (offset 0.3" to starboard, inclined out at 15 degrees) to post B (offset 0.2", same inclination) to post C (offset 0.2" to starboard, vertical); typical for all Lynxes.
2. Blade antenna D on centreline; typical for most Lynxes.
3. Loop antennas E on tailboom; seen on many Lynxes (but not RN).
4. Large blade antenna F seen (instead of D) only on HMA.8.
5. Twin 'towel rack' antennas (offset 0.3" from centreline), seen on German, Dutch and Norwegian machines.

oeuvre them into position using the soapy water as a lubricant. When satisfied they are in position, gently blot them into position. Because the adhesive is tacky and the mask can stretch, it doesn't work well to stick them in place dry and try to peel them off and reposition; the mask will likely stretch and not fit the second time around. Once the model is completely painted, the masks can be removed by lifting a corner with a sharp knife and gently peeling off.

### Antennas

88. Most machines have a pair of blade antennas on the nose. Add these from scrap strip.

89. Other antennas are often seen on the tailbooms, and the configurations vary. Refer to Figure 16.

### Final Touches

91. Make up a pair of windshield wipers from stretched sprue and strip, paint black and install.

### References

1. World Airpower Journal Volume 39
2. World Airpower Journal Volume 40
3. Military Helicopters of the World by N. Polmar and F. Kennedy, Naval Institute

Press, 1981

4. British Military helicopters by J. Everett-Heath, Arms and Armour Press, 1986
5. Fly Navy by R. Williams, Airline, 1989
6. The World's Great Military Helicopters, gallery Books, 1990
7. Scale Aircraft Modelling, Vol 6 No.10
8. Scale Aircraft Modelling, Vol 5 No.3
9. Modelaid International, Nov 1987
10. Airfan No.29
11. Air International Vol 10 No.4
12. Air International Vol 25 No.2
13. Air International Vol 38 No.4
14. Manual extracts and drawings courtesy of GKN Westland Helicopters
15. FAA SIG website ([www.faaSIG.org/tech/lynx.htm](http://www.faaSIG.org/tech/lynx.htm))
16. Dag Stangeland's website (<http://home.online.no/~dagsr/lynxmk.htm>)
17. Photos from Tim Maunder, Ian McGonagle and Rui Ferreira.

### Thanks

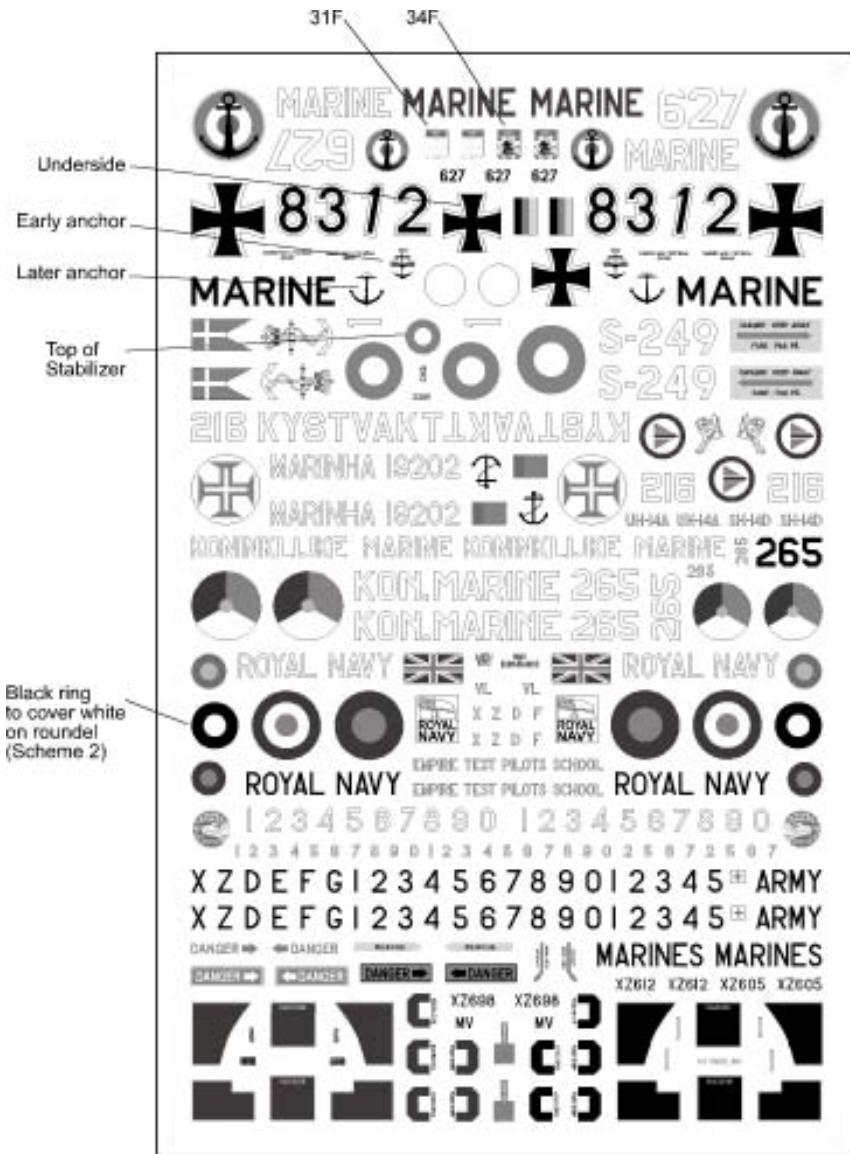
Thanks to Geoff Russell of GKN Westland and Rui Ferreira without whose help this kit would not have been possible. Thanks also to Flemming Sorensen, Knut Hagen and those others who either supplied info or pointed out URLs on the Net.

