

SHINANO 信濃

JAPANESE AIRCRAFT CARRIER

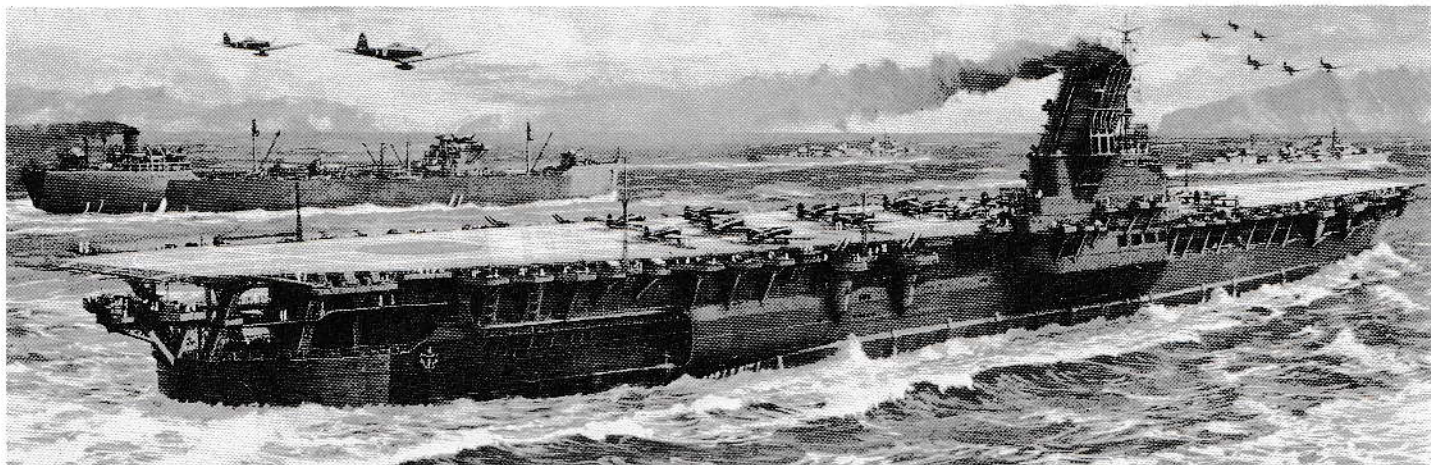


Illustration by Kihachiro Ueda

WATER LINE SERIES

A SHORT HISTORY OF THE SHINANO

Immediately after Japan denounced the limitations of the Washington Treaty, Japan's large battleships Yamato and Musashi were planned and commissioned in 1937 in the Kure naval dockyard and Nagasaki shipyard respectively. Later they were followed by the third battleship of the Yamato type, the Shinano, and a fourth, although not officially designated. Both were planned in 1939. The Yokosuka naval dockyard was appointed to build the Shinano, and Kure, the fourth at the end of the year. In the autumn of 1940, the emergency war plan was administered and the construction of aircraft carriers was promoted. After the outbreak of the war the fabrication of the Shinano and the fourth vessel made rather slow progress on account of more important projects. Due to the scarcity of raw materials and workers, development of the fourth vessel was severely hindered. In November 1941, the fourth vessel was even partially disassembled so that some of its components could be utilised in other more priority-ridden projects that had to be built earlier!

During the Pacific War, Japanese ship-based planes proved extremely effective at Pearl Harbor and also in Malaya. Even though some experts strongly advocated the need for aircraft and air superiority, emphasis was placed with the completion of the Yamato, and thus the Shinano was placed in a state of temporary suspension. It was the Battle of Midway on June 4th, 1942 that revived the building of the Shinano. Carrier-based planes from the United States; the Enterprise, the Hornet and the Yorktown delivered a serious blow to Admiral Nagumo's task force sinking four main strength carriers of the Japanese Navy, the Akagi, Kaga, Hiryu and Soryu. The defeat at Midway prompted the need to incorporate more carriers into the fleet at the first possible opportunity and the navy decided to study what vessels could be remodelled into aircraft carriers. Every type of vessel that could be converted into an aircraft carrier was scrutinised. Among the ships operating seaplanes, tankers, merchant ships, cruisers and battleships examined, the Shinano turned out to be by far the most suitable for the purpose. Thus the Shinano was to become the Japanese Navy's latest aircraft carrier. Since the lower part of the Shinano had already been completed to that of a battleship configuration incorporating many lessons learned from the Battle of Midway, the vessel was remodelled from a battleship to an aircraft carrier. Despite a valiant effort by the Shipping Control Headquarters completion of the ship was not until late September 1942. The Shinano was to be a powerful mobile air base. Fundamentally, it would have no aircraft hangars and therefore would not carry its own attack planes. Its purpose was to go to the front, pick up aircraft from the carriers in the rear, supply them with fuel and munitions and let them fly off again. The huge flight deck would have strong armour protection so that it could serve as an air base on the ocean even under intense enemy air attack.

