# WAVE HAWK

## Naval Tactical Information Management and Display System

IN SERVICE

CHELTON
Defence Communications
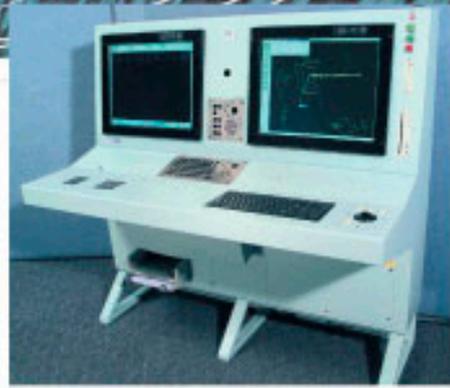
**WaveHawk** is a naval tactical information management and display system, drawing upon direct experience from the Royal Navy and the needs of other user groups. **WaveHawk** is constantly being developed for improved data flow, greater sensor integration and reduced operator workload. These improvements are consistent with upgrades to legacy platforms and address the needs of modern ships with greater capability and smaller crews.

## System Overview

The **WaveHawk** range can be specified to support navigation requirements (ECDIS), pure tactical systems (eg tactical plotting table), or a combined navigation/tactical system (WECDIS).

The current system is able to accept chart, mapping and tactical data from an increased number of sources and in many different data formats. The design takes into account the need to improve the flow of data across land, air and sea armed forces, and to support multinational operations by meeting interoperability requirements.

**WaveHawk** has been designed as a flexible solution to provide the command view within the naval operations environment. **WaveHawk** works side-by-side with command and control systems, providing a specialised capability that enables intuitive management, manipulation and display of tactical information.

**WaveHawk** normally occupies a prominent position in the command centre, providing the focal point for obtaining the current view of the tactical information that forms the local or wide area plot

The system has a number of serial interface ports that can be configured to accept information from the ship's sub-systems, normally in the form of track information from radar, sonar etc. This is displayed together with the ship's own data on a geographical backdrop, which presents positions based on the selected projection and co-ordinate system.

It is the combination of the system's unique display manipulation capabilities and the intuitive HCI (Human-Computer Interface) that permits the generation of tactical information views, which provide the ability to create a clear command insight into the collated data set.
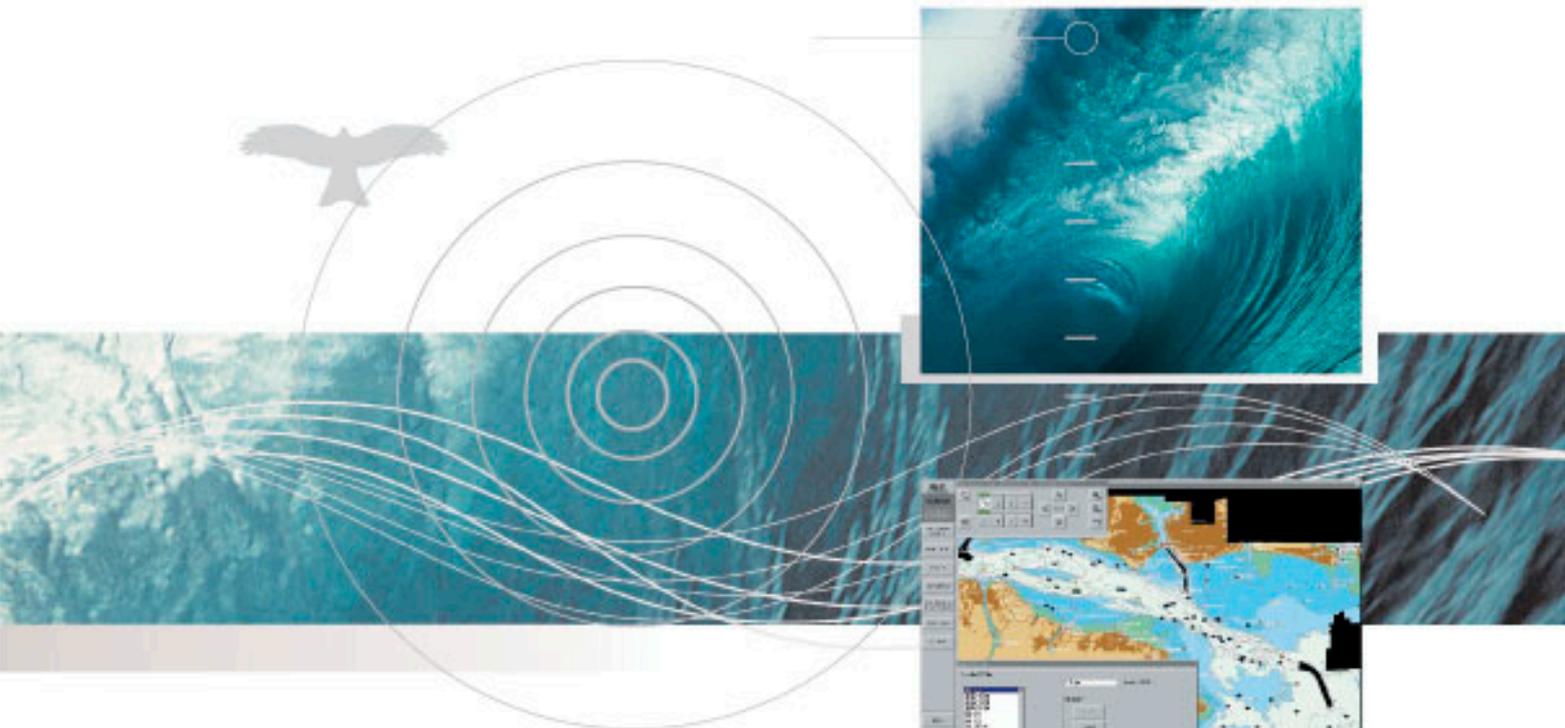
**WaveHawk** provides the perfect means of aiding command decisions in both wartime and peacetime operations.

