

IHS™ Jane's® Fighting Ships

2013-2014

Commodore Stephen Saunders RN

ISBN - 978 0 7106 3048 3

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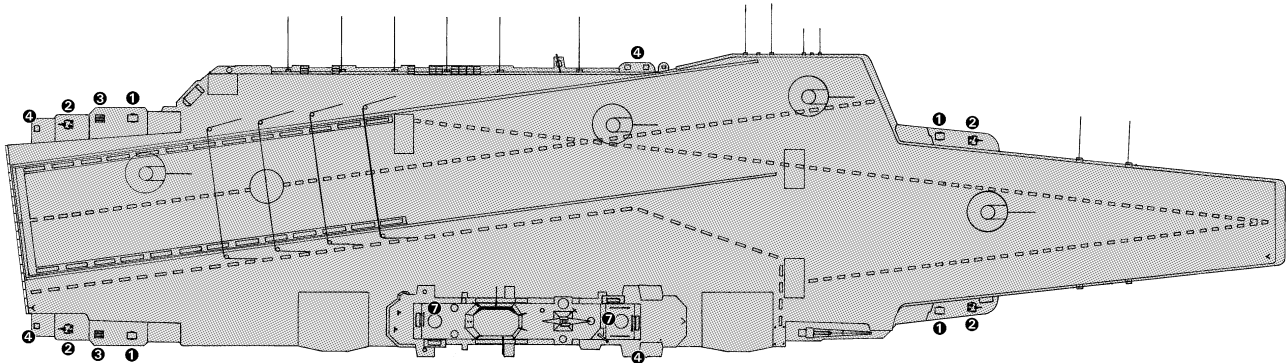
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AIRCRAFT CARRIERS

Notes: (1) The former Russian aircraft carrier *Minsk* is a tourist attraction at Shenzhen.
 (2) Building of an indigenous aircraft carrier (possibly Type 089) is expected to start by 2018 with a view to entering service in about 2025.

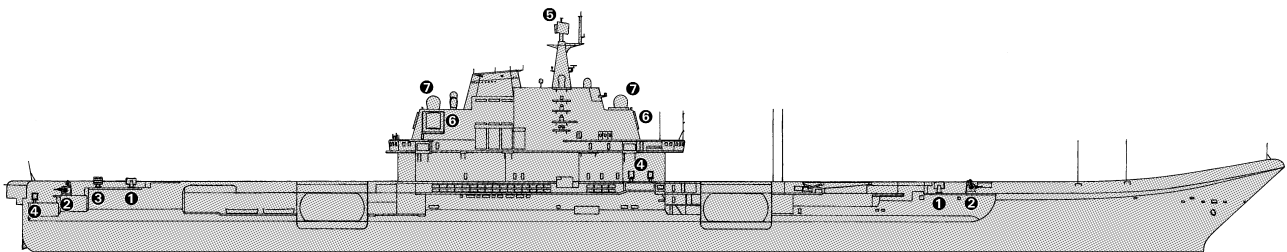
1 KUZNETSOV (OREL) (PROJECT 1143.5/6) CLASS (CVGM)

