SHIPS OF THE ROYAL AUSTRALIAN NAVY

Flagship

First Australian Destroyer Squadron

Second Australian Destroyer Squadron

Third Australian Destroyer Squadron

First Australian Submarine Squadron

First Australian Mine Countermeasures Squadron

First Australian Patrol Boat Squadron

First Australian Training Squadron

Support ships

Executive Support

Survey ships Reserve Training
A modern Navy

Although not large, the Royal Australian Navy compares well with the navies of other middle powers. It is well armed, well trained, is technically advanced and possesses a wide range of capabilities. The main objective is to maintain a balanced naval capability best suited to meet possible future operational situations. To this end naval planning has been, and will continue to be, directed to effect a change from an anti-submarine warfare oriented force to one with a more general-purpose capability. This is reflected in the present Fleet, which has capabilities in all facets of naval operations such as interdiction, surface and anti-submarine warfare, naval air operations, surveillance and patrol and support to the other Services including naval gunfire support.

Briefly, the Navy's role in time of war or conflict is:

- To organise, train and equip naval forces, including naval aircraft, for timely and sustained combat operations at sea;
- To provide naval support for land operations;
- To provide military sea transport support for the Australian Services; and
- To provide seaward defence of ports and anchorages.

In peacetime, the primary role is to maintain operational effectiveness of the capabilities required in the above roles, including the maintaining of an effective standard for joint operations with the Army and the RAAF and, in addition, wherever possible, to contribute to national development and to assist the civil population.

The ships and aircraft required to perform these tasks are described on the following pages.
The light aircraft carrier HMAS Melbourne is the Royal Australian Navy's flagship. With her Skyhawk, Tracker and Wessex aircraft, Melbourne combines aerial defence of the Fleet with her anti-submarine role.

She also has a formidable strike capacity which was strengthened with the recent purchase of additional Skyhawk aircraft. When carrying extra Skyhawks the carrier will control a significant strike force which can be directed against either maritime or shore targets and can give ground support to the Army.

Melbourne embarked her present generation of aircraft in 1969 after an extended refit which included modifications to aid flying and aircraft handling. In 1971 the ship received a rebuilt catapult, strengthened flight deck and other changes.

Melbourne was laid down in 1943 as HMS Majestic, at the same time as HMS Terrible (later HMAS Sydney) and was launched in 1945. With the end of World War II, work on Majestic stopped pending a decision on future requirements. Arrangements were then made for the ship to be taken over by the RAN and renamed HMAS Melbourne.

Construction resumed in 1948 with modifications including increasing the size of the flight deck lifts to handle larger aircraft and later fitting an angled flight deck, steam catapult and mirror landing system.

Melbourne was commissioned into the RAN on 28 October 1955 and after working up in British waters with her Sea Venom and Gannet aircraft she sailed for Australia, arriving in Sydney on 10 May 1956.
Guided missile destroyers

The three guided missile destroyers—HMA Ships Perth, Hobart and Brisbane—make up the RAN’s First Destroyer Squadron. The US-built ships are similar to the US Navy’s DDG-15 class and their design is particularly versatile. Their main task is air defence of the Fleet, but they also have formidable anti-submarine and surface gunnery capabilities.

The principal aircraft defence weapon is the Tartar guided missile system which is mounted near the stern. The DDG’s are also fitted with two Ikara missile launchers. This long-range anti-submarine system is Australian-designed and developed. The missile is automatically guided to the vicinity of a hostile submarine where a torpedo is released by parachute to home on the target.

The ships are fitted with modern long-range sonic, radar, communications and electronic equipment to provide the command with comprehensive information. Living spaces are air conditioned.

All three ships saw action in Vietnam where they served with distinction with ships of the US Navy’s 7th Fleet.

The ships are entering a period when their weapon systems are being updated. Perth, Hobart and Brisbane are the names of former RAN cruisers.
The Royal Australian Navy’s Second Destroyer Squadron is made up of the Daring Class destroyers HMAS Vendetta and Vampire. These all-purpose warships have main gunnery armament comparable to a light cruiser, giving them formidable surface gunnery as well as anti-aircraft capabilities.

Anti-submarine detection equipment and weapons increase their versatility.