The leaders of the Japanese Navy's air service requested that the original proposal made by the Shipping Control Headquarters should be changed to accommodate its own airplanes like a conventional carrier.

As a result, the Shinano was to carry 18 fighters in self-defense. Thus the final specifications at the time of the official test was an aircraft carrier of the Island type with a displacement of 68,000 tons, 18 fighters, 18 bombers and 6 reconnaissance planes and the ability to supply provisions for many other planes.

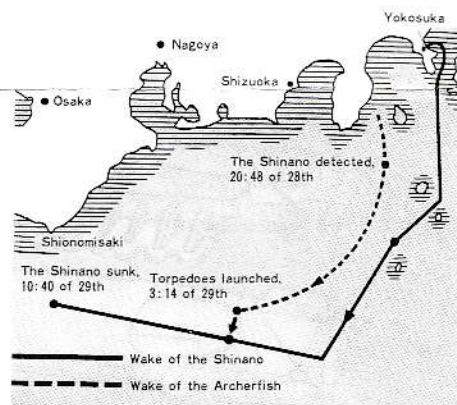
The ever prevalent threat of fire was a hard lesson learned in the Battle of Midway. The loss of four invaluable carriers due to enemy bomb attacks was a major setback to the Japanese war effort. Damage directly inflicted by the bombs themselves was not serious, but the pursuing fires that followed, setting ablaze the internal stores, bombs and torpedoes made the threat of explosions a real problem. This is exactly what happened to the four Japanese carriers at Midway, fires raging completely out of control. In regard to this threat, the Shinano was protected with 95mm armour plates over almost all of its flight deck so that it could withstand a 500 kg bomb explosion from dive bombers. Fire control was also paramount with foam extinguishers employed. These were of a soap-type which had been used only by the merchant fleet, and were adopted by the Japanese Navy after Midway as the standard fire-fighting equipment of Japanese aircraft carriers. The Shinano had heavier anti-aircraft armaments than conventional aircraft carriers. It carried eight double high-angle guns (four on each side). The Shinano was expected to have 115 machine guns of 25mm in calibre, but it was reported to have carried 140 when leaving Yokosuka, 69 were of the triple type, the rest were made up of double and single types. Rocket launchers were a unique feature to the Shinano and could discharge 27 or 30 rockets of 120mm at one time.

The Shinano was launched on November 11th, 1944 and commissioned eight days later. With the completion of the huge carrier, the need for a crew worthy of such a ship became pressing. There was however no suitable crew to be found in Yokosuka to train. To aggravate matters, the American air base in Saipan was to become operational by November of the same year, putting the Kanto District of Japan in range of the American B29 long range bombers, thus the large aircraft carrier would become a prime target in the dockyard. Thus in a shroud of secrecy, plans were laid to sail the Shinano to a safer location in the Inland Sea of Japan. The journey was only some hundreds of kilometers, of which only about half was in the sphere of activity of American submarines. Its journey to Kure at high speed was to thwart attempts to be pursued by the slower enemy submarines, so at 18:00 on November 28th, 1944 the Shinano left Yokosuka, accompanied by three escort destroyers, the Isokaze, Hamakaze and Yukikaze. On board, with a complement of 2,515 including naval workers from Yokosuka, the Shinano began its voyage to Kure. However luck was not on its side. The United States submarine Archerfish had been patrolling the Tokyo Bay area in search of prey. Looking out on the surface in the west Sagami Sea, the Archerfish detected the huge image of the Shinano and escort destroyers on its radar. After desperately pursuing its quarry for about 6 hours, the Archerfish launched six torpedoes at the Shinano at 03:17, 220 km south of Lake Hamana. Four of them detonated in the starboard bow and immediately the Shinano began listing 9° to the starboard. The Shinano restored the equilibrium by pumping seawater into the port tanks. The flood water was still continuing to rise and again the crew tried to counterbalance it. However a flood valve