As well as the normal real-time operational scenario, **WaveHawk** can be used to plan operations, monitor Economic Zone Activity and co-ordinate search and rescue operations.

# Capabilities

## Features

> Supports raster images (including UKHO ARCS)
> Supports vector images (including S57 data and Additional Military Layers)
> The WECDIS variant meets the requirements of NATO standard STANAG 4564
> Data assigned to multiple layers for ease of display and information management
> Built in data log - supports extended missions with a replay facility
> Special functions, which include Man Overboard, Relative Velocity Tools and Weapon Danger Zones

## Data Formats

The **WaveHawk** system provides a means of collating and displaying data to assist in command decisions. In order to achieve this task, the system receives and displays dynamic data autonomously.

The system is designed to receive data in a number of internationally recognised formats and has flexible interface software to enable bespoke interface modules to be produced for proprietary formats without major or expensive reworking of the core software.

## System Interfaces

The standard system is provided with a number of external interface ports for use by ship sub-systems for data input. All systems have two RS232 serial ports available, which can be complemented by additional ports configurable to other electrical standards.

The system can also interface with other equipment via a Local Area Network (LAN), and includes a parallel port to support printing or read/write devices.

## User Interfaces

Users are provided with a touch screen, keyboard and cursor control interface as standard. The Command screen is normally operated by a dedicated 'hot key' membrane, allowing the command view to be manipulated independently of the Operator view. Function keys can be customised to suit specific requirements.

## Installation and Support

Our aim is to ensure that our clients have maximum availability of our system and its operational benefits. Through our training and project teams, we develop a close relationship with our clients, and operate a programme of full support from installation through to acceptance into service.

We offer a full installation capability, as well as instructions, assistance, training and guidance as required. Our procedures support the formal setting to work, harbour acceptance, and sea trials normally associated with naval systems, and the **WaveHawk** system can be supplied in several different physical configurations to suit new build and upgrade programmes. The main criteria driving the system configuration is the display requirement. **WaveHawk** supports a large number of display types from 15.4" LCD through to 42" plasma screens. The systems may be configured as either horizontal plotting tables or vertical consoles.

We believe that equipment should maintain an operational benefit throughout
its life cycle. To achieve this, **WaveHawk** has been designed to accommodate incremental upgrades, ensuring it can change to meet new requirements, and prevent the system from becoming obsolete during its service life.