

J-CLASS DESTROYER

BRIEFING

By James Davies



Key Specifications

Country of Origin:	Great Britain.
Manufacturers:	Hawthorn Leslie, John Brown, Denny, Fairfield, Swan Hunter, White, Yarrow
Major Variants:	J class, K class, N class, Q class, R class (new), S class (new), T class, U class, V class (new), W class (new), Z class, CA class, CH class, CO class, CR class, Weapon class
Role:	Fleet protection, reconnaissance, convoy escort
Operated by:	Royal Navy (Variants also Polish Navy, Royal Australian Navy, Royal Canadian Navy, Royal Netherlands Navy, Royal Norwegian Navy)
First Laid Down:	26 th August 1937
Last Completed:	12 th September 1939
Units:	<i>HMS Jervis, HMS Jersey, HMS Jaguar, HMS Juno, HMS Jupiter, HMS Janus, HMS Jackal, HMS Javelin</i>

Overview

Destroyers are small warships (defined in the London Treaty of 1930 as being no more than 1,850 tons), and armed with light weapons (guns of calibre no more than 5.1 inches (130 mm)). In the British Royal Navy during the Second World War a ship must also be fitted with torpedo tubes to be classed as a destroyer. They are usually equipped for anti-submarine work, although some may alternatively be equipped for minelaying operations.

Before the Second World War, new British destroyers were generally designated as fleet destroyers for work in support of the main fleet, which includes cruisers and capital ships. Experience during the war led to older destroyers often being refitted and re-designated as escort destroyers (principally because older destroyers lacked the speed of modern warships) and used for less glamorous tasks such as convoy escort. The need for new specialist escort destroyers was recognised, however, and these were also built during the war. The J class ships are fleet destroyers, equipped for anti-submarine work.

The naval treaties between the wars had a significant effect on the design of all warships. Weight limitations forced all naval powers to focus on weight saving designs, bringing significant advances in several areas, such as advanced propulsion systems and dual purpose weaponry (to be used in both surface and air actions). The previous destroyer class - the Tribal class - were very much larger than all other existing British destroyers, with a correspondingly greater cost to build. The J class was intended to be a compromise, smaller and cheaper than the Tribal class and yet with comparable speed and armament.

The J class were fitted with a total of six main guns and 10 torpedo tubes, compared to the Tribal class with eight main guns and four torpedo tubes. This increase in torpedo tubes represented a significant improvement in the capabilities of the ship over the Tribal class, giving them a bigger punch against capital ships. The reduction in main guns from eight to six was in practice not significant, and as most British destroyers were only armed with four guns the J class were considered to be heavily armed.

For air defence a four barrelled pom-pom was fitted. This at last gave British destroyers some defence against dive-bombers, as they fired 115 rounds per minute per barrel, and were effective out to 1100 metres (1200 yards). Finally, eight 0.5 inch (13 mm) machineguns were installed in two mounts of four guns each, although these were found to be prone to jamming.

For the anti-submarine role the ships were fitted with asdic and depth charges. Asdic was effective out to about 2500 yards (2286 metres), although high speed and bad weather both adversely affected its operation. Generally, asdic was ineffective if the ship was travelling above about 18 knots, and was unable to detect anything within about 200 yards (183 metres) of the ship. Two racks of depth charges were provided at the stern of the ships, as well as two depth charge throwers on either side.

To protect the fleet from mines provision for a two speed destroyer sweep (TSDS) was fitted to all but *HMS Jervis*, who as the flotilla leader had increased accommodation for staff which reduced the space available at the stern of the vessel.

There was some discontent when it was found that the J class were only slightly smaller than the Tribal class (356.5 feet compared to 377 feet for the Tribals), had fewer main guns (six compared to eight), and yet cost more to build (£390,000 each compared to £340,000). Their performance silenced the critics, and the basic hull form was adopted for the 'emergency' programme.

Eight ships formed the J class (*HMS Jervis* as the flotilla leader, with the others being *HMS Jersey*, *HMS Jaguar*, *HMS Juno*, *HMS Jupiter*, *HMS Janus*, *HMS Jackal* and *HMS Javelin*). They mainly served in the Mediterranean, and (as with all small ships) they were extremely vulnerable to air attack. Later fleet destroyers tended to have anti-aircraft armament that was better still. Only two ships survived the war, with five being sunk before the end of 1942.

Despite the heavy losses of J class it was generally accepted that the design was sound, and formed the basis for the 'emergency' designs that followed. A total of 124 ships entered service as variations on the J class design, although 28 of these were completed after the end of hostilities.