would not open and the Shinano capsized and went to the bottom. This was seven hours after the initial attack. The Shinano was designed to withstand up to about 20 torpedoes, but the construction work was hastened and simplified, watertightness was ignored and airtightness tests were scrapped. The crew, too, were green and knew little about their ship and damage control. If the Shinano had been manned by a fully trained crew it might have been able to limp back to port. Its fate was sealed and the Archerfish had sunk the largest aircraft carrier of its day. Until the end of the war, the United States had assumed that it had sunk an aircraft carrier of the Junyo type.

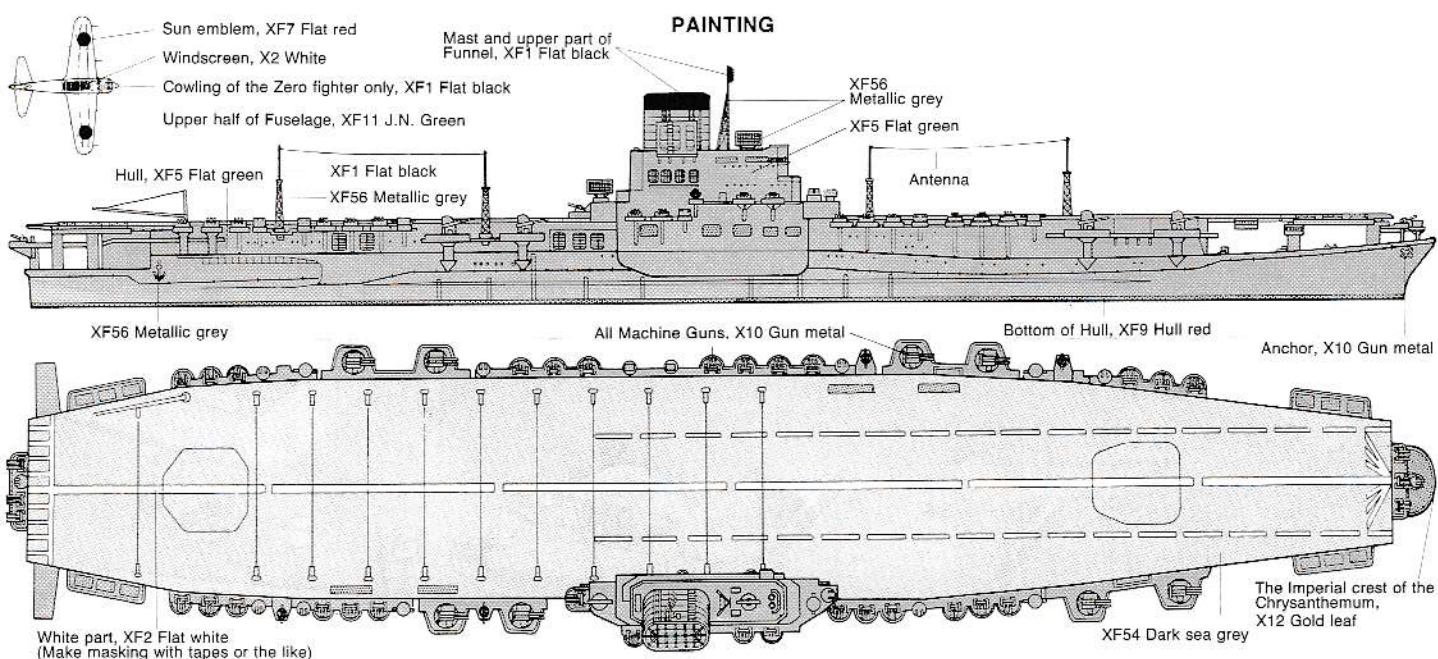
AIRCRAFT OF THE SHINANO

The Shinano was designed to carry 18 new A7M2 Reppu (Sam) fighters that succeeded the Zero fighter, on the front housing deck and 18 carrier bombers of the Ryusei (Grace) type on the rear housing deck. In addition, 6 reconnaissance planes, Shiun (Norm) were also expected to be carried. When the Shinano sank, however, it had no aircraft on board.



