

# VITAVOX

**British Defence Manufacturer of**  
**Military and Naval Loudspeakers**  
**Microphones, Headsets and Handsets**  
**Tactical Communications and Intercom Systems**



(a division of Secomak Ltd)



## *Vitavox Corporate Profile*

**For over 80 years Vitavox (a division of Secomak Ltd) has been the leading UK defence manufacturer of naval loudspeakers, handsets and microphones. Vitavox supplies the UK MoD and Ministries of Defence Worldwide with high specification audio equipment that is specifically manufactured for use in damaging and hazardous operational environments.**

For example Vitavox naval loudspeakers are renowned for their durability and reflect our understanding of the need for minimal through life cost. The mean time between repair for our above deck loudspeakers is ten years, a figure which outshines our competitors by a factor of five.

Vitavox was founded by Len Young in 1931. He was an electrician specialising in wireless who volunteered for service in the Navy. During his time at sea he realised the importance of the on board internal communications and on return to dry land, he set about producing products that would meet the exacting demands of the maritime environment, specifically warships.

Since that time Vitavox has confirmed itself as a supplier of highly specialised naval products designed to satisfy the most demanding of locations, conditions and customers.

In 1988 Vitavox, now based in Elstree UK, became a subsidiary of Secomak Ltd, the industry leader in air movement technologies. Since then we have expanded our product range into the land arena. Vitavox now manufactures both land and naval military specification communication systems and headsets.

At Vitavox our aim is to build upon 80 years of the manufacture and delivery of world class, battle proven, sound communications systems and components.



### LOUDHAILER/MAIN BROADCAST LOUDSPEAKER UNIT

An extremely rugged unit, water and shockproof to IP67 & 70G respectively. The unit has been proven through many years of use in naval loud hailer and on board internal and external broadcast systems. The design has also been utilised in the Vitavox Outacom System (122dB to 200m) having been fully type tested to withstand repeated close proximity explosions, heat and blasts, the ideal unit to mount outside any armoured platform.

Dimensions/Weight: 268mm x 195mm & 8kg



### 3 INCH, 4 WATT RUGGED LOUDSPEAKER UNITS

Designed specifically for ships, these loudspeakers are current British Royal Navy stock items. Intended for use both above and below deck where communication must be assured in noisy and hazardous areas such as in the vicinity of propulsion machinery and helicopter loading bays. Type tested to IP67 and 70G of shock the units may be also be supplied as 8 or 15 ohm impedances, in standard/lightweight and low magnetic versions.

Dimensions/Weight: 84mm x 45mm x 39mm & 375g/270g



### TYPE B60 RUGGED, WATERTIGHT MICROPHONE

The B60 is a completely watertight and ruggedised torch shaped microphone supplied for use where handling in exposed conditions and an intrinsically safe environment is required. Constructed with an inner casing of aluminium alloy die-cast sections and enclosed in a removable rubber cover. The microphone can withstand very heavy handling and complete saltwater immersion. It is also fully intrinsically safe and ATEX/SIRA Certified.

Dimensions/Weight: 70mm x 200mm & 623 grams



### TYPE B90 RUGGED, WATERTIGHT/NOISE CANCELLING MICROPHONE

The B90 noise cancelling (VQ13375) handheld microphone has a press to talk switch and is fully proofed against shock and vibration. The water tight version to IP67 (VQ13373) is not available with noise cancelling. Both versions are specifically designed to accommodate the different types of microphone insert that may be encountered in harsh military and naval operational environments. With a 2m curly or 8m straight cable, finished in a rubber coated, moulded black 'Noryl 738' nylon casing.

Dimensions/Weight: 284 grams



### SUBMARINE WATER & PRESSURE-TIGHT LOUDSPEAKER/MICROPHONE

Pressure proof to 69 Bar (703m depth), these loudspeakers are designed specifically for use on submarines and are current British Royal Navy stock items. Employed in the outside submerged areas such as the fin for helm/command communications, they are also employed in diver or escape chamber intercom systems (see Vitavox LockCom). Configurable to 1W, 2W or 4W the fully type tested unit exceeds IP68 and the machined nickel aluminium bronze construction ensures a long service life..

Dimensions/Weight: 356mm x 368mm x 264mm & 41kg



### TYPE B80 MICROPHONE

The bracket mounted watertight B80 microphone conforms to all shock and vibration requirements as per DEF-133, Class N1, and SES-5. The on/off switch operates a spare set of contacts for remote control applications and may be internally set to biased or unbiased modes. Approved as intrinsically safe to ATEX EN13980 94/9/EC for use in flammable atmospheres (Groups 2a, 2c, 2d and 2e), there is also a non ATEX approved version (VT07240).