Name	No	Builders	Laid down	Launched	Commissioned
LIAONING (ex-Varyag; ex-Riga)	16	Nikolayev South	6 Dec 1985	6 Dec 1988	25 Sep 2012
Displacement, tonnes: 46,637 standard; 59,439 full load		IFF: To be announced.			radar. The work was completed in mid-March 2010 when the ship was moved out of dock to a degaussing berth. Meanwhile a full-scale replica of the flight deck at Wuhan became available for flight-deck training.
Dimensions, metres (feet): 304.5 oa; 280 wl × 70 oa; 37 wl × 10.5 (999; 918.6 × 229.7; 121.4 × 34.4)		Sonars: To be announced.			Structure: The hangar is 183 × 29.4 × 7.5 m and can hold up to 18 Flanker aircraft. There are two starboard side lifts, a ski jump of 14° and angled deck of 7°. There are four arrestor wires. The ship has some 16.5 m of freeboard. The FL-3000N launchers are sited on sponsons fore and aft and the Type 730 CIWS are on the port and starboard quarters.
Flight deck, metres: 304.5 × 70 (999 × 229.7)		Weapon control systems: To be announced.			Operational: Initial sea trials started on 10 August 2011 and the ship returned to Dalian after four days. A further docking period followed during which the flight-deck was stripped and repainted. It is not known whether there were other problems that required a docking. Between November 2011 and August 2012, nine sets of sea trials, culminating in a 25-day period in July 2012, were carried out. Subsequently, the ship was handed over to the PLAN on 23 September 2012 and formally commissioned on 25 September 2012. While the ship is now capable of limited operations, its initial role is likely to be as an aviation training ship with a view to working the ship up to a full aircraft carrier capability in due course. This is expected to last at least a year. A significant step in this process was the successful recovery of a J-15 aircraft on 20 November 2012. The ship arrived at her base at Dazhu Shan on 27 February 2013.
Speed, knots: 30		Fixed-wing Aircraft: 18 J-15.			
Range, n miles: 3,850 at 29 kt, 8,500 at 18 kt		Helicopters: To be announced.			
Complement: 1,960 (200 officers; 626 air crew) + 40 flag staff		Programmes: Procurement of an aircraft carrier capability has been a high priority for the Chinese Navy since the 1990s. Ex-Varyag, the second of the Kuznetsov class (the first of class, <i>Admiral Kuznetsov</i> , remains in service in the Russian Navy) was between 70 and 80 per cent complete by early 1993 when building was terminated after an unsuccessful attempt by the Russian Navy to fund completion. Subsequently the ship was bought by China and, having been towed through the Bosphorus on 2 November 2001, arrived at Dalian in March 2002. Once the ship emerged from dock in mid-2005 painted in military colours, it became clear that it was intended to bring the ship into operational service. Work in 2006 included the application of a non-skid surface to the flight deck and, by mid-2008, the exterior of the ship was looking relatively shipshape. The ship was moved to a dry-dock on 27 April 2009 for a refit during which shafts and/or propellers are likely to have been fitted. Other work included substantial rebuild of the upper island structure which has involved installation of the Dragon Eye			
Machinery: 8 boilers; 4 turbines; 200,000 hp(m) (147 MW); 4 shafts					
Missiles: SAM: 4 FL-3000N 24-cell launchers ❶; passive IR/anti-radiation homing to 9.0 km (4.8 n miles).					
Guns: 2–30 mm Type 1030 ❷; 10 barrels per mounting; 4,200 rds/min combined to 1.5 km.					
A/S Mortars: 2 RBU 6000 ❸					
Physical countermeasures: Decoys: 4 Type 726 chaff launchers ❹					
Electronic countermeasures: ESM/ECM: To be announced.					
Radars: Air search: Type 381B Top Plate (Frigate MAE-3) ❺; 3D; E/F-band.					
Air search/fire control: Type 346 (Dragon Eye) ❻; 3D; G-band.					
Surface search: To be announced.					
Fire control: 2 Band Stand (Mineral ME) ❼; I-band.					
Navigation: To be announced.					
CCA: To be announced.					
Tacan: To be announced.					



LIAONING

(Scale 1 : 1,800), Ian Sturton / 1483595



LIAONING

(Scale 1 : 1,800), Ian Sturton / 1483595



LIAONING

11/2012* / 1483005

11 OYASHIO CLASS (SSK)

Name	No	Builders	Laid down	Launched	Commissioned
OYASHIO	SS 590	Kawasaki, Kobe	26 Jan 1994	15 Oct 1996	16 Mar 1998
MICHISHIO	SS 591	Mitsubishi, Kobe	16 Feb 1995	18 Sep 1997	10 Mar 1999
UZUSHIO	SS 592	Kawasaki, Kobe	6 Mar 1996	26 Nov 1998	9 Mar 2000
MAKISHIO	SS 593	Mitsubishi, Kobe	26 Mar 1997	22 Sep 1999	29 Mar 2001
ISOSHIO	SS 594	Kawasaki, Kobe	9 Mar 1998	27 Nov 2000	14 Mar 2002
NARUSHIO	SS 595	Mitsubishi, Kobe	2 Apr 1999	4 Oct 2001	3 Mar 2003
KUROSHIO	SS 596	Kawasaki, Kobe	27 Mar 2000	23 Oct 2002	8 Mar 2004
TAKASHIO	SS 597	Mitsubishi, Kobe	30 Jan 2001	1 Oct 2003	9 Mar 2005
YAESHIO	SS 598	Kawasaki, Kobe	15 Jan 2002	4 Nov 2004	9 Mar 2006
SETOSHIO	SS 599	Mitsubishi, Kobe	23 Jan 2003	5 Oct 2005	28 Feb 2007
MOCHISHIO	SS 600	Kawasaki, Kobe	23 Feb 2004	6 Nov 2006	6 Mar 2008