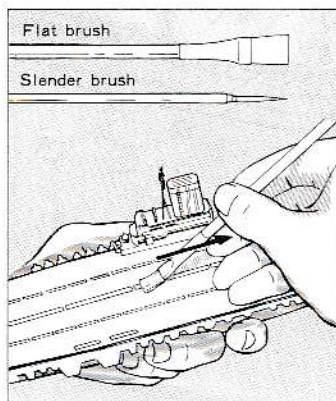
Specifications of the Aircraft Carrier Shinano

Displacement at a time of official test: 68,059 tons
 Water line length: 256.00m Maximum width: 36.30 m
 Speed: 27 knots Aircraft expected to be carried: regular,42, reserve,5
 Flight deck: 256 m in length, 40 m in width



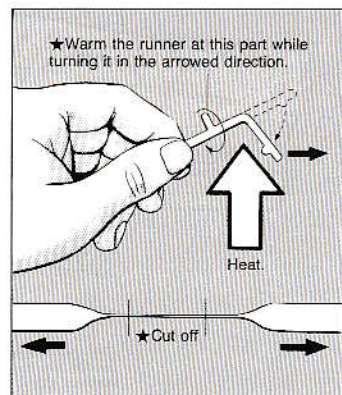
PAINTING THE SHINANO

Paint after construction. Begin by applying several light coats of paint to the whole ship. Spray can paints provide the best finish. Several light coats are better than one heavy coat. Best results are achieved if the paint is allowed to dry completely between coats. Finally paint the deck and the finer details. Use a broad brush for large surfaces and a fine brush for smaller parts.



CONSTRUCTION OF ANTENNA

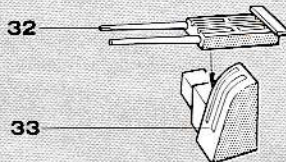
An antenna adds that final touch of realism to the kit and should be done after the kit has been painted. Antenna can be easily made from runners. First cut the runner to the length required, then heat it until it becomes pliable as shown in the diagram. When the runner is sufficiently hot remove the heat source, then quickly pull both ends of the runner and a long thin strand of plastic is produced. Make the strands longer than required, attach with adhesive and then trim to the length needed.



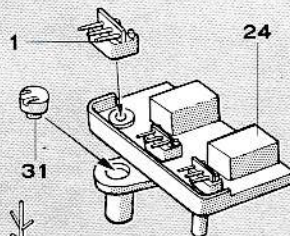
Read Before You Start Your Assembly Work:
 ★When cutting Parts off the runner, be sure to do so carefully with the aid of a pair of nippers, a knife or the like.
 ★When gluing two Parts together, always try to apply adhesives little by little onto both surfaces.

1 Construction of High-Angle Guns

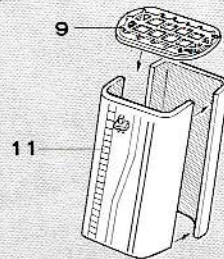
In all, eight High-Angle Guns will have to be constructed.



