

Background - the 'Dido' class:

The *Dido* class had their genesis in a letter written in 1933 by the Director of the Tactical Division, Captain Tom Phillips, to the Commanders in Chief of the Home and Mediterranean fleets asking for their opinions on a 4,000 ton cruiser to replace the aging 'C' and 'D' classes. At the time the Royal Navy was committed to building the *Leander* class for trade protection, the *Arethusa* class for fleet work, and the much larger *Towns* in response to the threat of the Japanese *Mogami* class. To make up the numbers for fleet work, the Admiralty Board was looking for a cheaper alternative to the *Arethusas*.

CinC Mediterranean wanted a small cruiser that would be handy enough to work with the destroyer flotillas. It would have to be heavily gunned enough to deal with enemy destroyers and large enough to be used as a flagship and a rallying point for destroyer flotilla torpedo attacks. The *Town* class was much too large in his opinion to be useful in this role.

In 1934, the 'C' class cruisers *Curlew* and *Coventry* were converted to specialized Anti-Aircraft cruisers with 10-4" guns and 2-8 barrelled pompoms. Serving with the Mediterranean Fleet in 1935 during the Abyssinian crisis, these two ships were received very favourably and a requirement for heavy AA fire was added to the list for the new cruisers.

Further design refinements followed and by February 1935 requirements settled on a ship small enough to be built in large numbers, big enough to keep up with the fleet in heavy seas, maximum gun power, speed and handiness. As the *Arethusas* mounted 6-6" and 4-4" guns, a minimum of 10 guns was also

required for the new design. The new 4.5" mounting had been adopted by the Admiralty as the standard AA gun, but they felt that this gun mount was too small for cruiser sized ships and settled on the new 5.1" Dual Purpose gun then under development

The development of the 5.1" gun morphed into the 5.25" gun which was also being proposed for the new King George V class battleships. This was not an ideal AA gun as the associated twin mounting was complex and heavy with a slow training speed and low rate of fire. It would however, prove to be a very good gun in its low angle role.

By June 1936 a cruiser of 5,300 tons mounting 10-5.25" guns was approved. The Dido class was born.

It should be noted that the *Dido's* were not single purpose AA cruisers like the converted 'C' class but merely small cruisers with a Dual Purpose main armament. The Admiralty still preferred the 4.5" gun for AA purposes.

To save time and effort, the basic hull of the *Arethusa* was used as the basis for the new design, with 3 gun turrets forward and two aft. The bridge had to be high enough to clear 'Q' mounting, which in turn meant the fore funnel had to be raked aft to reduce the effects of fumes. The after funnel and the masts followed suit. Tripod masts were chosen in order to minimize the number of stays which would interfere with fields of fire.

The original design called for a seaplane and crane between the funnels. This was replaced by two quad 2pdr pompoms in order to augment AA defence. Two triple torpedo mounts were also added.

For surface targeting, a Mk IV director was installed on the bridge. Two high angle directors for AA fire were fitted, one above the bridge and one aft of the mainmast, giving the ability to engage two aircraft simultaneously. The after HA director was dual purpose as it could also be used to engage surface targets.

The unit system of machinery was chosen with alternating boiler and engine rooms. A quadruple screw arrangement would drive the ships at 33 knots at 62,000 SHP and endurance was 5,000 nm at 16 knots. Four turbo-generators capable of generating 1,200 Kwh were also installed.

The armour scheme consisted of a 3" belt abreast the engineering spaces with a 1" deck and transverse bulkheads at the ends. A 2" platform deck covered the magazines which also had 1" longitudinal bulkheads fitted abreast. The turrets had 1" to 1.5" plate and the steering gear was enclosed with 1" sides and deck. This scheme was deemed sufficient to deal with 6" gun fire.

As much weight saving as possible was incorporated: welding of the forward sections, a reduced number of shells, copper piping, no handing room between the magazines and turrets, no spare gun barrels carried aboard, and lighter High Angle directors. The Mk II 5.25" mounting was chosen as it featured combined magazines and shell rooms, saving weight and offering a reduction of some 60 crew members, no small consideration given the small size of the ships.

The following ships were ordered:

- Five in 1936: Dido, Euryalus, Naiad, Phoebe, Sirius
- Two in 1937: Bonaventure, Hermione
- Three in 1938: Charybdis, Cleopatra, Scylla
- Six in 1939: Argonaut, Bellona, Black Prince, Diadem, Royalist, Spartan

This was the largest cruiser program since the First World War. The class would be split into three groups: *Dido, Euryalus, Naiad, Phoebe, Sirius, Bonaventure, Hermione, Cleopatra,* and *Argonaut* built to the original design; *Charybdis and Scylla* armed with 4.5" guns; *Bellona, Black Prince, Diadem, Royalist,* and *Spartan* of a modified design with 4-5.25" turrets.

