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HeliCom™ Hyperbaric Lifeboat Helium Speech Unscrambler

The HLB HSU is designed specifically for deployment within a hyperbaric lifeboat. It allows the sat supervisor in the HLB to have clear communication with sat control, the HLB crew and the divers. It is available in a rack mount version and a portable version housed in a protective environmental case.

Operating Modes

- Helium speech communications with the pressurised occupants of the HLB rescue chamber on channel 3 using standard HLB comms boxes in the rescue chamber (equipped with loudspeaker, microphone with PTT switch and headset and boom microphone).
- Normal four wire communications with the coxswain and crew of the lifeboat on channel 2 (using standard HLB comms boxes with loudspeaker, microphone with PTT switch and headset and boom microphone).
- Normal four wire communications with sat control on channel 1 for diver embarkation and launch preparation. A waterproof bulkhead connector and plug on the lifeboat hull disconnects the lifeboat for launching.

A front panel loudspeaker allows the divers' speech to be audible to the sat supervisor independently of his headset in all modes of operation. An on/off switch allows the loudspeaker to be switched off as required.

DSP Helium Speech Unscrambler Circuit

Uplink signals from the HLB rescue chamber occupants on Channel 3 are decoded to the

selected gas and environmental settings by a digital signal processing (DSP) circuit. An LCD display is provided for monitoring helium speech decoding settings. Adjusting settings is easily accomplished by means of a front panel depth setting potentiometer calibrated 0 msw to 400 msw in 50 msw increments and a user-friendly keypad for PPO₂, pitch reduction and temperature settings.

An unscrambler on/off switch allows the DSP helium speech unscrambler circuit to be bypassed when communications are in the air range or when unscrambling is not required.



HeliCom™ Unscrambler inside hyperbaric lifeboat.

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GLOBAL LOCATIONS

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Technical Data

General	Power	110/220 VAC 50/60 Hz
	Power Amplifiers	1 per channel
	Power Output	10 watts per channel
	Frequency Response	300 Hz to 12 kHz
	DSP Unscrambler	Channel 3 only
	Voice Correction Range	0 m to 400 m (0 ft to 1,312 ft)
	Audio Recording	Recording level control with VU display
HLB Helium Speech Unscrambler, Rack Mount Type CO363AX		
Connectors	Lifeboat & Sat Control Channels	4 pin socket P/No EM3008 & 4 pin plug P/No EM3011, rear panel
	HLB Rescue Chamber	10 pin socket P/No EM3009 & 10 pin plug P/No EM30012, rear panel
	Remote PTT	2 pin socket P/No EM3007 & 2 pin plug P/No EM3010, rear panel
	Supervisor Headset	¼" headset socket, front panel
	Recording Output	BNC bulkhead socket, rear panel
Environmental	Operating & Storage	-20°C to +40°C
Dimensions	Height - 19" Sub-rack	H 4U (177.8 mm)
	Width - 19" Sub-rack	W 84HP (426.7 mm)
	Depth	355 mm
	Weight	7.5 kg
HLB Helium Speech Unscrambler in Environmental Enclosure Type CO363AX-E		
Connectors	4 Copex Glands on rear panel for cable installation in the field	
Environmental	Operating & Storage	-20°C to +40°C
Dimensions	Protective Case	19" 4U Enclosure
	Height	500 mm
	Width	520 mm
	Depth	198 mm
	Weight	16.5 kg

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Rack Mount**

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