Units

Ship	Builder	Laid Down	Launch	Completed	Left Service	Fate
<i>HMS Jervis</i>	Hawthorn Leslie	26 Aug 1937	9 Sept 1938	12 May 1939	Late 1948	Scrapped
<i>HMS Jackal</i>	John Brown	24 Sept 1937	25 Oct 1938	31 Mar 1939	12 May 1942	Severely damaged by German bombers 90 miles NW of Mersa Matruth. Deliberately sunk by <i>HMS Jervis</i>
<i>HMS Jaguar</i>	Denny	25 Nov 1937	22 Nov 1938	12 Sept 1939	16 Mar 1942	Torpedoed and sunk by German submarine <i>U652</i> NE of Sollum
<i>HMS Juno</i>	Fairfield	5 Oct 1937	8 Dec 1938	25 Aug 1939	21 May 1941	Sunk by German bombers south of Crete
<i>HMS Janus</i>	Swan Hunter & Wigham Richardson	29 Sept 1937	10 Nov 1938	5 Aug 1939	23 Jan 1944	Torpedoed and sunk by German aircraft whilst supporting the Anzio landings
<i>HMS Javelin</i>	John Brown	11 Oct 1937	21 Dec 1938	10 Jun 1939	11 June 1949	Scrapped
<i>HMS Jersey</i>	White	20 Sept 1937	26 Sept 1938	28 Apr 1939	4 Jun 1941	Severely damaged by a mine off Valletta. Sank two days later
<i>HMS Jupiter</i>	Yarrow	28 Sept 1937	27 Oct 1938	25 Jun 1939	28 Feb 1942	Torpedoed by Japanese destroyers. Sank the following day.

There is a tradition in shipbuilding of finding a design that works, then modifying it for other newer ships so that the best of the old can be combined with new knowledge. Evolution rather than revolution is the watchword. The reasons for this are complex, but given the unpredictable nature of the sea, the time and cost of construction, the difficulty of predicting performance for a new design (still a problem today), the need for more destroyers quickly, the inability to build a prototype for testing, the difficulty of future modifications and the potential consequences of failure it can perhaps be understood why many subsequent fleet destroyers adopted a slightly simplified version of the J class hull form.

Although the variants were all different in detail from the J class, with later models incorporating hard-won war experience, they were essentially J class ships. They all had the same power plant and basic hull form, the same speed and similar main weapons (generally with slightly reduced guns to speed construction and reduce cost). Often anti-submarine capability was increased, along with anti-aircraft armament, and the greater weight made them sit lower in the water (with increased displacement and reduced freeboard).

The J class variants were the K class, N class, Q class, R class (new), S class (new), T class, U class, V class (new), W class (new), Z class, CA class, CH class, CO class, CR class and the Weapon class. These variants were operated mainly by the Royal Navy, however some units were also operated by Polish Navy (1), Royal Australian Navy (12), Royal Canadian Navy (2), Royal Netherlands Navy (2) and the Royal Norwegian Navy (2).

Specifications

	J and K Classes ^[Note 2]	Variants ^[Note 3] N, Q, R (new), S (new), T, U, V (new), W (new), Z, and CA classes
Dimensions		
Displacement	1,690 tons standard 2,330 tons full load	1,692 - 1,830 tons standard (occasional to 1,906 tons) 2,384 - 2,620 tons full load
Length (OA)	356 feet 6 inches (108.66 m)	356.5 feet (108.66 m) - 368.25 feet
Length (pp)	339 feet 6 inches (103.48 m)	339.5 feet (103.48 m)
Length (WL)	Unavailable	Unavailable
Beam	35 feet 9 inches (10.90 m)	35.75 feet (10.90 m)
Draft (Standard)	9 feet (2.74 m)	9 feet (2.74 m) - 10 feet (one 11.25 feet)
Draft (Full Load)	12 feet 6 inches (3.81 m)	12.5 feet (3.81 m) - 14.5 feet (one 15.25 feet)
Block Coefficient ^[Note 1]	0.54 standard 0.54 full load	Around 0.55
Propulsion	40,000 SHP (29.8 MW)	40,000 SHP (29.8 MW)
Speed	36 knots 32 knots full load	36 knots 32 knots full load
Weapons		
Main Guns	6 x 4.7 inch (119 mm) in 3 mounts	Generally 4 (some 6) x 4.7 inch (119 mm) or 4 x 4.5 inch (114 mm)
Other Guns	4 x 2 pound (0.91 kg) pom-poms in 1 mount 8 x 0.5 inch (13 mm) machine guns in 2 mounts	Varied AA armament (generally 40mm (1.6 inch) and 20mm (0.8 inch), some pom-poms)
Torpedo Tubes	10 x 21 inch (533 mm) torpedo tubes in 2 mounts	4 to 8 tubes (generally 8 in 2 mounts)
Depth Charges	2 mortars 1 rack (20 depth charges, + 10 additional during wartime)	2 to 4 mortars (generally 4) 1 (45 depth charges) to 3 racks (120 depth charges) (generally 2, with up to 70 depth charges)
Magazine	1140 Semi-Armour Piercing 60 High Explosive Direct Action 300 High Explosive Time Fuse 50 Star Shell 195 Practice Low Angle 69 High Angle	Varies
Miscellaneous		
Compliment	183 except <i>HMS Jervis</i> and <i>HMS Kelly</i> 218	170 to 237

Note 1: Block coefficient is an approximation, although waterline length not known. May be slightly less in practice.

Note 2: Modifications were made during the war, with the addition of radar and increased anti-aircraft armament in 1940/41. Changes were also made after this, generally improving air defence capability and providing better radar.

Note 3: The CH class, CO class, CR class and the Weapon class data are not included as the units were commissioned after the end of hostilities.