By 1939, none were ready due to bottlenecks with turrets, fire control equipment, turbines, and reduction gearing although the first ten had been laid down and six had been launched. In the spring of 1939, with *Bonaventure* about a year away from completion, a problem of supply of the 5.25" mounts arose as they had also been chosen as the secondary armament of the *King George V* class with the battleships having priority.

Compounding the problem was the pending order for five ships of the 1939 program. Partly as a result of the shortage of turrets and partly as a compromise to free up additional mountings and allow a sixth ship to be ordered in 1939, it was decided to complete *Charybdis* and *Scylla* with 4.5" guns instead. Known derogatively as 'The Toothless Terrors', *Charybdis* and *Scylla* were in fact true anti-aircraft cruisers.

Despite these measures, three of the first four to complete were one turret short: *Bonaventure, Dido*, and *Phoebe*, each mounting a single 4" star shell gun instead. *Bonaventure* carried hers in 'X' position; *Dido* and *Phoebe* in 'Q'. *Dido* would eventually receive her 5th turret, *Phoebe* never would, and *Bonaventure* would be lost before receiving her 5th turret. All the remaining ships completed with the full outfit of turrets.

Construction of the six ships of the 1939 group was suspended in 1940. All were subsequently restarted, but only *Argonaut* was completed to the original design. The other five were completed to the modified design featuring only 4-5.25" twin mounts, a lower bridge, and straight funnels and masts.

Of the original group, *Bonaventure* was the first to complete in May 1940; *Argonaut* was the last in August 1942. The second group completed from August 1943 (*Spartan*) to January 1944 (*Diadem*). All of the ships completed with some form of radar, and by 1943 surviving ships all had types 272, 281, 282, 284, and 285 installed.

As first of type, *Bonaventure* was subject to extensive trials, complicated by troubles with the 5.25" mounts which took Vickers 3 weeks to correct. In all other respects the ship was deemed satisfactory.

Bonaventure suffered weather damage in November 1940 which buckled two pillars under the forward deck; this was solved by additional stiffening. *Naiad* had movement in the deck and bridge which caused leaking; deck movement in other ships resulted in frequent jamming of 'A' turret.

It was determined that most damage was caused by driving them too hard in bad weather. As experience was gained during operations, crews were able to allow for adverse weather conditions with the result that no further weather damage was reported.

Overall, the ships were good sea boats but prone to heavy pitching, mainly due to the heavily loaded ends. They were less successful in the AA role than the 4" armed 'C' class, mainly due to the heavy and slow 5.25" gun mount.

Many modifications were made to the close range AA armament during the war, references and photographs should be consulted. Camouflage schemes also varied considerably, references should be checked carefully.

They were used extensively mainly in the Mediterranean where they gave good service in the face of constant air and submarine attack. Five of them were sunk, four to torpedoes in the machinery spaces: *Naiad, Bonaventure, Hermione,* and *Charybdis*. With the lack of reserve buoyancy on such a small hull it is not surprising that flooding in the large machinery spaces would cause the loss of the ship. *Spartan* was lost after being hit by a glider bomb.

In addition 6 of the ships were very heavily damaged from bombs, torpedoes, or shellfire. *Phoebe* and *Argonaut* were torpedoed twice and *Cleopatra* once, *Cleopatra* managing to survive a torpedo hit in the machinery spaces. *Phoebe* and *Argonaut* were fortunately (!) hit elsewhere on the hull. *Scylla* was not fully repaired after being mined off Normandy. *Dido* and *Sirius* were both heavily damaged by bomb hits. *Cleopatra* was also damaged by bombs and a 6" shell hit from the Italian battleship *Littorio*.

The Kit:

This features Naiad as built in her original fit as a member of the first group of Dido's.

Packaging:

The kit comes in a well-constructed box featuring a dramatic painting of *HMS Naiad* in action wearing a colourful camouflage scheme. Inside the main box can be found two smaller boxes: a see-thru one containing the two sprues for the masts, and another very solid box with the rest of the kit components. Each of the sprues is individually sealed in plastic bags, with the exception of the main superstructure pieces which are in their own sealed box. There is also a large full colour card featuring the box art on one side and a ship's history with general characteristics on the reverse.

The box can be used as a display base by carefully cutting and folding the box top so that it forms a backdrop for the completed model which would rest on a blue sea scape that comes as an inner flap. Directions for this interesting feature can be found on the instruction sheet.

The kit comprises 256 parts on 20 sprues with a further 82 photo-etch pieces.