### Further Colour notes

1. Due to a printing error, the aluminum details of the 31 Flotille crest were printed dark blue by mistake. A correction slip is included with the decal sheet with these aluminum details printed separately. These are printed without a separate clear carrier, so the procedure is to apply the squadron decals, let dry, trim the aluminum correction decals tightly, then apply these over the squadron decals.
2. Please note that the '1' on the German code letters on the sheet is printed leaning to the left, only to save a little space on the sheet. It should be vertical when applied to the model.
3. Some markings on this sheet are only applicable to the Army Lynxes, so don't be surprised if you cannot find a scheme which calls these out.
4. Black and grey non-skid areas are at the bottom of the sheet. the square ones are meant for the tops of the gear sponsons, with the lettering facing the front. The footstep markers have been seen both with and without white stripes, so these are printed separately.

### Notes on Markings drawings

1. Antennas are not shown on drawings. Refer to the notes and the antenna configuration drawing on the preceding page to determine what to fit.

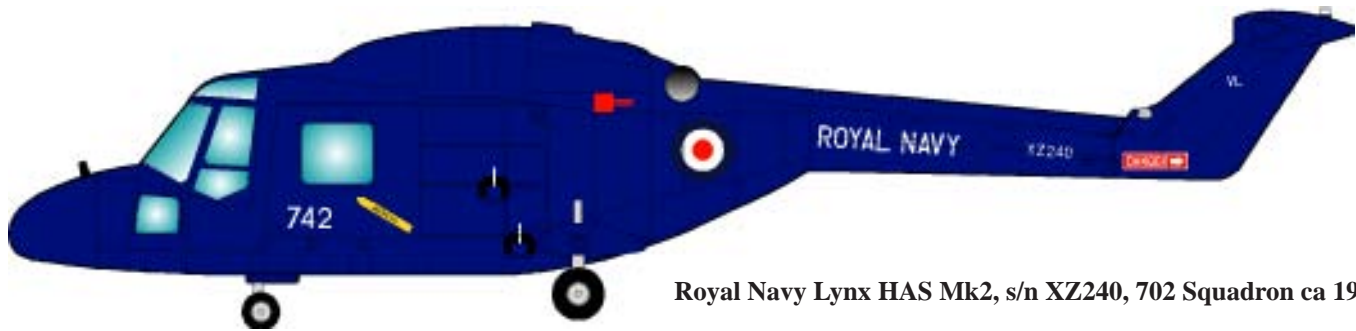


Note: There should be sufficient numbers and letters to represent any RN machine  
 Note: Some of these markings are for Army Lynx and are not applicable to this kit



### Note on Supplementary Yellow Decal Strip

The decal sheet for the kit was printed with the yellow slightly off register. This is only apparent on the Aeronavale roundels and the walkway borders. If you are using these decals, please place the appropriate yellow decal down first and let dry. Trim the yellow border off the kit decal as closely as possible, then apply it on top of the yellow decal. This will allow you to ensure the walkway or roundel is exactly centred in its yellow border. Also note that the yellow strip has borders for the no-steps; these are for the Army release of this kit and are not used for any Navy versions that I know of.

