ULTRA

# Sea Searcher™ Active and Passive Hull-Mount Sonar

Ultra is the sole supplier of hull-mounted sonars to the UK's Royal Navy warship fleet

## Key features

- Active and passive ASW
- Omni and sector (north and ship stabilised) transmissions
- Live, replay and training modes
- Automatic torpedo detection with low false alarm rate
- High source level, wide bandwidth, high dynamic range
- Mine and obstacle avoidance mode
- Automatic mammal detection and classification

## Overview

Ultra's Sea Searcher™ is a family of HMS that provides the latest innovation in Anti-Submarine Warfare (ASW). Sea Searcher™ forms part of Ultra's flexible Integrated Sonar System (ISS) – an adaptable system that can be configured to meet individual customer and platform requirements.

Sea Searcher™ is a medium frequency hull mounted sonar, that provides active and passive surveillance and classification capabilities in a broad range of environmental conditions. It is capable of omni or sector transmission and can also provide automatic torpedo classification with low false alarm rate, mine and obstacle avoidance, underwater communications and optional automatic marine mammal detection.

Performance prediction features and an intuitive human computer interface optimises information gathering for faster and more efficient decision-making in a broad range of operational situations.

ULTRA

# Technical Specification

The outboard Digital Array Module design reduces inboard footprint and complexity, increasing reliability and availability. Inboard, the system uses a flexible Ethernet network to connect the processing, sonar console, combat management and navigation system interfaces, data recorder and digital array.

The Sea Searcher™ HMS has been selected for the Royal Navy's Type 23 and Type 26 frigates, the Royal Australian Navy's Hunter Class and Canadian Surface Combatant.

Sea Searcher™ supports both bow and keel mounted configurations and can be fitted within new or existing domes.

The processing software uses an open systems architecture and publish/subscribe inter-process communications, permitting insertion of third-party applications and optional hosting on alternative processing hardware platforms, such as Shared Computing Environments.

| Outboard | HMS-2210 | HMS-1810 | HMS-1606 |
|---|---|---|---|
| Transducers | 440 | 360 | 192 |
| Array size (D x H) | 1.64m x 1.44m | 1.41m x 1.44m | 1.24m x 0.92m |
| Array frame mount height | 1.76m | 1.65m | 1.10m |
| Total weight | 5050kg | 3600kg | 2012kg |

| Inboard | Weight | Height | Width | Depth |
|---|---|---|---|---|
| Processor cabinet | 530kg | 1.70m | 0.60m | 0.90m |
| Remote panel | 8kg | 0.15kg | 0.30m | 0.31m |

| Sonar Characteristics | |
|---|---|
| Capabilities | Active and Passive ASW<br>Mine & Obstacle Avoidance Sonar<br>Integrated Underwater Communications<br>Automatic Torpedo Detection, Classification & Localisation<br>Marine Mammal Detection & Classification (optional)<br>Record & Replay<br>Built-in Training Simulator |
| Active operating frequency | 5kHz – >12kHz |
| Active transmit sectors | 360° or operator selectable sector (north or ship stabilised) |
| Active waveforms | CW, FM, combined CW & FM |
| Active centre frequency | 3 x centre frequencies, operator selectable |
| Active ping lengths | 1/16th – 2 seconds |
| Range scale | 2 - 72 Kyds |
| Passive operating frequency | 2 kHz – 8 kHz |
| Passive processing | Broadband, Narrowband, Transient, DEMON, Acoustic Intercept |

**Ultra Maritime**
+44 (0) 1628 530 000
maritime@ultra-electronics.com
**ultra.group**