Displacement, tonnes: 2,794 surfaced; 3,556 dived
Dimensions, metres (feet): 81.7 × 8.9 × 7.4
 (268 × 29.2 × 24.3)
Speed, knots: 12 surfaced; 20 dived
Complement: 70 (10 officers)

Machinery: Diesel-electric; 2 Kawasaki 12V25S diesels; 5,520 hp(m) (4.1 MW); 2 Kawasaki alternators; 3.7 MW; 2 Toshiba motors; 7,750 hp(m) (5.7 MW); 1 shaft

Missiles: SSM: McDonnell Douglas Sub-Harpoon; active radar homing to 130 km (70 n miles) at 0.9 Mach; warhead 227 kg.

Torpedoes: 6–21 in (533 mm) tubes; Type 89; wire-guided; active/passive homing to 50 km (27 n miles)/38 km (21 n miles) at 40/55 kt; warhead 267 kg and Type 80 ASW. Total of 20 SSM and torpedoes.

Electronic countermeasures: ESM: NZLR-1B; radar warning.

Radars: Surface search: JRC ZPS 6D; I-band.

Sonars: Hughes/Oki ZQQ 6; hull and flank arrays; active/passive search and attack; medium/low frequency. Towed array; passive search; very low frequency.

Weapon control systems: SMCS type TFCS.

Programmes: First of a new class approved in the 1993 budget and then one a year up to FY03.

Structure: Fitted with large flank sonar arrays which are reported as the reason for the increase in displacement over the Harushio class. Double hull sections forward and aft and anechoic tiles on the fin. A new type of deck casing and faired fin are other distinguishing features. Diving depth 650 m (2,130 ft).



UZUSHIO 3/2012*, Hachiro Nakai / 1482871



ISOSHIO 7/2010, Jin Tetsuya / 1366880



ISOSHIO 10/2012*, Hachiro Nakai / 1482870

2 HARUSHIO CLASS (SSK)

Name	No	Builders	Laid down	Launched	Commissioned
FUYUSHIO	TSS 3607 (ex-SS 588)	Kawasaki, Kobe	12 Dec 1991	16 Feb 1994	7 Mar 1995
ASASHIO	TSS 3601 (ex-SS 589)	Mitsubishi, Kobe	24 Dec 1992	12 Jul 1995	12 Mar 1997

Displacement, tonnes: 2,489 (TSS 3607), 2,947 (TSS 3601) surfaced; 3,251 (TSS 3607), 3,759 (TSS 3601) dived
Dimensions, metres (feet): 77, 87 (TSS 3601) × 10 × 7.7
 (252.6, 285.4 × 32.8 × 25.3)
Speed, knots: 12 surfaced; 20 dived
Complement: 75, 70 (TSS 3601) (10 officers)

Machinery: Diesel-electric; 2 Kawasaki 12V25/25S diesels; 5,520 hp(m) (4.1 MW); 2 Kawasaki alternators; 3.7 MW; 2 Fuji motors; 7,200 hp(m) (5.3 MW); 1 shaft; 4 Stirling engines (TSS 3601) Kockums V4-275R Mk 2; 348 hp (260 kW)

Missiles: SSM: McDonnell Douglas Sub-Harpoon; active radar homing to 130 km (70 n miles) at 0.9 Mach; warhead 227 kg.

Torpedoes: 6–21 in (533 mm) tubes. Japanese Type 89; wire-guided (option); active/passive homing to 50 km (27 n miles)/38 km (21 n miles) at 40/55 kt; warhead 267 kg; depth to 900 m, and Type 80 ASW. Total of 20 SSM and torpedoes.