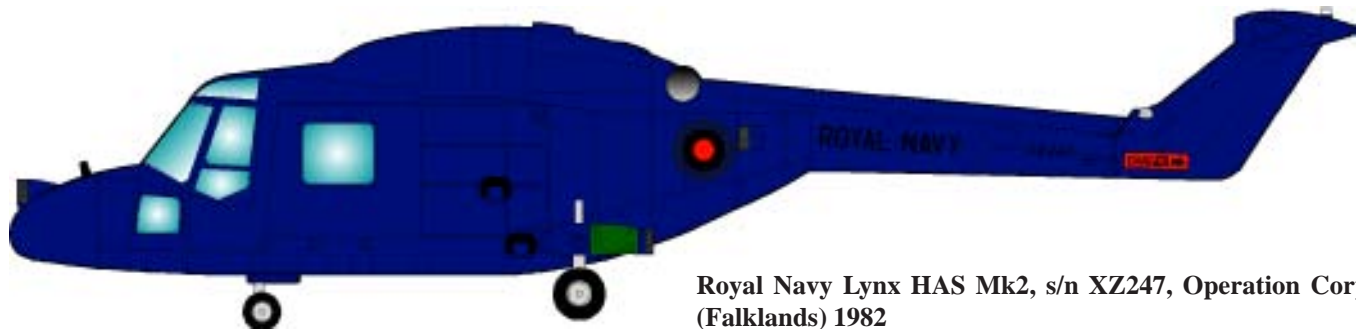


**Royal Navy Lynx HAS Mk2, s/n XZ240, 702 Squadron ca 1979**

The Royal Navy ordered a total of 60 Lynx HAS Mk 2 in three batches; serial numbers were in the ranges XZ227-252, XZ254-257, XZ689-700 and XZ719-736. The HAS Mk 2 was armed with either two torpedoes (Stingray), two mines (Mk 11 Mod 3) or up to four Sea Skua anti-ship missiles. Lynxes are used as light ASW helicopters operating from RN ships, and from the beginning RN Lynxes have been assigned to either the training squadron (702 Sqn) or the operational squadron (815 Sqn) which acts as a pool from which ship's flight machines are assigned.

The first operational scheme was overall Oxford Blue (FS15050) with 600mm D-type roundels on the fuselage sides. ROYAL NAVY is 200mm white letters on forward end of tailboom, followed by the serial in 100mm white letters. The aircraft number (742) was carried on the door in 200mm white letters. The tail rotor warning placard was red and white. This aircraft carried the squadron code VL in 100mm white letters on the tail. Wire antenna ABC and blade antenna D.

**Ref: World Airpower Journal Volume 40, Scale Models Dec 82**

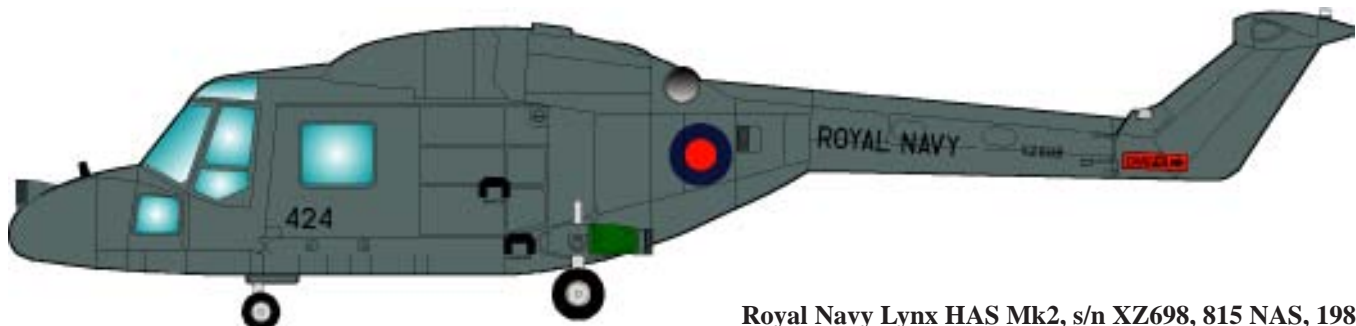


**Royal Navy Lynx HAS Mk2, s/n XZ247, Operation Corporate (Falklands) 1982**

Lynxes were fully operational by the time of the Falklands war in 1982, and at least one Argentine ship was sunk by a Sea Skua missile. The HAS Mk 3 was just entering service and its Orange Crop ESM equipment was also refitted to many HAS Mk 2s.

Paint schemes were already in transition from Oxford Blue to overall grey at this time, and combat requirements for low visibility markings led to some unique variations. This aircraft retains its original blue scheme, but all white markings were overpainted in black, including the white ring in the roundel and the serial number blacked out completely. Wire antenna ABC and blade antenna D.

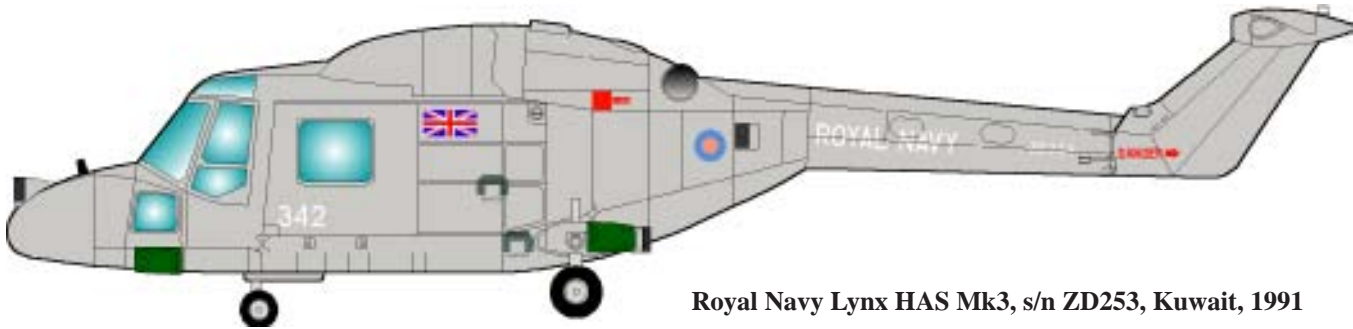
**Ref: Scale Aircraft Modelling Vol 5 No.3**