---- Box Art ----



---- Internal box and clear box for masts ----



---- Contents of internal box ----





---- Front and Rear of included card ----





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---- How to use the box to create a display ----

Hull:

The starboard and port hull sides are in one piece and scale out perfectly to the actual length of 512 feet. A lower hull and a waterline base plate and weight are supplied giving the modeller the option to build either a full hull or a waterline version. There are no stands included so those wishing to build the full hull version will need to come up with some arrangement to display the completed model.

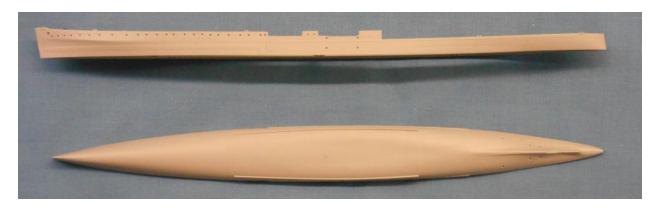
The lower hull itself has finely molded bilge keels and the lower half of the armour belt. Rudder, propellers and shafts are included as separate pieces.

The pronounced bow knuckle is in the correct position, starting just under 'B' barbette and terminating just short of the bow. It correctly follows the contour of the upper deck, but curves slightly upwards under 'A' barbette. This is not quite the correct shape as careful study of many photographs shows that the actual knuckle was a straight line for its entire length without any curve. Nevertheless, this is a very good attempt at capturing this very distinctive feature; most people will not even notice the discrepancy.

There is also a good attempt at capturing the line of hull plating from the bow back to the armour belt amidships and from the armour belt aft to the stern. It is slightly exaggerated in this scale and could be

sanded down to be less conspicuous. The armour belt itself is spot on as is the external degaussing cable. The portholes all feature eyebrows.

The hull on my example is slightly warped as it does not sit flat. Some attention with a heat source such as a hair dryer will be required to straighten it out.



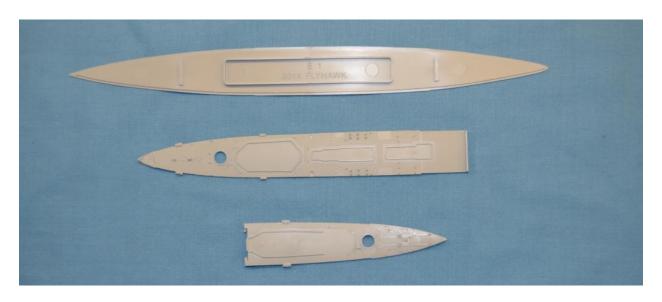
---- Upper and lower hulls ----



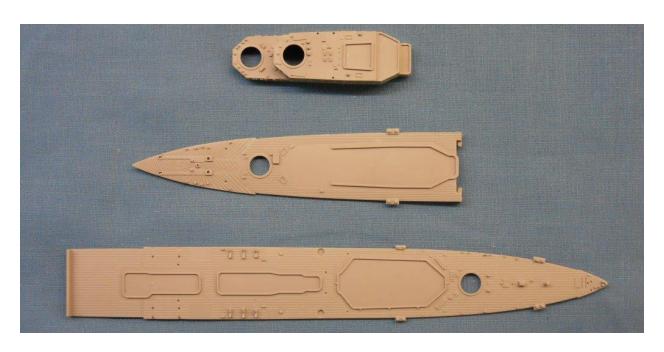
---- Propellers, rudder, and propeller shafts -----

Decks:

The main decks are in two pieces: the foredeck back to the focsle break, and the after deck. Both feature amazing levels of detail with individual deck planks, bollards, capstans, boat skids, and hatches. The main deck forward of the breakwater features an intricate non-skid pattern. The breakwater itself is a separate piece. Both pieces drop right into place on the main hull in a good display of precision fitting.



---- Waterline hull plate and main decks ----



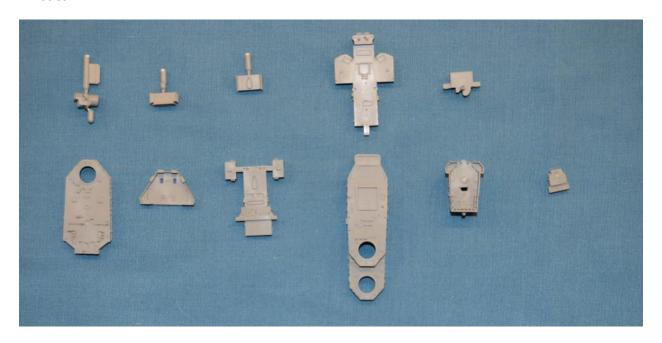
---- Forward superstructure and main decks showing the amount of detail ----

Superstructure:

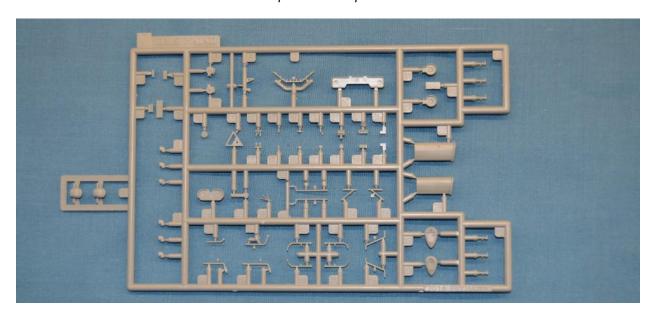
The main superstructure parts are all individual pieces that do not require cutting from sprues. This is a great feature which prevents any damage from sprue cutters and the like. They all feature immense

detail on every face: hatches, handrails, deck fittings, slots for fitting other pieces. The one piece bridge is especially outstanding featuring molded in air deflectors and the open bridge windows below the upper bridge. There are no less than 17 pieces to be applied to the upper bridge, including binoculars, the chart table cover, and the main gunnery director. The forward HA control station above the bridge consists of 4 pieces and has a simulated canvas cover.

The funnels are single pieces with engraved lines, separate caps, steam pipes, and piping for the whistles.



---- Superstructure pieces -----



---- Funnels and smaller fittings -----

Weapons:

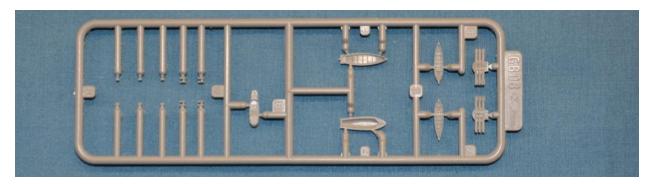
The main 5.25" gun turrets are in two pieces, with separate gun barrels. The turrets are outstanding, correctly shaped with plenty of roof and side details. Photo-etch pieces for the gearing used to elevate the guns are provided if the modeller desires to have the guns at full elevation.

The quad pompoms consist of 3 pieces and have plenty of detail on the actual gun platform.

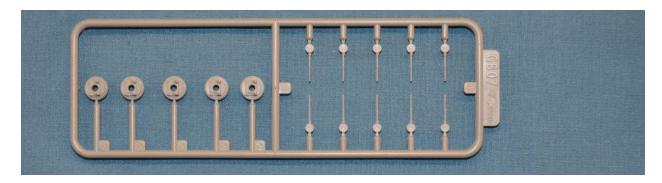
The 0.5" mounts are also very detailed.

The torpedo tubes are exquisite with plenty of detail and hollowed out ends allowing torpedoes to be inserted if the modeller wishes. Torpedoes would have to be scratch built.

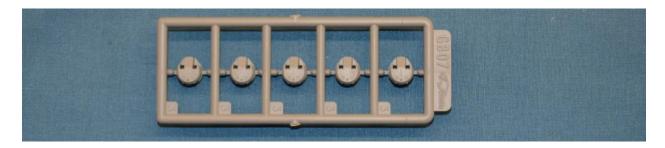
There is an additional open single gun mount to be placed just forward of 'X' turret. I haven't been able to find a photo showing this gun or a reference that mentions it. Those in pursuit of absolute accuracy may need to consult their references to see if this gun mount was ever actually mounted.



---- Torpedo tubes and boats -----



---- 5.25" turret bottoms and gun barrels ----

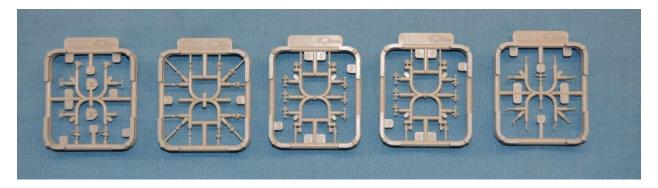


---- 5.25" turrets ----

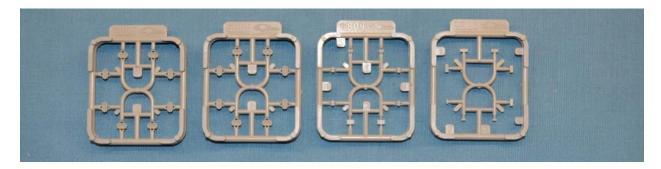
Boats and fittings:

There are 3 open boats and one motor launch, each one features deck planks. There are many smaller fittings, every piece of which is incredibly detailed. The ready use ammo lockers have doors, the cowl vents are hollowed out, the main air intakes have photo-etch grills, the deck winches have detailed motors, the life rafts are detailed both top and bottom, the davits are extremely thin, the paravanes are accurately shaped, and there is a depth charge rack and a smoke float rack for the quarterdeck.