Dimensions/Weight: 175mm x 76mm x 62mm & 680 grams



### EMERGENCY TELEPHONE HANDSET

Multiple handsets may be connected via a dual copper wire to form a stand alone, non-interfering, communication channel. The emergency telephone system requires no power from any of the vessels' systems. Power is provided by the internal PP3 9V battery included in each handset. Used to provide direct communication between strategic positions on a ship or submarine, they can also be employed where lines are not already wired, for field use or 'on the fly' communications.

Dimensions/Weight: 230mm x 57mm x 90mm & 380 grams



### VITAVIC 401 - CENTRAL COMMUNICATION UNIT (CCU)

The Central Communications Unit (CCU) is the heart of the intercom and is able to operate as a completely independent system (2 radios & 2 crew as standard on the one box) with no additional interconnecting cables required. Power supply conditioning and protection plus Built in Test (BIT) and software processing are contained in the CCU. The CCU will support any configuration of up to 6 Combat Net Radios (CNR) and 21 users.



### VITAVIC 401A - CENTRAL COMMUNICATION UNIT (CCU)

The VITAVIC 401A is an alternative unit designed to be fully programmable and allow platform configuration of an intercom where the requirement is to include up to four CNR, warning alert signals originating from the Battlefield Management System (BMS) - or any other vehicular digital system and an ETHERNET port that may be required in the basic intercom configuration.



### VITAVIC 402 - BASIC COMMUNICATION UNIT (BCU)

The VITAVIC 402 BCU is connected via any of the 3 standard digital communication ports located on the CCU (401 or 401A). A standard BCU provides for the connection of an additional 2 crew members to the system with full individual access to Intercom and CNR as required.



### VITAVIC 405 - INTERCOM COMMUNICATION UNIT (ICU)

Each ICU can connect up to three crewmembers to intercom system (both VITAVIC 401/401A based systems). This unit provides connected crewmembers with intercom access with no CNR access. Warning and alert signals are still generated and received by all crew. Up to three ICUs can be used in one intercom system.



### VITAVIC 407 - LOUDSPEAKER UNIT (LU)

The VITAVIC 407 Tactical Loudspeaker Unit is designed to provide loud reproduction of selected signals (intercom, onboard combat net radios, all together). The loudspeaker is connected either to audio port of VITAVIC 401A or can be connected to all intercom system units via the headset connector.



### VITAVIC 409 - PERSONAL COMMUNICATION INTERFACE (PCI)

The VITAVIC 409 PCI may be fixed to a tactical vest and facilitates continuous support to the soldier when dismounted. The PCI creates an integrated interface between a personal tactical headset, intercom system, personal role/soldier and handheld tactical radio. The PCI has a built in loudspeaker microphone should the attached headset be disconnected/discarded.



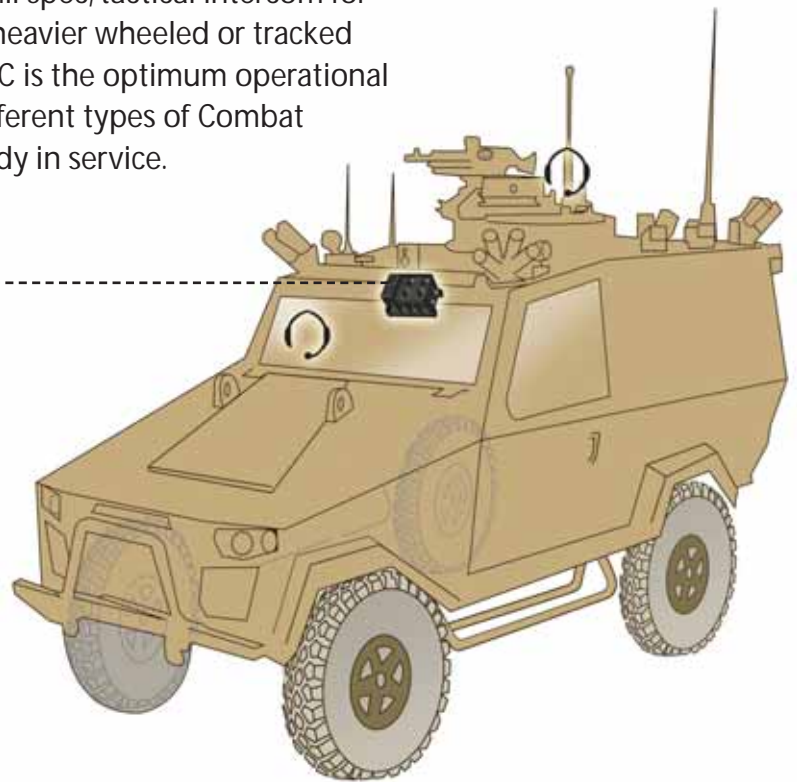
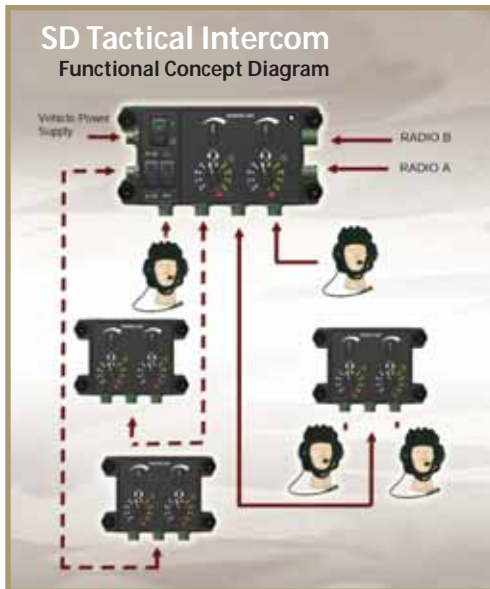
### ACTIVE NOISE REDUCTION HEADSETS (ANR)