Electronic countermeasures: ESM: NZLR-1; radar warning.

Radars: Surface search: JRC ZPS 6; I-band.

Sonars: Hughes/Oki ZQQ 5B; hull-mounted; active/passive search and attack; medium/low frequency. ZQR 1 towed array similar to BQR 15; passive search; very low frequency.

Programmes: First approved in 1986 estimates and then one per year until 1992.



HARUSHIO CLASS 10/2012*, Hachiro Nakai / 1482872

Structure: The slight growth in all dimensions is a natural evolution from the Yuushio class and includes more noise reduction, towed sonar and wireless aerials, as well as anechoic coating. Double hull construction. *Asashio* had a slightly larger displacement on build and a small cutback in the crew as a result of greater systems automation for machinery and snorting control. The hull was extended in 2001 to accommodate an AIP module (Stirling engine)

which was fitted by Mitsubishi, Kobe. Diving depth 550 m (1,800 ft).

Operational: A remote periscope viewer is fitted in *Asashio*. *Asashio* is an experimental submarine which has been used for testing of AIP propulsion. *Fuyushio* converted to a training role on 15 March 2011. *Hayashio* decommissioned in 2011, *Arashio* in 2012 and *Wakashio* in 2013.



Solomon Islands

Country Overview

Formerly a British protectorate, the Solomon Islands gained independence in 1978. Its head of state is the British sovereign, who is represented by a Governor-General. Situated in the southwest Pacific Ocean, east of New Guinea, the country comprises more than 35 islands and numerous atolls which extend some 650 n miles from east to west and includes most of the Solomon Islands group. The

six main islands are: Guadalcanal, Malaita, New Georgia, San Cristobal (now Makira), Santa Isabel and Choiseul. Vella Lavella, Ontong Java, Rennell, Bellona and the Santa Cruz islands are also part of the group, together with the Florida, Russell, Reef and Duff island groups. Honiara, on Guadalcanal, is the capital and principal port. An archipelagic state, territorial seas (12 n miles) are claimed. An Exclusive Economic Zone (EEZ) (200 n miles) is also claimed but limits have not been fully defined by boundary

agreements. Patrol boats are operated by the National Surveillance and Reconnaissance Force (NSRF).

Headquarters Appointments

Director of Maritime forces:
Inspector Charles Fox Sau

Bases

Honiara (HQ NSRF)

Personnel

2013: 60 (14 officers)

Prefix to Ships' Names

RSIPV

POLICE

2 PACIFIC CLASS (LARGE PATROL CRAFT) (PB)

Name	No	Builders	Commissioned
LATA	03	Australian Shipbuilding Industries	3 Sep 1988
AUKI	04	Australian Shipbuilding Industries	2 Nov 1991

Displacement, tonnes: 165 full load

Dimensions, metres (feet): 31.5 × 8.1 × 2.3 (103.3 × 26.6 × 7.5)

Speed, knots: 20. **Range, n miles:** 2,230 at 12 kt

Complement: 14 (1 officer)

Machinery: 2 Caterpillar 3516TA diesels; 4,400 hp (3.28 MW) sustained; 2 shafts

Guns: 3—12.7 mm MGs.

Radars: Surface search: Furuno 8100-D; I-band.

Comment: Built under the Australian Defence Co-operation Programme. Training, operational and technical assistance provided by the Royal Australian Navy. Aluminium construction. Nominal endurance of 10 days. The Australian government has extended the Pacific Patrol Boat programme but, following suspension of most of support of the Solomon Islands' craft in 2001, an overdue half-life refit was not completed for *Auki* until 2002. Life-extension refit for *Lata* completed at Townsville in 2005. *Auki* completed a similar refit in 2010.



AUKI

8/2012*, Chris Sattler / 1455805



LATA

4/2011, Chris Sattler / 1454715

3 INSHORE PATROL CRAFT (PBR)

JACKPOT +2

Comment: Details are not known.