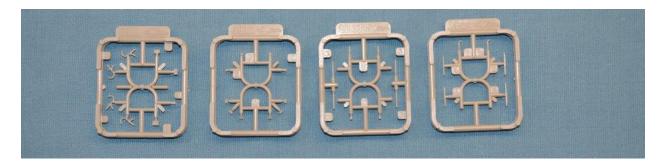
Photo-etch railings are supplied pre-cut to the correct lengths with very clear instructions on where each piece is to be placed.



---- Fittings -----



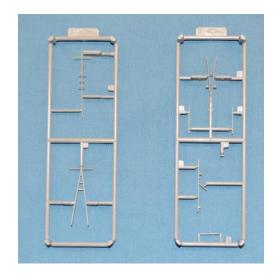
---- Fittings -----



---- Fittings -----

Masts:

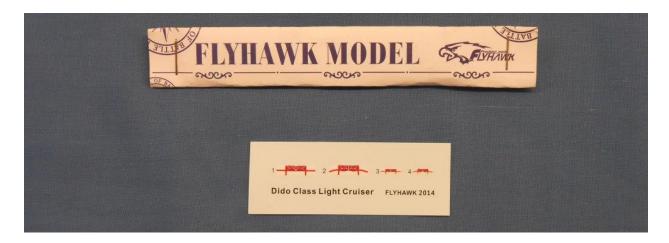
The masts and tripod supports come on their own sprues and are packaged separately in their own box. They are extremely thin and can be used as is without resorting to replacements built from wire. Photoetch aerials for the Type 279 radar and platform are supplied for the tops of both masts.



---- Masts ----

Decals:

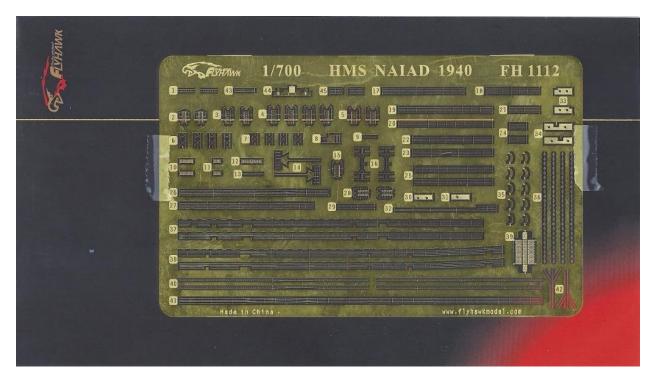
As Royal Navy cruisers did not carry pennant numbers as a rule, the decals are very minimal consisting solely of 4 White Ensigns.



---- Weight and Decals ----

Photo-Etch:

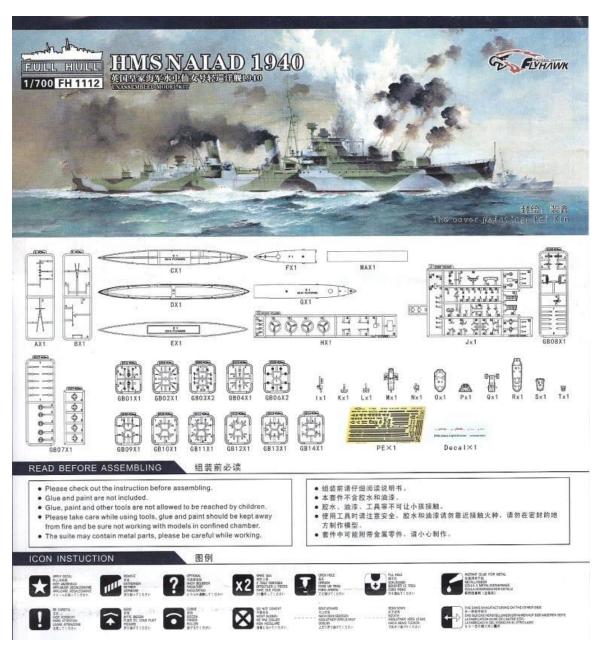
A very comprehensive photo-etch sheet is also included with all the railings, ladders, grilles, lattice supports, and radar components needed for the kit. It also contains anchor chain and some smaller structures such as the chart table shelter and a storage locker.

