

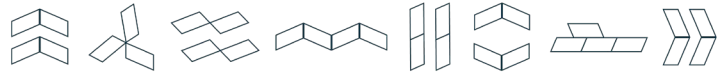
Diver Helium Speech Unscrambler Systems

Highest speech intelligibility for heliox saturation divers

Fully digital frequency domain unscrambler completely models effects of high-pressure helium environment on the vocal tract.

A modular system ensures that the system is extremely flexible, reconfigurable, and easy to maintain. The tender control allows setting of wet/dry diver communication groups, entertainment, telephone connection and recording.

Unscrambled speech intelligibility level is close to 100% at standard diving depths and better than 91% at 450 m.



Diver Helium Speech **Unscrambler** System

Highest speech intelligibility for heliox saturation divers



Advantages

- Modular Construction for easy reconfiguration, expansion, and spares holding
- Highest possible intelligibility
- Full switching capability
- Group communication facilities
- No chamber or bell active electronics
- Standard 4-wire system
- Communicate between chambers at different depths
- Interface to telephone system
- Interface to emergency acoustic bell comms

Modules Available

3500 DSP Unscrambler	The "brains" of the system using a high specification DSP processor. The module allowing entry of the diving depth and selection of the group to be unscrambled.
3501 Tender	The tender module effectively removes the need for one off switch panels and allows the tender to select which groups can be talked to and listened to. A press to talk for each group and entertainment are also available, along with a headset connection and volume up and down control. A remote speaker is available via the rear panel connector.
3514 Wireless Tender 3515 Wireless Headset Interface	These modules allow wireless headsets to be used by the supervisor. In conjunction with the Imenco Nautronix wireless headset and belt pack allowing wireless communications for the user. The Wireless Tender module also supports wired headsets as a back up.
3502 Power Supply Unit	UPS module provides universal mains input, or 12V DC, and includes battery back-up for a minimum of 1 hour's operation from the internal batteries. Indicators are available for power (charge) battery and low battery warning.
3503 Dry Diver	The standard diver module, providing full 4 wire comms, group and entertainment select and including unique pick-up cancelling circuitry, which nullifies any electrical pick-up between the diver module. Separate volume up and down with limit indicator are provided as standard. A 2-wire/4-wire switchover allows the module to be used for comms boxes using a press to talk switch.
3504 Wet Diver	Designed for the excursion divers, and as well as providing group select separate volume up and down and pick-up cancelling it has built in breathing noise reduction. An emergency 4-wire/2-wire switchover allows communications to be maintained in the event of a microphone failure.
3505 Telephone	Allows a standard telephone line to be connected to the system and assigned to a group, thus allowing a private conversation between divers and the outside world.
3506 Record	Recording of all communications is provided via the 3506-module allowing 2 separate outputs and an additional auxiliary monitoring output.
3507 Entertainment	Up to 3 external audio sources can be input on separate channels with individual volume and enable control. Selection of the channels is available on dry diver and tender modules.
3508 Emergency Acoustic Communications	Allows a Nautronix 3136B Emergency Acoustic communications system surface unit to be fully interfaced to the DSP Unscrambler such that uplink speech is fully unscrambled, and downlink speech is channelled direct from the Supervisor's headset mic via the press to talk switch.
3511 Interface	Allows configuration of priorities between interconnected systems by specifying which groups are solely controlled from that unit and which from other units in the event of a problem.
3512 Surface Communication	Allows an interface between a surface location such as the deck crane or bridge and any other selected group. Separate volume knobs for uplink and downlink with limit indicator are provided as standard.