JACKPOT

4/2011, Chris Sattler / 1454717



POLICE CRAFT

3/2009, Chris Sattler / 1305574



South Africa

Country Overview

The Republic of South Africa is bordered to the north by Namibia, Botswana, Zimbabwe, Mozambique and Swaziland. With an area of 472,731 square miles, it has a 1,512 n mile coastline with the south Atlantic and Indian Oceans. South Africa also has sovereignty over the Prince Edward Islands which lie some 950 n miles south-east of Port Elizabeth. The independent country of Lesotho forms an enclave in the eastern part of the country. The administrative capital of South Africa is Pretoria and the judicial capital is Bloemfontein. Cape Town is the legislative capital and a prominent port. There are further ports at Mossel Bay, Port

Elizabeth, East London, Durban, Saldanha, and Richards Bay. Territorial seas (12 n miles) are claimed. It also claims a 200 n mile EEZ but its limits have not been fully defined.

Headquarters Appointments

Chief of the Navy:
Vice Admiral J Mudimu
Flag Officer Fleet:
Rear Admiral Philip Schoultz

Personnel

(a) 2013: 7,508 naval
(b) 2,266 (Public Service Act Personnel)

Prefix to Ships' Names

SAS (South African Ship)

Bases

Simon's Town (main); Durban (naval station); Port Elizabeth (naval station).
Saldanha Bay (ratings' training), Gordon's Bay (officer training).

0 + 2 (3) AMERICA CLASS (AMPHIBIOUS ASSAULT SHIP) (LHA)

Name	No	Builders	Laid down	Launched	Commissioned
AMERICA	LHA 6	Huntington Ingalls Industries, Mississippi	17 Jul 2009	4 Jun 2012	2015
TRIPOLI	LHA 7	Huntington Ingalls Industries, Mississippi	2014	2017	2018

Displacement, tonnes: 44,971 full load
Dimensions, metres (feet): 257.3 oa; 237.1 wl x 59.1 oa; 32.3 wl x 8.75 (844.2; 777.9 x 193.9; 106.0 x 28.7)
Flight deck, metres: 249.6 x 36.0 (818.9 x 118.1)
Speed, knots: 22. **Range, n miles:** 9,500 at 20 kt
Complement: 1,059 (65 officers)

Military lift: 1,687 troops (plus 184 surge)
Machinery: COGES: 2 GE LM 2500+ gas turbines; 70,000 hp (52.2 MW); 2 auxiliary propulsion motors; 10,000 hp (7.46 MW); 2 shafts
Missiles: SAM: 2 Raytheon GMLS Mk 29 octuple launchers; 16 Evolved Sea Sparrow RIM-162D; semi-active radar homing to 18 km (9.7 n miles) at 3.6 Mach; warhead 38 kg. 2 Raytheon RAM RIM-116 Mk 49 launchers; passive IR/anti-radiation homing to 9.6 km (5.2 n miles) at 2.5 Mach; warhead 9.1 kg.
Guns: 2 Raytheon 20 mm 6-barrelled Vulcan Phalanx Mk 15.
Physical countermeasures: Decoys: Mk 53 Mod 6 NULKA DLS; SLQ-25 Nixie; acoustic torpedo decoy system.
Electronic countermeasures: ESM/ECM: SLQ-32B(V)2.
Radars: Air search: ITT SPS-48E(V)10; 3D; E/F-band; Raytheon SPS-49A(V)1; SPQ-9B.

Surface search/Navigation: 2 SPS-73; I-band.
 CCA: SPN-35C, SPN-41A and SPN-43C.
 Tacan: URN 25. IFF: CIS UPX-29.
Combat data systems: SSSDs Mk 2 Mod 4B, CEC USG-2A, Links 4A, 11 (modified), 16 and 22. SATCOMS: SSR-1, SRC-XX (JHF), USC-38 (EHF), URC-131(H)(HF), URC-139 (VHF), CBSP and 1 WSC-6C(V)9 (SHF). SMQ-11 Metsa. Advanced Field Artillery TDS.
Weapon control systems: NSSMS Mk 57 Mod 12 with 2 Mk 9 MFCS.

Fixed-wing aircraft: Similar to Wasp class with improved facilities to operate and support MV-22 Osprey and up to 23 F-35B Joint Strike Fighter (JSF).