**Royal Navy Lynx HAS Mk2, s/n XZ698, 815 NAS, 1983**

Overall Dark Sea Grey (FS36173) with black markings. ROYAL NAVY is in 200mm letters on the tailboom, followed by the serial in 100mm letters. The aircraft number (424) is on the door in 200mm letters. Fuselage roundels are red and blue E-type, 600mm diameter, and the tail rotor warning placard is red and black. Wire antenna ABC and blade antenna D.

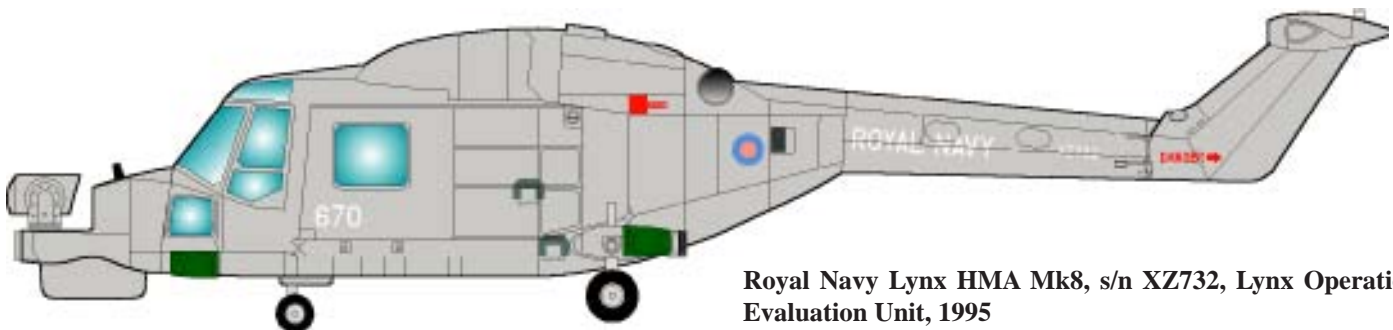
**Ref: Scale Aircraft Modelling Vol 6 No.10**



**Royal Navy Lynx HAS Mk3, s/n ZD253, Kuwait, 1991**

The Lynx HAS Mk.3 incorporated updated engines and transmissions for improved performance. Delivered in several batches (including some to make up for losses in the Falklands war), the new build Mk 3s were in the serial ranges ZD249-268, ZD565-567 and ZF557-563. Most remaining Mk 2s were rebuilt to Mk 3 standard. The Mk 3 was used with great success in Operation Granby (Gulf War). Overall Medium Sea Grey (FS36270) with white markings. ROYAL NAVY is in 200mm letters on the tailboom, followed by the serial in 100mm letters. The aircraft number (342) is on the door in 200mm letters. Fuselage roundels are low visibility pink and blue E-type, 300mm diameter, and the tail rotor warning placard is red only. Wire antenna ABC and blade antenna F.