VITAVIC 400 will automatically support any headset connected to the system via the CCU or BCU. A wide range of VITAVIC headsets may be supplied or any existing, in service units can be easily adapted for use in the intercom.

The system will support a wide range of headsets, from analogue single ear to more robust passive versions or ANR with full talk through capability for situational awareness as required.

# Vitavic 400 SD Tactical Intercom

**Vitavic 400** is a fully software defined, mil spec, tactical intercom for all military, paramilitary light strike and heavier wheeled or tracked armoured vehicles and platforms. VITAVIC is the optimum operational choice to be deployed where several different types of Combat Net Radios or tactical headsets are already in service.



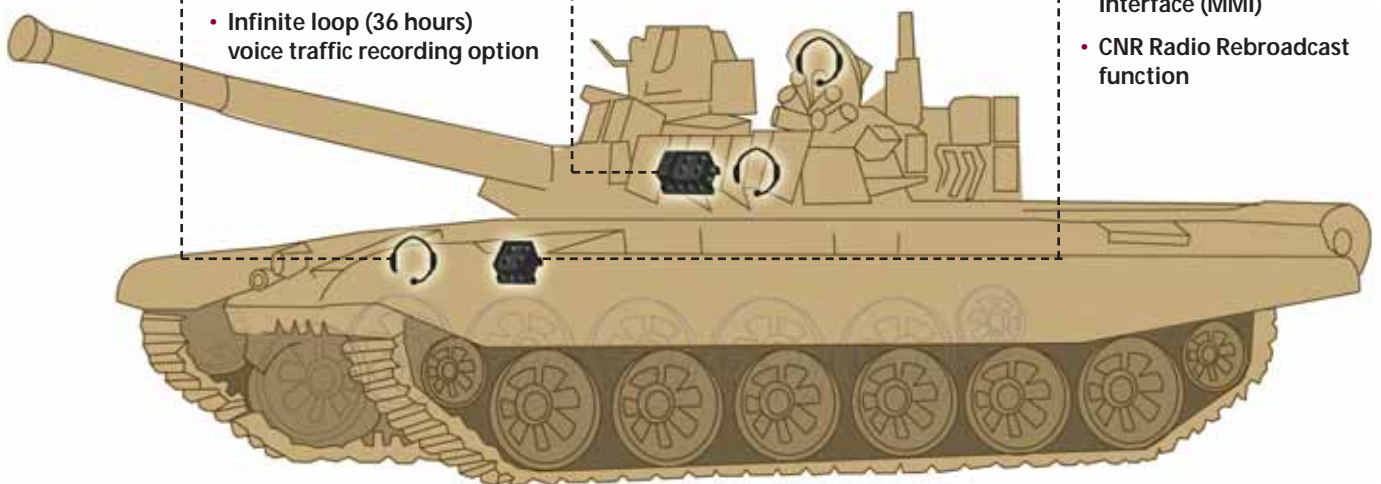
- Selectable PTT or VOX audio operation
- Fully ANR compatible
- Existing, in service user headsets supported
- Infinite loop (36 hours) voice traffic recording option