Vendetta and Vampire were built in Australia, while the training ship Duchess—also a Daring—was built in Britain.

The three ships are all-welded and light alloys have been used extensively in their construction to reduce weight.

Vendetta became the first Australian-built warship to serve in Vietnam. She had the distinction, as a result, of being the first Daring Class destroyer to engage in the role for which the ships were primarily built—naval gunfire support.

Half-life modernization of Vampire and Vendetta, which began in 1970, included fitting new gun turrets, fire control systems, new aircraft warning and navigation radar, re-equipping the operations centre, enclosing the bridge and replacing a major part of the superstructure.

Communications equipment was renewed and living conditions on board considerably improved.

The original Vampire and Vendetta served with distinction in the 10th Destroyer Flotilla, known as the “Scrap Iron Flotilla”, in World War II.
The Royal Australian Navy has six Australian-built destroyer escorts forming the Third Australian Destroyer Squadron.

The newest ship HMAS Torrens and her sister ship HMAS Swan incorporate many design changes made in the four earlier River Class HMAS Ships Derwent, Stuart, Yarra and Parramatta.

All the ships are armed with twin 4.5 inch guns which are used with digital fire control radar and computer. The guns can be used for shore bombardment or can provide fire power against air or surface targets.

Close-range air and surface defence is provided by the Seacat missile system which is controlled by a separate radar and computer. The Seacat missile system was developed in Britain and has been adopted by a number of navies.

A submarine threat can be met by using either the Australian-designed and built Ikara anti-submarine missile system, or the triple-barrelled mortars carried on all the escorts.

Ikara is a rocket-propelled guided missile which carries a homing torpedo towards its submarine target. The torpedo is dropped into the sea by parachute and is then acoustically homed on the submarine target.

All the ships in the squadron except Derwent carry the names of former RAN destroyers and sloops.
The Oberons are long-range diesel-electric submarines which can move against surface ships or other submarines. They are one of the most effective conventional types of submarines available today, and their quietness of operation makes them particularly difficult for an enemy to detect. They are designed for silent running, and underwater equipment includes sensitive listening apparatus and an electronic fire control system. All are fitted with a ‘snort’ system which enables batteries to be recharged while the submarine remains submerged. They can dive to more than 400 ft and have a submerged speed of more than 15 knots.

The four craft are based at HMAS Platypus, Neutral Bay, Sydney. HMAS Oxley and HMAS Otway are named after two earlier RAN submarines. The first of the new submarines on order will be named HMAS Orion to preserve long established links with the Royal Navy and because the constellation Orion is visible in the Southern Hemisphere. The second new Oberon will be named HMAS Otama after the Queensland aboriginal word meaning dolphin—the submarines’ symbol.
The First Australian Mine Counterm easures Squadron is made up of six Tor Class mine countermeasure ships. Of British design and construction, the ships were modified in the UK before joining the Australian Fleet in 1962. Originally all six ships were fitted as minesweepers, but HMAS Curlew and HMAS Snipe have been converted to minehunters. The other four are fitted for mine sweeping. They carry devices to explode acoustic and magnetic as well as contact mines. They can also locate and destroy other underwater obstructions which would be hazardous to shipping. The wooden-hulled minesweepers are themselves non-magnetic and are sufficiently silent not to activate acoustic mines. Mine hunting is the latest advance in mine countermeasures and the re-equipped Curlew and Snipe are significant additions to the Australian Fleet. Mine hunting is complementary to mine sweeping and is carried out in a different way. Using a high definition sonar set, the minehunter locates mines ahead of the ship. When a mine is located, clearance divers go into the water to identify it and decide whether to render it safe and remove it, or to blow it up with an explosive charge.
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**Displacement**: 140 tons  
**Beam**: 20 ft  
**Armament**: 40/60 mm Bofors gun, machine guns and a variety of light arms  
**Machinery**: Two 16-cylinder diesels, producing more than 3,000 hp  
**Speed**: More than 20 knots  