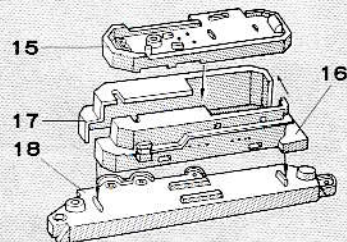
2 Construction of Machine-Gun Placements



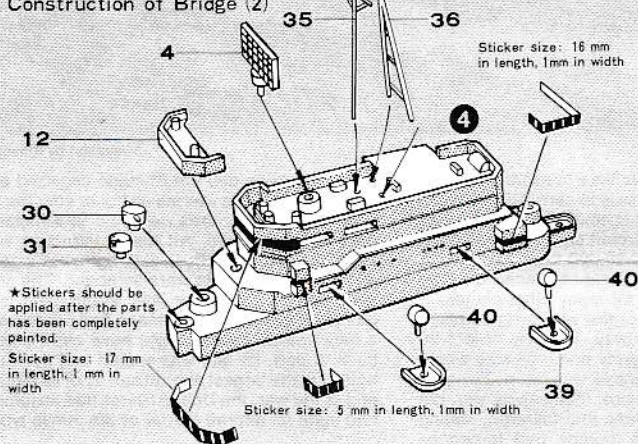
3 Construction of Funnel



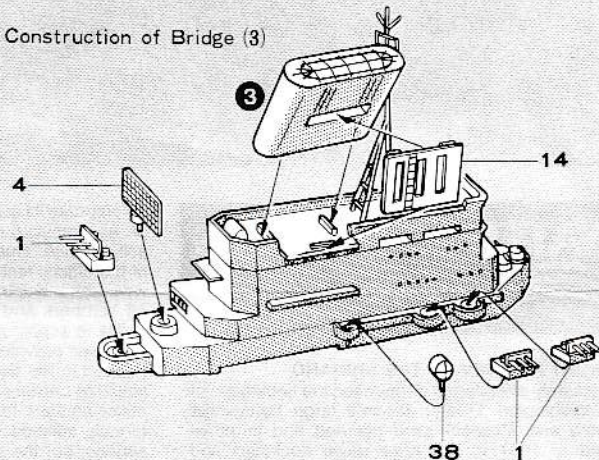
4 Construction of Bridge (1)



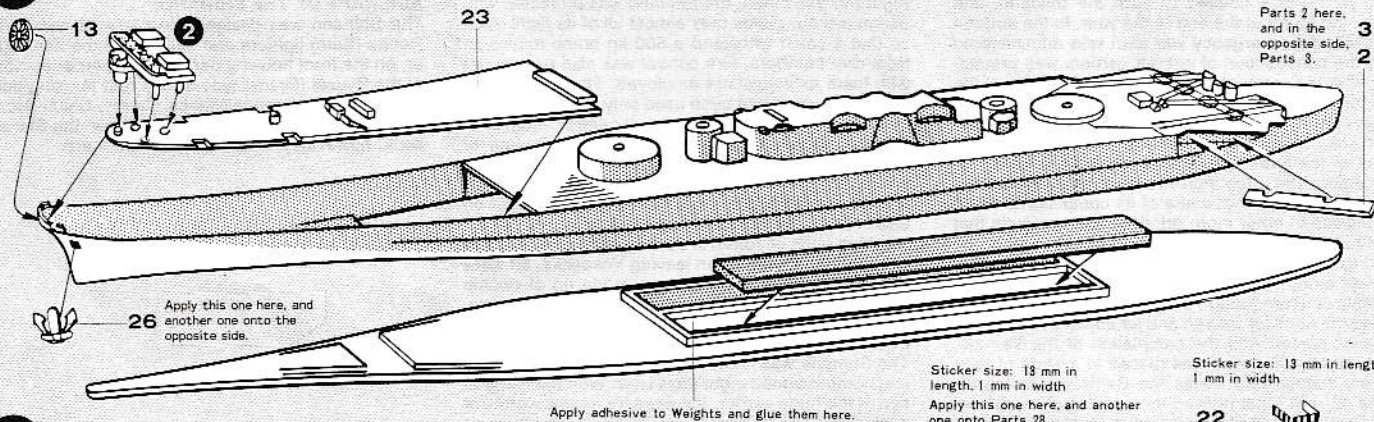
5 Construction of Bridge (2)



