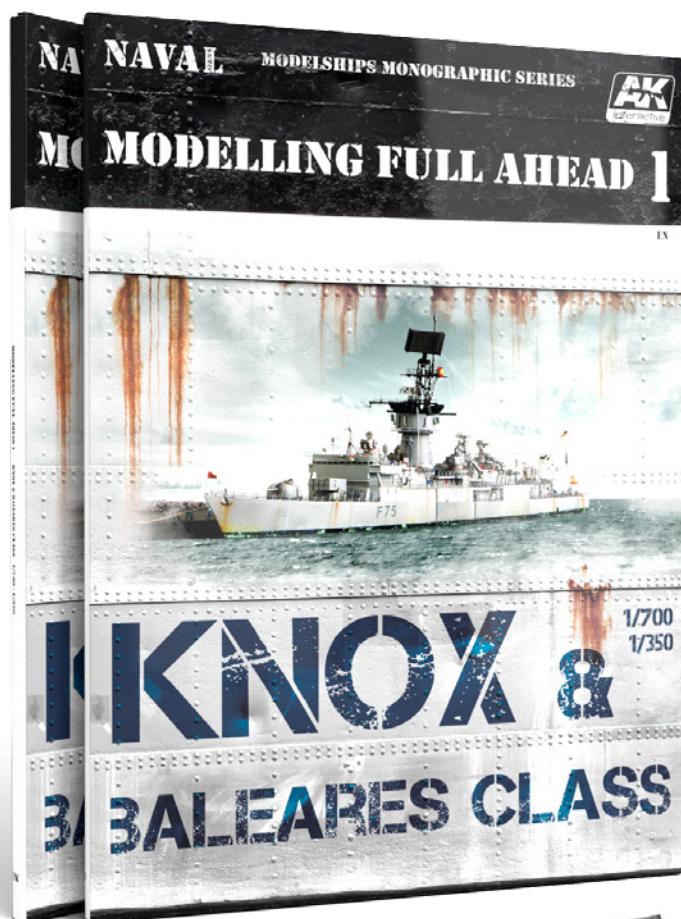


## MODELLING FULL AHEAD 1 KNOX & BALEARES CLASS

80 pages. High quality print.



Modelling Full Ahead is a new series of short books about naval modelling. The aim is to concentrate on a specific ship in depth. From pictures showing all the angles of the ship, to the model kits you can use and, of course, a detailed step by step on how to transform your modelship in an outstanding artwork. For this first issue Fran Romero, wellknown naval modelling master, with the collaboration of the italian modeller Luciano Rizzato, will guide us through the difficult but exciting way of modelling a Knox / Baleares Class frigate. Follow Fran and Luciano in their journey around the Knox/Baleares Class, from standard kits to 4 outstanding models, with different levels of weathering, and learn in an easy and practical way their master modelling techniques. A book from modellers for modellers, a 'must' have to improve your naval modelling skills.



SAMPLE 1

**Cannon 5 inch/54 MK 42**

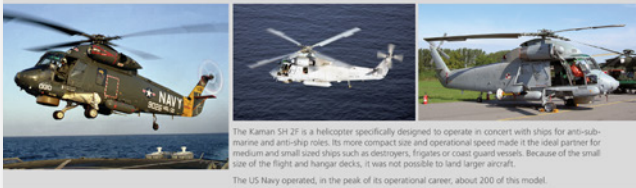
The 127 mm naval gun assembly was developed by the US Navy in the 50's to remedy the need for a greater range and faster rate of fire. The control of the gun could be remote or localized inside the assembly itself.

The rate of fire was 40 rounds per minute with an initial velocity of the projectile of 800 m / sec and a range of 23 Km. Various deficiencies found during the Korean War advised a decrease in the rate of fire to 24 rounds per minute.

Although initially the use of this weapon was intended for dual air / surface but subsequent system updates were designed favoring a mainly surface defense role because of the introduction of better anti-aircraft defense systems and its uncertain effectiveness for this role.