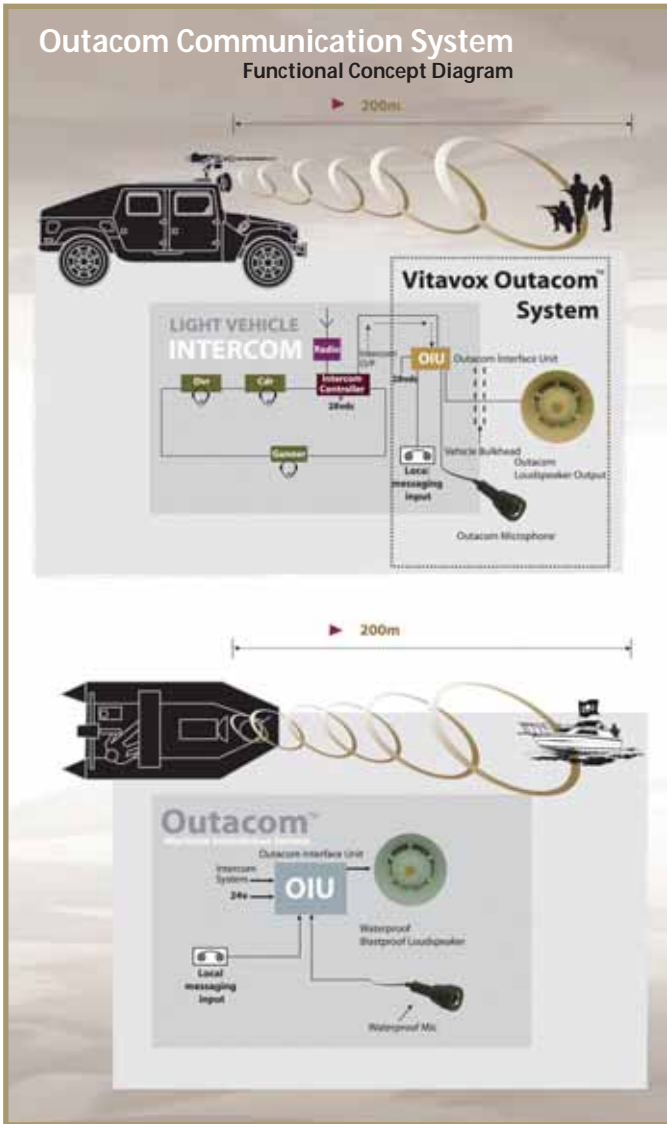
- Tank upgrade without lifting turret
- Single box is a stand alone system
- Truly Software Defined (SD) for in the field upgradeability



- Full individual intercom and CNR access
- Individual working and monitoring CNR selection
- Intuitive Man Machine Interface (MMI)
- CNR Radio Rebroadcast function



## Outacom Communication System Functional Concept Diagram



# Outacom

## Less than Lethal Effect Technology

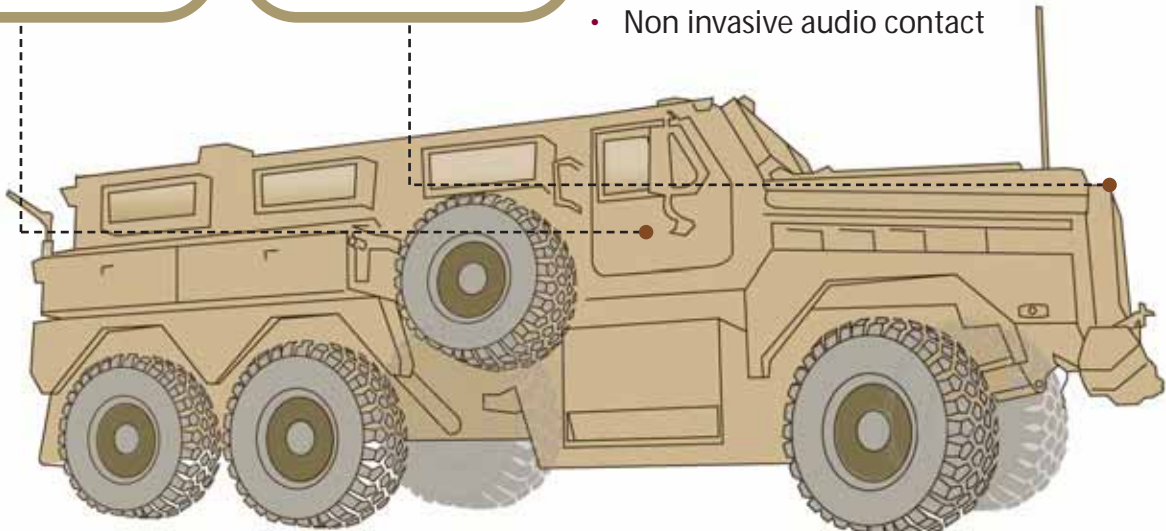
The **Outacom** communications system is an extremely rugged, powerful, military proven, loudspeaker and multiple audio input system. It integrates with all standard internal communication systems and offers an easily-implemented tactical battlefield communications innovation allowing the user a less than lethal option to be employed when encountering possible threats in the local area.