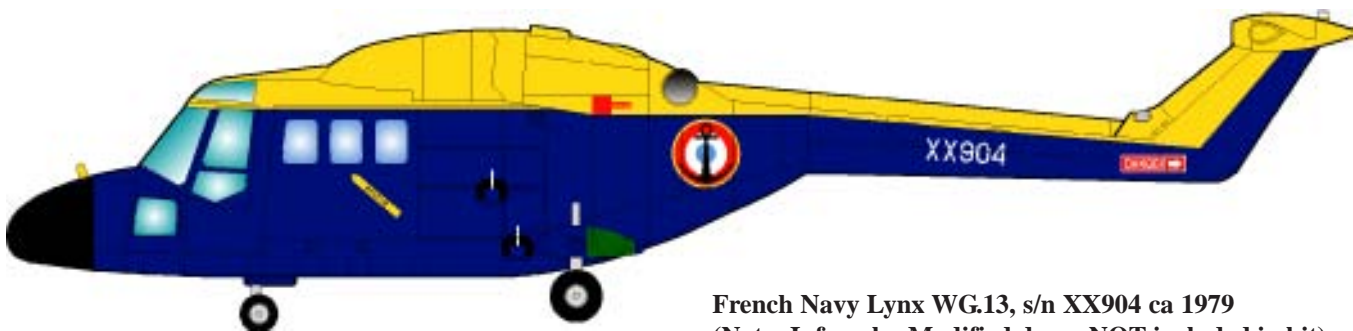
**Ref: Sea King by Patrick Allen**



**Royal Navy Lynx HMA Mk8, s/n XZ732, Lynx Operational Evaluation Unit, 1995**

The Lynx HMA Mk.8 represents the RN version of the Westland Super Lynx and incorporates the latest developments including Sea Owl passive IR sensor turret and AN/AQS-18 dipping sonar. It has the later reversed direction tail rotor, and a shorter, stiffened tailplane. Overall Medium Sea Grey (FS36270) with white markings. ROYAL NAVY is in 200mm letters on the tailboom, followed by the serial in 100mm letters. The aircraft number (670) on the door in 200mm letters. On the nose panel between the forward Orange Crop ESM antennas is the legend LOEU above the aircraft numbers 670 in 50mm white letters. Fuselage roundels are low visibility pink and blue E-type, 300mm diameter, and the tail rotor warning placard is red only. Wire antenna ABC and blade antenna F.

**Ref: Combined Forces Monthly, Aug 95.**



**French Navy Lynx WG.13, s/n XX904 ca 1979  
(Note: Info only: Modified doors NOT included in kit)**

France was one of the two original partners in the Lynx project, with a need for an armed reconnaissance version (never built) and an ASW variant.

This scheme represents one of the two development aircraft, without AS.12 capability. Externally similar to the later operational machines except for the doors (which had three small windows vs. one large), it was overall Oxford Blue (FS 15050) with a yellow roof, tailboom top and tail leading edge. 650mm roundels on the fuselage sides. The serial was 200mm white on the tailboom. The tail rotor warning placard was red and white. Blade antenna D only.

**Ref: World Airpower Journal Volumes 39 & 40, Air Fan No.29**

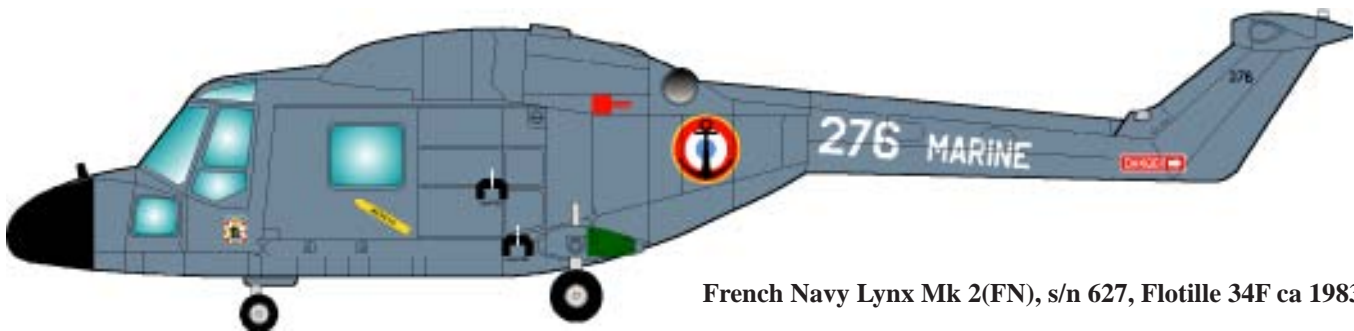


**French Navy Lynx Mk 2(FN), s/n 627, Flotille 31F ca 1981**

Twenty six Mk 2 (FN) were delivered with serial numbers 261-278 and 620-627. These machines were fitted with the Alcatel DUAV-4 dipping sonar and could carry two Mk 46 torpedoes or four AS.12 missiles. These were wire-guided anti-shiping missiles, controlled through the use of a roof mounted sight on the port side. These missiles were removed from service by the end of the 80s, and the sight removed, although the roof mount was retained.

The first operational scheme was Dark Blue Grey (FS35164) with a white roof, tailboom top and tail leading edge. 650mm roundels on the fuselage sides. Serials are 300mm white on forward end of tailboom, followed by MARINE in 250mm white letters. The serial was repeated on the tail and above the windscreen in 100mm black numbers. The tail rotor warning placard was red and white. The squadron badge was carried on both sides under the cockpit doors. Blade antenna D only.

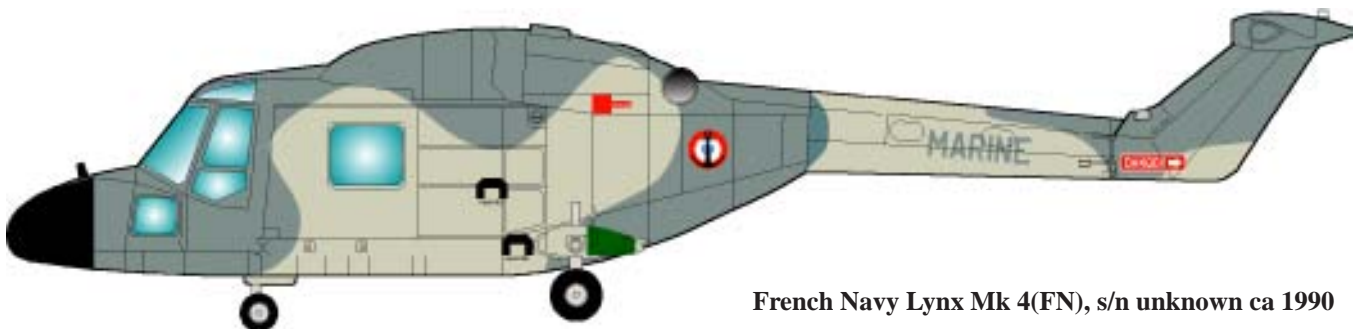
**Ref: World Airpower Journal Volume 40, Air Fan No.29**