**Ship's Company**: 19

Twenty patrol boats were built in Australian shipyards for patrol and survey work in waters around Australia and Papua New Guinea. They form units of the Navy's patrol boat squadrons. They are units of the First Australian Patrol Boat Squadron. These all-weather, ocean-going ships have a variety of tasks, including the patrol of fishing grounds close to the coastline. They also assist RAN survey ships in sounding and survey work. The 107 ft patrol boats are used for Reserve training and for training Papua-New Guinea officers and sailors who will eventually assume full responsibility for operating a Papua-New Guinea patrol boat squadron. The speed and versatility of the patrol boats have made them useful for helping disabled craft, for use as sea-air rescue boats and for transporting patients from remote shallow ports. Major excursions have been made deep into Papua-New Guinea river systems. Included in the ships' equipment is high definition navigation radar, high and ultra-high frequency radio transmitters and receivers, gyro and magnetic compasses and echo sounders. All the patrol boats are fully air conditioned, and all were built in Queensland shipyards.
Amphibious craft

For the first time since World War II, the RAN has a landing craft squadron. Called Landing Craft Heavy (LCH), the first ship, HMAS Brunei, joined the Fleet on January 5, 1973. The squadron is based at HMAS Moreton, the RAN shore establishment at Brisbane, where the commanding officer is also the LCH Squadron Commander.

At the end of August 1973, four LCHs had been commissioned into the RAN — HMA Ships Brunei, Labuan, Tarakan and Wewak — and three others — HMA Ships Salamaua, Buna and Betano — were to commission in late 1973 or early in 1974. An eighth, Balikpapan, the prototype which has been manned by the Army, will transfer to the RAN in mid-1974. She went through extensive joint Navy/Army evaluation trials in 1972.

The eight sea-going ships, all built at Walkers Ltd. shipyards, Maryborough, Queensland, are each manned by two officers and 11 sailors. They will be employed primarily in providing support for the Army, although one will normally be allocated to the Navy for hydrographic survey work.

As the names suggest, the ships are all named after World War II amphibious operations in which RAN ships and craft put Australian Army units ashore or did surveys preparatory to the landings.

The versatile LCHs will be able to carry the heaviest equipment in the Army’s order of battle (up to three Centurion tanks, for example).
The Battle Class destroyer HMAS Anzac and the Daring Class destroyer HMAS Duchess are the Royal Australian Navy's training ships.

Anzac, the second RAN ship of that name, was built at Williamstown Naval Dockyard, Melbourne, and commissioned on 14 March 1951. She spent the greater part of the following two years in Korean waters supporting United Nations forces. Her other periods in northern waters included four tours of duty with the Strategic Reserve at Singapore.

In 1961 Anzac became the Fleet training ship with the important task of preparing young officers and sailors for careers at sea. Much of the ship's original armament was removed and replaced by class-rooms and other training facilities.

Duchess, formerly a Royal Navy ship, was built in Britain and commissioned in 1952. She served at Suez during the 1956 crisis and escorted aircraft carriers in the Aden area in 1963. She was lent to the RAN in 1964 and was bought by the Australian Government in 1972.

A Daring Class destroyer, Duchess has served in recent years as a member of the Second Australian Destroyer Squadron. Like Anzac, changes have been made to Duchess to convert her to her training role. Anzac will decommission in 1974. Trainees in both ships include young sailors, cadet midshipmen from the RAN College, midshipmen from the Papua New Guinea division of the RAN and officer cadets from other countries. Normally they spend several months at sea learning navigation, seamanship, engineering, communications and other aspects of naval life.
**Destroyer tender**

The destroyer tender HMAS Stalwart is the largest naval vessel wholly designed and built in Australia. Her role is to provide destroyers with repair and maintenance facilities on a mobile basis so the ships can spend the maximum time on duty in their operational areas.

For this job the ship is equipped with extensive engineering, electrical, electronic, weapons, shipwright and other workshops, staffed by experts in a wide variety of trades and professions. Several destroyers can be maintained by Stalwart at a time and three quarters of Stalwart’s ship’s company of nearly 400 are available for repair and maintenance duties.

**Fleet oiler**

HMAS Supply, the largest ship in the RAN, has the important task of refuelling fleet units to give ships greater range and mobility. She supplies furnace fuel, aviation gasoline, diesel oil and water to other ships while they are underway.