**KAMAN SH-2F Seasprite helicopter**



The Kaman SH-2F is a helicopter specifically designed to operate in concert with ships for anti-submarine and anti-ship roles. Its more compact size and operational speed made it the ideal partner for medium and small sized ships such as destroyers, frigates or coast guard vessels. Because of the small size of the flight and hangar decks, it was not possible to land larger aircraft.

The US Navy operated, in the peak of its operational career, about 200 of this model.

**Phalanx CIWS**

This is a US proximity defense system manufactured and developed by General Dynamics. The system is composed of two antennas for locating and targeting used in conjunction with a Vulcan 20mm 6 rotating tube cannon. Its main task is close defense against air targets and anti-ship missiles. With a rate of fire of around 3000-4500 rounds per minute, this high rate and the use of depleted uranium piercing ammunition, made this system one of the best in its class.

This system is fully self-contained and has been upgraded several times allowing installation on any kind of platform. So these are the reasons for its fact inclusion in almost all classes of ships of the US Navy in the 80's. There was even a land version developed.



**2 SPANISH KNOX FRIGATES BALEARES CLASS**

TEXT: JOSÉ ALCALDE  
PHOTO: GUILLERMO MARTÍNEZ BAZ

The acquisition of the Baleares class frigates was a significant qualitative change for the Spanish Navy. For the first time in its history, the Spanish Navy had a real multi-mission ship equipped with anti-aircraft missiles and capabilities for anti-submarine warfare. The presence of these frigates also involved the incorporation of new operative procedures that raised our Navy to the level of other naval forces of our environment. However, the acquisition of these vessels was not free of difficulties, mainly due to the prevailing political regime in Spain in those years. However, these drawbacks were eventually very beneficial for our fleet of war because in order to face them, a technical and industrial base was created that, after some time, led to acquire one of the world's best multi-mission frigates, the Alvaro de Bazan F-100 Class.



**2 1. GENESIS OF A PROJECT**

In the 1960's, the Spanish Armada was an outdated force with null oceanic projection. Many units were re-manufactured old Spanish Civil War ships and five WW2 veteran Fletcher Class Destroyers obtained via American Aid. The arrival of the five destroyers from the FRAM program, equipped with anti-submarine ASROC weapons systems were just a patch and not enough to solve all the shortcomings of the Armada.



SAMPLE 2

The most famous naval conflict in the 80's, the Falklands war, involved an overhaul of the concepts existing so far on naval combat and projection of modern and very expensive warships. The anti-ship missile became the ultimate ship destroyer weapon.



The ultra-modern Royal Navy, who was about to suffer a colossal setback against the antiquated but fierce Argentinian Air Force. The Spanish Armada is no stranger to the new currents after that war, so in the years after the Falklands war, the Baleares class ships were to be equipped with two MIM-103A point defense systems and eight mounts, two of which were quadruple mounts for Harpoon anti-ship missiles. Simultaneously, the A19 torpedos tubes disappeared because they were considered obsolete.

The presence of these frigates in the Persian Gulf and the former Yugoslavia conflicts in surveillance and control roles show us vessels operating in full swing. The Baleares class ships were considered the most densely armed among the other frigates in its class. A 127mm cannon, four 12.7mm heavy machine guns, two Meroka positions, Standard anti-aircraft missiles (16 missiles), Harpoon anti-ship missiles (8 missiles), ASROC (8 launchers), and two double torpedo tubes.

The Baleares class ships were excellent escort ships, a product of the Cold War. They were also the first truly modern units of the Spanish Navy and they laid the way for the next generation, the Santa Maria class Oliver Hazard Perry as first line fleet units. The last five of the Baleares units were taken down from Spanish Armada lists in 2009.