**French Navy Lynx Mk 2(FN), s/n 276, Flotille 34F ca 1983**

The second operational scheme was Dark Blue Grey (FS35164) overall. 650mm roundels on the fuselage sides. Serials are 300mm white on forward end of tailboom, followed by MARINE in 250mm white letters. The serial was repeated on the tail and above the windscreen in 100mm white numbers. The tail rotor warning placard was red and white. The squadron badge was carried on both sides under the cockpit doors. Blade antenna D only.

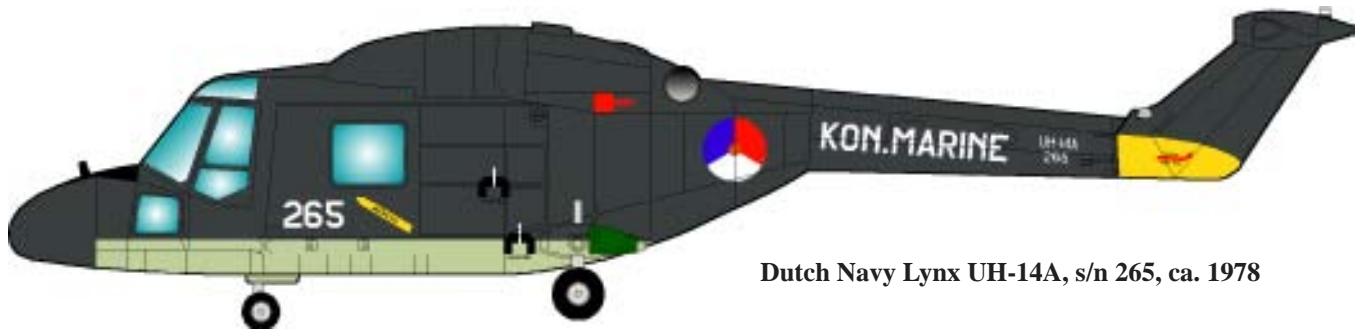
**Ref: World Airpower Journal Volume 40**



**French Navy Lynx Mk 4(FN), s/n unknown ca 1990**

A second batch was purchased (perhaps because of delays in the NH-90 project) and are similar to the HAS. Mk 3; they are gradually being fitted with BERP rotor blades. Fourteen were delivered starting in 1985 (s/n 801-814).

The current scheme is Medium Blue Grey (FS36270) and Light Grey (FS36357) overall with 350mm roundels on the fuselage sides. No serials can be seen, and the MARINE on the tailboom is now Dark Grey. The tail rotor warning placard is red only. A unique variant of the wire antenna ABC (check photos) and blade antenna D.

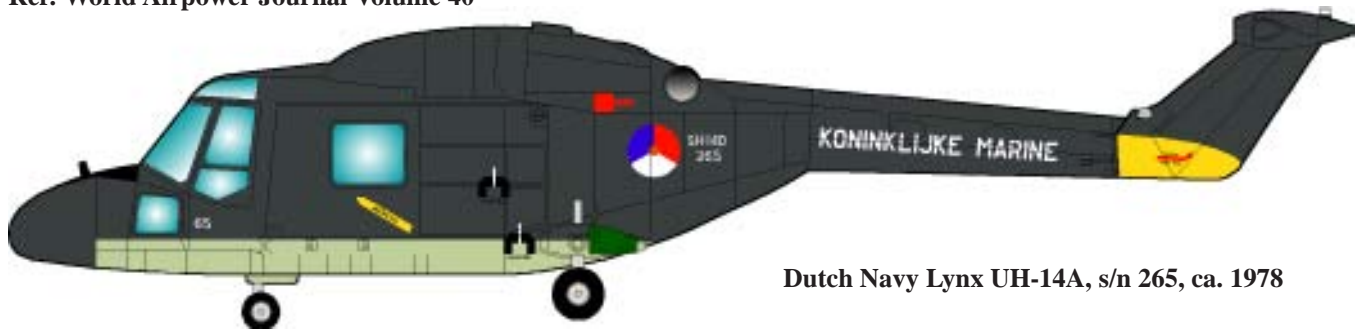


**Dutch Navy Lynx UH-14A, s/n 265, ca. 1978**

The Dutch Navy has ordered several variants of the Lynx, all of which have now been upgraded to a common standard. The first six UH-14As (serials 260 - 265) replaced the Agusta Bell 204Bs in the SAR/liason role in 1977 and 1978; these were roughly similar to the RN HAS Mk 2.. A further ten SH-14Bs (serials 266- 275) replaced the Westland Wasps in the ASW role in 1979; these machines were fitted with the DUAV-4 dipping sonar and were similar to French Mk 2(FN)s. The last eight helicopters for ASW were designated SH-14C (serials 276 - 283) and delivered in 1980 and 1981. These machines carried a MAD detector on the starboard main gear pylon. These were later removed and the machines used in the utility role while the UH-14As were rebuilt.