AMERICA

6/2012*, US Navy / 1486473

Programmes: It was announced on 6 April 2004 that the LHA Replacement design was to be a modified version of the LHD 8 design. The detailed design phase started in January 2006 following ship design approval to proceed with Milestone B. A contract for the detailed design and construction of the first of class was let on 1 June 2007 and for the second on 31 May 2012. A class of five is planned.

Structure: LHA Replacement is optimised for aviation operations and is to have additional cargo/magazine capacity in lieu of a traditional well deck. The flight deck has nine helicopter landing spots and is to be equipped with two aircraft elevators, one to starboard and aft of the island and one to port amidships; the folding capability has been removed. The aircraft hangar is larger than in previous

classes and includes a significant increase in aviation parts stowage capacity. Cargo capacity is 160,000 cu ft total with an additional 12,000 sq ft to accommodate vehicle stowage. The ship is to be fitted with a 26 bed capacity hospital and two operating rooms. The bridge is two decks lower than that of an LHA 1; the command, control and communications spaces having been moved inside the hull. The ship has gas turbine propulsion and all electric auxiliaries. The design is to be modified to include a stern dock, or well deck in LHA 8 and subsequent vessels. LHA 8 and subsequent ships will have smaller hangars to accommodate the well-deck but modified island superstructure to increase deck area.
Operational: Homeport is yet to be announced.

79 LANDING CRAFT AIR CUSHION (LCAC)

Displacement, tonnes: 89 standard; 185 full load
Dimensions, metres (feet): 26.8 on cushion; 24.7 between hard structures x x ? (87.9; 81 x x ?)
Range, n miles: 300 at 35 kt, 200 at 40 kt
Complement: 5

Military lift: 23 troops; 1 Main Battle Tank or 60-75 tons
Machinery: 4 Allied-Signal TF40B marine gas turbines for propulsion and lift; 16,000 hp (11.9 MW) sustained; 2 shrouded reversible-pitch airscrews (propulsion); 4 double-entry fans, centrifugal or mixed-flow (lift). SLEP configuration, 4 Vericor Power Systems ETF40B marine gas turbines with Full Authority Digital Engine Control (FADEC) for propulsion and lift; 19,000 hp (14.1 MW) sustained; 2 shrouded reversible-pitch airscrews (propulsion); 4 double-entry fans, centrifugal or mixed-flow (lift)
Radars: Navigation: Marconi LN66 or Decca Bridgmaster E; I-band.

Programmes: Built by Textron Marine and Land Systems and Avondale Gulfport. A total of 90 craft delivered 1984-1997. The final craft LCAC 91 delivered in 2001 in SLEP configuration.

Modernisation: A total of 73 in-service craft are receiving Service Life Extension Programme (SLEP) from 2002-2018. The programme includes the installation of more powerful engines to provide greater lift capacity, an improved deep skirt for better handling in heavier sea states and an integrated navigation suite for precise navigation, and advanced Multimode Integrated Communications System in either normal, secure modes. Up to FY04, 13 craft were upgraded followed by five in FY05, five in FY06, five in FY07, five in FY08, six in FY09, three in FY10 and five in FY11.



LCAC 46

6/2012*, M Declerck / 1486441

Structure: Incorporates the best attributes of the JEFF(A) and JEFF(B) learned from over five years of testing the two prototypes. Bow ramp 28.8 ft, stern ramp 15 ft. Cargo space capacity is 1,809 sq ft. Noise and dust levels are high and if disabled the craft is not easy to tow. 12.7 mm, 7.62 mm machine guns or 44 mm grenade launchers can be fitted.

Operational: Ship classes capable of carrying the LCAC are Wasp (three), Tarawa (one), Austin (one), Whidbey Island

(four), Harpers Ferry (two) and San Antonio (two). A portable transport module can be carried on the cargo deck to transport up to 180 troops. Some limitations in very rough seas. Shore bases on each coast at Little Creek, VA and Camp Pendleton, CA. Of 79 craft, 71 were operational and 8 undergoing SLEP as of October 2012.

Sales: Six to Japan. One of a similar type built by South Korea.



LCAC 29

4/2012*, Hachiro Nakai / 1483676