**2 TECHNICAL SPECIFICATIONS OF SPANISH KNOX CLASS SHIPS**



JOSÉ ALCALDE, FRAN ROMERO  
PHOTO: GUILLERMO MARTÍNEZ BAZ

Certainly, the view of such ships while sailing turns out to be the most rewarding for the viewer, however, we must focus on electronic and combat equipment, which will tell us much more, not only about the concept of the ship, but when it was created along with any changes, or better yet, additions the ships received keeping with the same rhythm of the birth of technological improvements on the field of naval warfare.

Before any other consideration, we should remember the missions these destroyer escorts were designed for. They were later redefined as frigates, the name they still bear today. Discussion of the Knox class is talking about a type of oceanic escort ship with a specific anti-submarine vocation, and easy to build in large numbers. Forty-six units were used by the US Navy and five in the Spanish Armada.

The economy of its design led to a kind of vessel on a single axis, which would be its eternal penance throughout its operational life. The "Bismark Effect" had not been forgotten yet and the thought of receiving shaft damage involved the almost certain loss of the frigate unless it could be towed right away. This did not seem to bother the designers because the successor of the Knox / Baleares, the Perry Class, also had just one axis but with two extra propellers for support in case of an emergency.



SAMPLE 3

**4** SPANISH KNOX/  
BALEARES CLASS  
1/700 AFV



AUTHOR: FRAN ROMERO  
TEXT & PHOTOS: FRAN ROMERO

As a starting point for this article I will take three 1/700 scale models of this same ship, an injected plastic Knox class frigate from AFV brand. From the many options of nationalities to choose from, I opted for the Spanish Armada because of personal reasons, so I was forced to make numerous reforms in its structure and configuration.

We built the same three models in order to try to show you three different paint finishes on the same ship so people can choose what kind of painting techniques are interesting for applying in your own models, keeping in mind what kind of diorama or vignette you want to build.



To begin this article, first we'll show the modifications performed. The most important one was the suppression of the helicopter hangar and the construction of the structure located in that place instead of the hangar. We can opt for building a whole new piece or use the original supplied with the kit. Since we are going to build 3 twin models, both options were chosen, as can be seen in the pictures.

We cut the bridge high structure just behind the Mack and extended the deck on both sides using very thin sheet of Evergreen, thus enabling the two lateral platforms where two CIWS Meroka will be located.

Another small reform is seen on the bow where the breakwater balcony of the original model was removed and replaced with railings.

In the stern, the original helicopter deck is removed, keeping in place only the structure width, aft of which the Standard missile launcher will be located.

SAMPLE 4

RUST

For an intermediate weathering finish we will add some light rust streaks. We will use the AK-INTERACTIVE Rust Streaks AK013 and we still don't want an excessively worn effect.



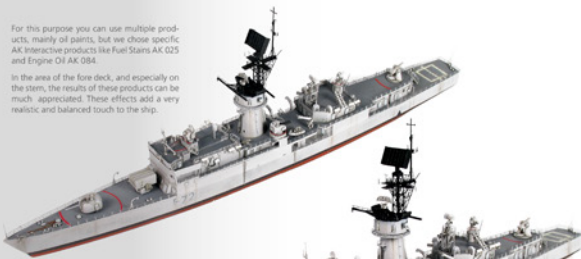
These streaks will be placed in the areas where rust usually accumulates like from worn and chipped paint, bollards, davits, edges, stern gates, etc.

If we don't want our weathering effects to be the protagonist on our model more than the model itself, we must be very careful with these kinds of effects being careful not to overdo them, especially in such a small scale as 1/700 or 1/600.



DECK

Here we can see wear and tear on a deck, especially in areas most prone to get dirty like the bow deck and anchor chain, the stern deck where the maneuvers with helicopters are performed, the base of string spools, or areas near the 800 bolts or davits, areas where grease residue appears.



For this purpose you can use multiple products, mainly oil paints, but we chose specific AK Interactive products like Fuel Stains AK 025 and Engine Oil AK 084.

In the area of the fore deck, and especially on the stern, the results of these products can be much appreciated. These effects add a very realistic and balanced touch to the ship.