The scheme is representative of all earlier Lynxes. Overall Extra Dark Sea Grey (FS36118) over Sky (FS34424). On the tailboom is the legend KON MARINE in 250mm white letters. Aft of this is the legend UH-14A / 265 in 100mm white letters. Serial number is in white 250mm numbers on the fuselage sides and top of the tailplane; the underside of the tailplane has the same number in 250mm black numbers on the Sky background. Roundels on the fuselage sides are 600mm diameter, with 500mm roundels on top of the transmission fairing and below the fuselage between the main gear. The tail rotor warning is red letters on a yellow background that covers the entire bottom of the tail area. Wire antenna ABC, blade antenna D and towel rack antennas.

**Ref: World Airpower Journal Volume 40**



**Dutch Navy Lynx UH-14A, s/n 265, ca. 1978**

Of the 24 Lynxes ordered in three batches, 22 remain in service today. All were upgraded to SH-14D standard (with more powerful engines, BERP blades and dipping sonar) between 1990 and 1993. Initially all UH-14As were operated by 7 squadron and all SH-14B and Cs by 860 squadron. In 1990 both squadrons started pooling their helicopters from a common group MARHELI, although the squadrons still exist separately.

SH-14D markings are generally similar to earlier machines, with the following changes. The Dutch navy name has been spelled out in full on the tailboom; KONINKLIJKE MARINE is now 200mm white letters. The fuselage roundels have been reduced in size to 500mm and the type name and serial have been moved off the tailboom to the rear fuselage. Fuselage codes are now smaller (200mm) and display the last two numbers under the cockpit doors. Wire antenna ABC, blade antenna D and towel rack antennas.

**Ref: World Airpower Journal Volume 40**



**Danish Navy Lynx Mk 80, s/n S-142 ca 1982**

Used for fisheries patrol and reconnaissance, these a/c are similar to the HAS. Mk 3. Although they have a Navy-style tail section, the tail does not fold. They do not carry weapons or sonar. Eight were delivered starting in 1981 (s/n S-134, 142, 170, 175, 181, 187, 191 and 196); 187 and 196 were lost in accidents and 170 crashed in 1997 but has been repaired. These aircraft have since been upgraded to Mk 80A standard with Orange Reaper RWR and four-bag flotation systems (**Cont'd next page**).

**Danish Navy Lynx Mk 80, s/n S-142 ca 1982 cont'd from previous page**

The basic scheme is overall Oxford Blue (FS15050). 500mm roundels on side, 600mm on bottom (centred under rear landing gear) and 300mm (centred on top of tailplane). The fuselage also sports a white naval anchor with blue details. Serials (S-XXX) are 300mm white on forward end of tailboom, 50mm white above windscreen.. The rotor warning placard is bilingual (English above Danish). The tail carries the Danish flash. Wire antenna ABC, blade antenna D, loop antennas E and towel rack antennas.

**Ref: Markings drawings from Westland, World Airpower Journal Volume 40.**



**Danish Navy Lynx Mk 90, s/n S-249 ca 1990**

Two Mk 87 (originally destined for Argentina) were purchased in 87/88; these are designated Mk 90 (s/n S-249 and S-256) but are indistinguishable from the Mk 80. Upgrades have brought these up to Mk 90A standard. Paint and markings are identical to the Mk 80. Wire antenna ABC, blade antenna D, loop antennas E and towel rack antennas.

**Ref: Markings drawings from Westland, World Airpower Journal Volume 40.**



**German Navy Sea Lynx Mk 88, s/n 83+12, 2/MFG3 ca. 1985.**

The Lynx Mk 88 is basically similar to the HAS. Mk3 but with an Army-style non-folding tail. They are fitted with AN/AQS-18(V) dipping sonar. Normal armament is one or two Mk 46 torpedoes. Nineteen were delivered (s/n 83-01 to 83-19) to Marinefliegergeschwader (MFG) 3 starting in 1981.