## Applications

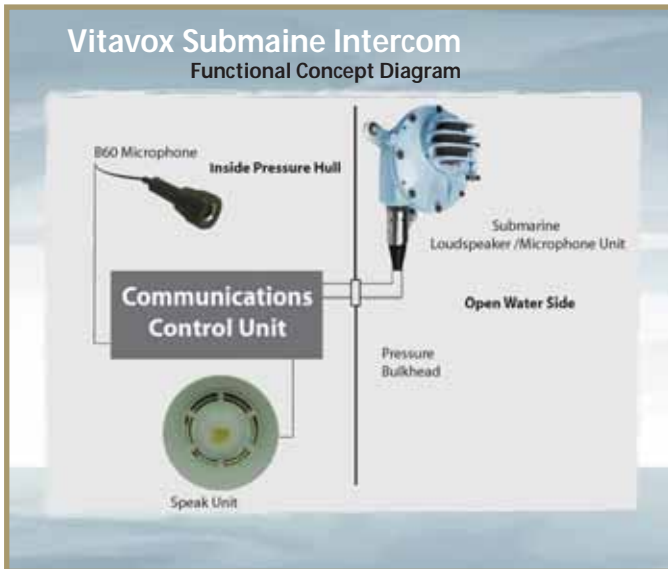
- First Contact Communications
- Anti-Piracy
- Ship to Ship
- PSYOPS
- Coast Guard
- Less-than-Lethal option than use of force

## Functionality

- First Contact Communications
- Local External Voice Communications
- Intercom integrated or stand alone systems (plug & play)
- Intercom Communications Microphone & recorded input (PSYOPS)
- MIL-STD-810, Waterproof, shock proof, blast proof to 70g
- Loudspeaker up to 200 metres direct voice contact
- Non invasive audio contact



Vitavox Submaine Intercom  
Functional Concept Diagram



## Functionalities and Applications

- Bespoke design for dive chamber use
- Proven, in service pressure and broadcast units
- Hands free operation on 'wet side'
- Recordable if required
- Integrated control from 'dry side'
- Can be fully integrated or 'stand alone' with on board communications if required
- Full Military & Naval Specification
  - blast water & shockproof units

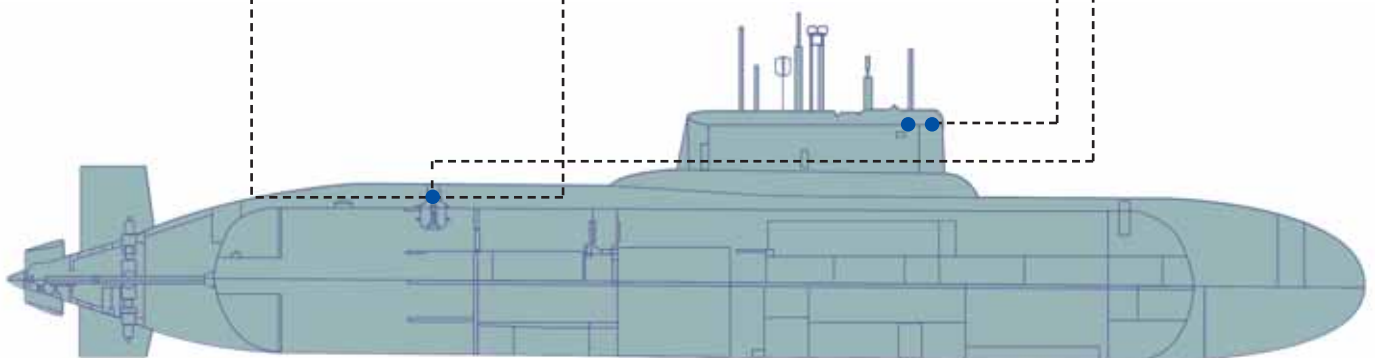
# LockCom

## Submarine Dive Chamber Intercom System

**LockCom** is pressure proof intercom system enabling embarking and disembarking divers to contact the on board control room.

The **LockCom** System consists of a pressure proof (69bar) loudspeaker/ microphone on the 'wet side' and a waterproof broadcast loudspeaker, microphone complete with a communications control unit on the 'dry side'.

The **Vitavox LockCom** is easy to use, requires minimal training and has low through life costs. LockCom will last the full life of the boat with minimal maintenance requirements.





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