In a typical operation a destroyer will steam alongside Supply at about 15 knots. With only about 100 ft between ships, lines are shot across, hoses are run across and connected, and pumping begins. A destroyer can be refuelled in this way in less than half an hour.
Surveying of Australian and Papua-New Guinea waters, which combined involve 16,500 miles of coastline and cover about one eighth of the earth's surface, is the mammoth task entrusted to the RAN Hydrographic Service.

The stepped-up exploitation of Australia's vast mineral resources in recent years based on bulk handling methods has led to the development of new ports such as Gove, Weipa, Spring Bay, Dampier and Port Hedland. The largest bulk carriers in the world now call at Australian ports and there is a continuing need for new and more accurate surveys of shipping routes and harbour approaches.

Four RAN ships are engaged full time in this work and on oceanographic research. They are HMAS Ships Moresby, Flinders, Diamantina and Kimbla, helped at times by other Fleet units.

Moresby is a large modern survey ship. She operates her own helicopter and carries advanced electronic surveying equipment. A new hydrographic ship, the 750 ton Flinders, has replaced the 336 ton Paluma, which was commissioned in 1957.

The two other ships Diamantina, a converted frigate, and Kimbla are mainly engaged on military and civilian oceanographic research including work for the CSIRO, universities and museums.

Diamantina will soon be replaced by another new hydrographic ship, HMAS Cook, similar to Moresby but slightly larger, and fitted with the most up-to-date oceanographic and survey equipment.
Support ships

The Royal Australian Navy has two general purpose ships, HMAS Bass and HMAS Banks, of the Explorer Class, built at Walkers Ltd. shipyards, Maryborough, Queensland. Banks was fitted for fishery surveillance and Bass for surveying, but both were used for other duties.

In June 1967, Bass was assigned as a Naval Reserve training ship in Tasmanian waters and a month later Banks was assigned to similar duties in South Australian waters. Normally they have complements of two officers and 12 sailors, but during training cruises they may carry more.

Both ships provide training of officers and sailors in the seamen, electrical, engineering and communications branches of the Naval Reserve. Also, they provide support to shore establishments in Tasmania and South Australia and to visiting Fleet units.

Future ships

As well as HMAS Flinders, which was commissioned in 1973, the RAN's oceanographic and hydrographic service is to have another new ship. She is HMAS Cook, which will replace HMAS Diamantina.

Cook will be of similar size to the survey ship HMAS Moresby but with distinct features of her own. Equipped with the latest survey techniques including satellite navigation, Cook will have accommodation and laboratory research facilities for a number of scientific staff in addition to the ship's company. Unlike Moresby she will not carry a helicopter.
Aircraft

The Skyhawk jet fighter-bomber (top left) is the air defence and strike aircraft of the Fleet Air Arm. These transonic aircraft are ideal for high pay load/wide radius operations in tactical air support and they have increased the versatility of the aircraft carrier HMAS Melbourne.

The Douglas A4-G Skyhawk is a relatively small aircraft (weight empty—9,800 lbs) but it is capable of carrying an extensive and varied war load (maximum all-up weight—24,500 lbs) over a considerable distance. Its armaments include combinations of air-to-air missiles, a variety of 250, 500 and 1,000 lb bombs, 20mm cannon and rockets.

Embarked on Melbourne with the Skyhawks are anti-submarine Tracker aircraft and Wessex helicopters. The Grumman S2E Tracker (below left) is an all-weather, twin-engine aircraft. It can remain on patrol for up to 10 hours and each carries a crew of two pilots, an observer and an aircrewman.

The Tracker is fitted with electronic devices for submarine detection and can be armed with homing torpedoes or depth charges. The Westland Wessex 31B helicopter, which doubles in a search and rescue role, is equipped with sonar for its anti-submarine duties and can also be armed with homing torpedoes or depth charges. The Wessex carries a crew of two pilots, an observer and an aircrewman.

Training and support aircraft of the Royal Australian Navy include Iroquois utility and search and rescue helicopters, Macchi jet trainers and Dakota aircraft. The Dakotas are due to be phased out soon and Hawker Siddeley 748 training aircraft, the latter having been delivered in mid-1973.