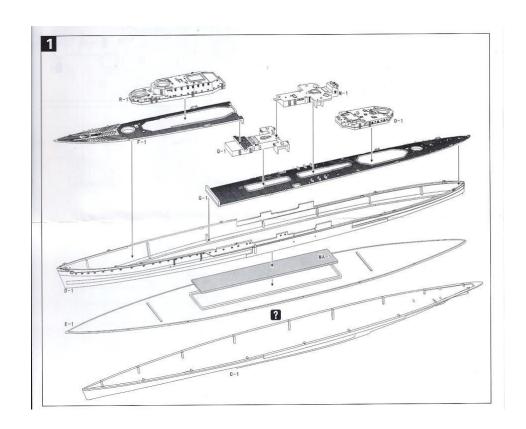


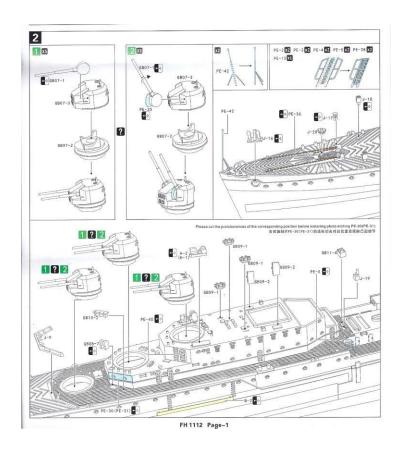
---- Photo-etch sheet -----

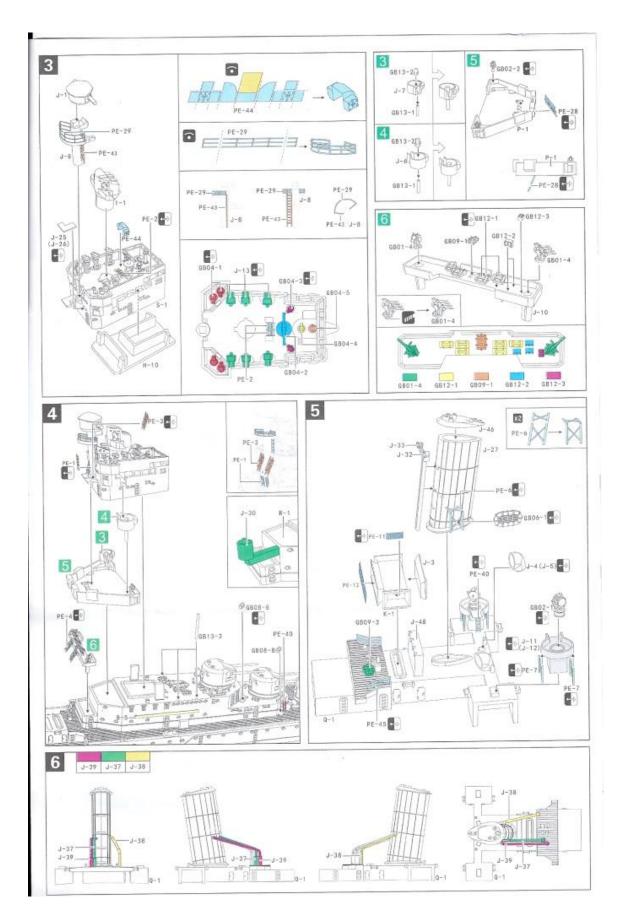
Instructions:

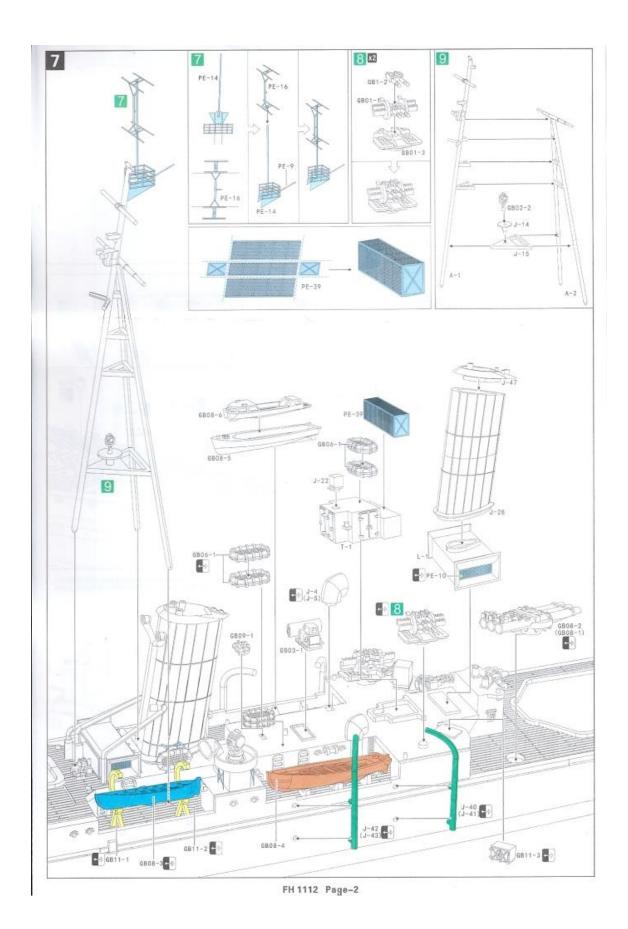
The instructions come on two large, double sided full colour pages. They are very clear and comprehensive and also feature a drawing showing all the sprues and parts included. Flyhawk uses colour coding to assist with placement of smaller parts; this is a very good feature which takes out a lot of guess work.