6 Construction of Bridge (3)



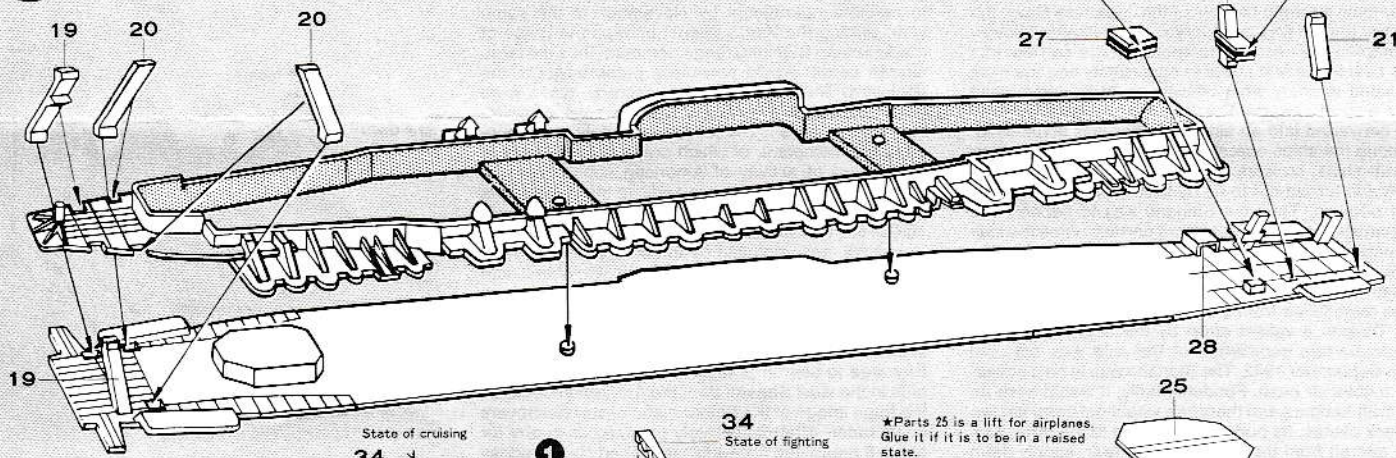
7 Construction of Hull



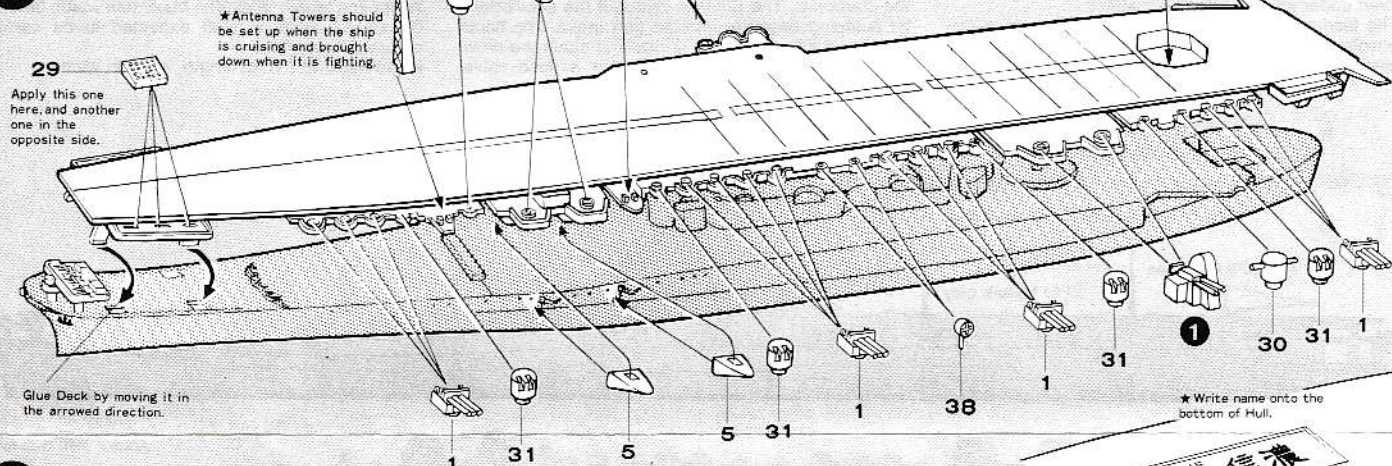
8 Construction of Deck



8 Construction of Deck



9 Construction of Hull (1)



10 Construction of Hull (2)