Basic scheme is Basalt Grey RAL 7012 (FS26152) over Light Grey RAL 7035 (FS36628), with a black anti-glare shield. 630mm crosses on sides, 500mm on top (900mm forward of rotor centre) and on bottom (between rear landing gear). The bottom cross only has black edging. Fuselage codes are 400mm with white edging, 83 to left of cross on both sides. Black 250mm MARINE on tailboom, 250mm back from leading edge. German flag on tail (black on top), below which is 'MARINE SEA LYNX MK88 / WA 272' in small black letters. Red/white rotor warning placard. 360mm white disc below cockpit doors carries squadron logo of 2/MFG 3. Tail rotor has 150mm red/white/red tip stripes. Wire antenna ABC, blade antenna D and towel rack antennas.

**Ref: Markings drawings from Westland, World Airpower Journal Volume 40.**

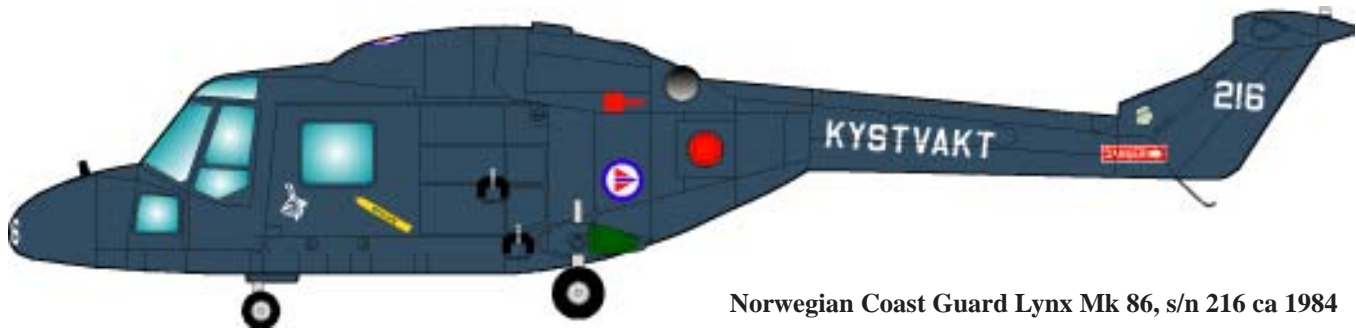


**German Navy Super Lynx Mk 88A, s/n 83+21, ca. 1999.**

The Lynx Mk 88A is similar to the HAS. Mk 8, but with an Army-style non-folding tail and with a GEC MST FLIR turret instead of the RN Sea Owl turret (early pictures show a simple nose fairing instead of the FLIR turret). Seven new-build a/c are being delivered (s/n 83-20 to 83-26) and the seventeen remaining Mk 88s will be upgraded to this standard as well.

Paint scheme is identical to the Mk 88, except the white disc below cockpit doors now carries the generic MFG logo. This aircraft carries 'MARINE SEA LYNX MK88 / WA389' on the tail. Flotation bags are green. Wire antenna ABC, blade antenna D.

**Ref: World Airpower Journal Volume 40.**



**Norwegian Coast Guard Lynx Mk 86, s/n 216 ca 1984**

Used for fisheries patrol, SAR and reconnaissance, these a/c are similar to the HAS. Mk 3 but with an Army-style non-folding tail. They do not carry weapons or sonar. These aircraft carry a Crash Position Indicator (CPI) on a panel on the port rear fuselage. Six were delivered starting in 1981 (s/n 207, 216, 228, 232, 235 and 237); 235 crashed and was rebuilt as 350 in 1991. All are operated by 337 Squadron.

The basic scheme is overall Dark Sea Grey (FS36173). 400mm roundels on side and on top of transmission fairing (dart faces to the rear on all roundels). Serials are 250mm white on nose and tail, 250mm KYSTVAKT on forward end of tailboom. Red and white tail rotor warning placard. The CPI is red. White Lynx head on lower forward doors both sides. Wire antenna ABC, blade antenna D and towel rack antennas.

**Ref: Markings drawings from Westland, World Airpower Journal Volume 40, photos from Knut Hagen**



**Portuguese Navy Super Lynx Mk 95, s/n 19202, ca. 1995.**

The Lynx Mk 95 is similar to the HAS. Mk 8 with a simple upper nose fairing instead of the RN Sea Owl. Although they have the later style gear pylons, the Orange Reaper RWR equipment is not fitted. Five new-build a/c are being delivered (s/n 19201-19205). These aircraft are operated by the Naval Helicopter Squadron in support of the fleet in an anti-submarine role. They are fitted with the AN/AQS-18(V) dipping sonar.

Paint scheme is overall Light Sea Grey (FS 36440). 600mm roundels on fuselage sides. MARINHA and Serials (1090X) are 200mm white on sides of tailboom, with serials aft. Below the cockpit doors is a white disc with the Navy fouled anchor logo. The rotor warning placard is red only. The tail carries the Portuguese flash (red to right of green on both sides). Flotation bags are green. Wire antenna ABC, blade antenna D.

**Ref: World Airpower Journal Volume 40, Aviacao Naval website, photos by Rui Ferriera.**