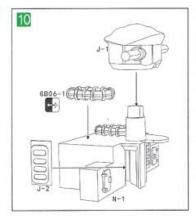


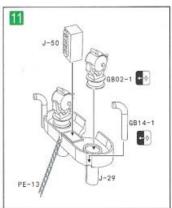


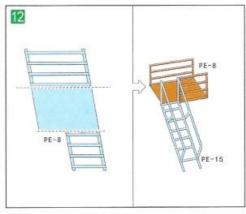


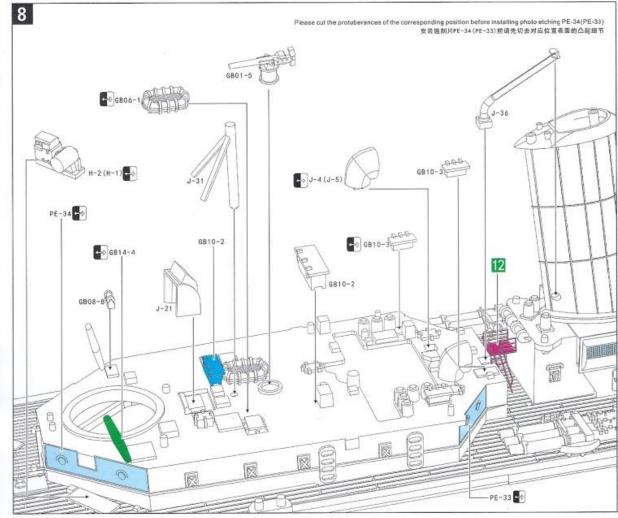


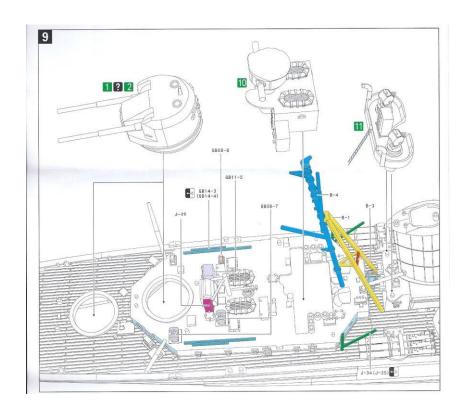


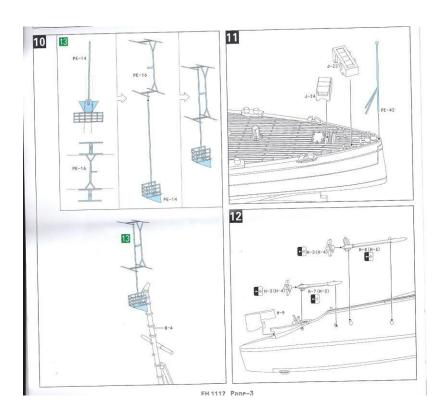


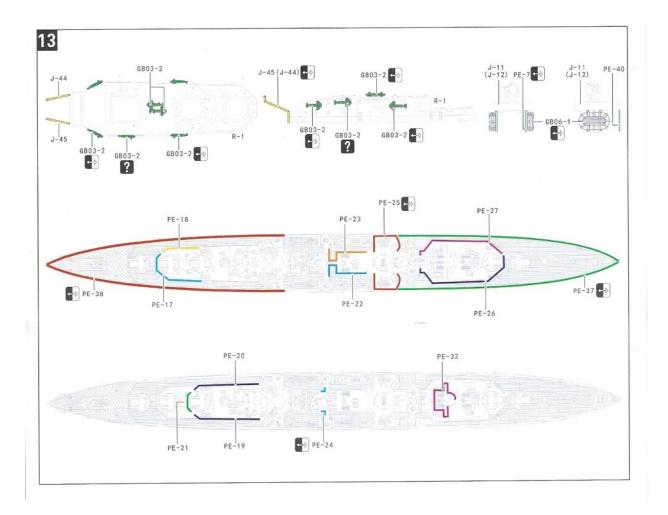












---- Instructions ----

Colour scheme:

There is a full colour diagram of the camouflage scheme carried by *Naiad* from her completion in July 1940 to some point in 1941, with references to the Mr. Colour and Tamiya paint ranges. The brown and green colours appear to be based on the colour drawing featured in the Ensign title 'Dido Class Cruisers' by Alan Raven and H.T. Lenton which shows the starboard side only and states that both sides were the same.

Since the Ensign title was published in 1973, more information has come to light regarding the pattern and the colour scheme. The Warship Perspectives title 'Camouflage Volume One: Royal Navy 1939-1941' by Alan Raven and published in 2000, has a drawing on page 46 showing both sides of *Naiad* wearing essentially the same scheme but with colours of black, 507B, and 507C specified. The two sides are also not identical. To the best of my knowledge, Mr. Raven concedes that this second set of patterns and colours is the definitive version.

The pattern provided by Flyhawk provides yet another interpretation, with the starboard side being very similar to the drawing in the Ensign title and the port side being very similar to the Warship Perspectives drawing. Flyhawk's drawings have some very subtle differences however, and specify the use of green, brown, and light grey.

So the modeller has a choice of colours and patterns to choose from. Royal Navy camouflage still remains a complex subject and for those without access to the newer Warship Perspective drawings, you cannot go too far wrong using the Flyhawk supplied patterns with black, 507B, and 507C.

It should also be noted that *Naiad's* scheme was painted out in favour of the dark hull, light upperworks scheme by September 1941. She was wearing this second scheme when sunk in March 1942.

Painting & Marking guide 涂装与标贴指示 DECAL APPLICATION 水贴纸的使用: Please move the picture to the proper position on model. 1.从水贴纸上剪下图案; 1. Cut the pictures from sheet as needed. Dip the pictures in warm water for about 10 seconds. 2.将图案放入温水中浸泡10秒; Please gently press picture down with a soft cloth until excess water's out and no air bubbles. 3.拿着图案纸板将图案移到模型上; Hold the picture backing sheet edge and gently slide the picture onto the model. 4.将图案移到适当的位置; 5.用软布轻压图案直至水干,消除掉气泡。 Color 颜色 Mr. Hobby Tamiya Color 颜色 Mr.Hobby Tamiya H 17 29 XF-9 Hull Red 健康紅 Flat Black 消光潔 H 12 88 XF-1 Dark Blue-Grey 1940年 福色速彩 H 47 49 XF-84 暗蓝灰 H 32 40 940 Brown H 10 10 XF-6 XF-19 1R Sky Dark 天灰色 H 308 308 Wooden Deck Tan 木甲板色 H 27 44 XF-78 H 308 308 :2 XF-19:2 H 11 62 10 XF-5;2 XF-2:10 Light Grey 浅灰 1940年 緑色迷彩 1940 Green XF-2:5 H 27 46 :1 XF-78:1 XF-19:2 XF-2:10 XF-78:1 XF-5:2 XF-2:5 XF-19:2 + XF-2:10 XF-78:1 XF-19 XF-5:2 XF-63 XF-2:5 XF-64 XF-64 XF-78 XF-19:2 + XF-2:10 + XF-78:1 * XF-19:2 XF-5:2 XF-2:10 XF-2:5 XF-5:2 XF-78:1 XF-1 XF-9 XF-6 XF-19:2 XF-19:2 XF-5:2 XF-2:10 XF-2:10 XF-1 XF-2:5 XF-78:1 XF. XF-1 XF-9

---- Colour scheme ----

Overall Impression:

To put it quite simply, this is a superb kit; it just cries out to be built. The one word that best describes it is 'precision'. All the main superstructure parts fit perfectly when dry fitted. As an example of how precise the components are, all the smaller sprues actually fit together and can be stacked, much like a set of Lego bricks.

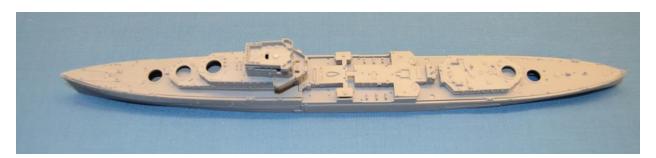
It is also very accurate, matching up very well with the drawings and photos in my various reference books. The only thing I would question is the extra gun mount ahead of 'X' turret.

The amount of detail is incredible, considering that the model itself is only 9" long. There is absolutely no flash on any of the pieces and none of those lines that result when two mold halves are used to make a single component. Providing all the main superstructure pieces as separate parts is a brilliant idea, there is very little scope for damage.

It does retail in North America for more than the average kit, but considering that it comes with a dedicated photo-etch set and without much scope for any after-market items, it does represent very good value for the money. In fact, the only thing that could improve this kit would be the provision of anchor chain instead of the photo-etch chain that is provided.

The kit can be used to model any of the 9 members of the first group of *Dido's*, the exceptions being *Scylla* and *Charybdis*. Careful use of references will be required as each ship differed slightly in details.

This is a highly recommended kit, and it will make a splendid addition to any collection. Royal Navy enthusiasts have waited a very long time for an injection molded *Dido* (or any RN cruiser for that matter) in 1/700 and Flyhawk is to be heartily congratulated for providing such a well-researched and well-engineered kit. One can only hope for more!



---- Dry-fitting of decks and main superstructure pieces ----

Review kit courtesy of Flyhawk Models