

World leaders in diving equipment technology

DEFENCE COMMERCIAL



HeliCom[™] Dive Control Helium Speech Unscrambler

HEAD OFFICE

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GLOBAL LOCATIONS

Aberdeen Chertsey Portsmouth Bremen Dubai Cape Town Perth Sydney

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The DC HSU is designed for helium speech communications with three divers and the bell environment.

Operating Modes

Three operating modes offer greater flexibility to meet all bell diving communication requirements:

- Supervisor Round Robin Mode allows duplex hands-free communication between the dive supervisor wearing a headset/boom microphone and all divers. A separate volume control for each diver circuit allows different volume settings for each diver to suit individual hearing and speech characteristics and to compensate for microphone performance.
- Diver Round Robin Mode provides duplex hands-free communication between all divers. Interjection by the dive supervisor to all divers is by means of the PTT All Divers switch, or to individual divers by means of the respective Diver PTT switch. A separate volume control for each diver circuit allows different volume settings for each diver to suit individual hearing and speech characteristics and to compensate for microphone performance.
- Simplex Mode provides simplex diver communication with uplink signal priority.
 The dive supervisor uses a PTT switch for each diver individually or a master PTT switch for all three divers simultaneously.
 Separate volume controls are provided for uplink and downlink signals to suit individual hearing and speech characteristics and to compensate for microphone performance.

A front panel loudspeaker allows the divers' speech to be audible to the dive 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 divers are mixed in an audio mixer before decoding 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.



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Specification

Dimensions

110/220 VAC 50/60 Hz General Power

Power Amplifiers 1 per channel Power Output 10 Watts per channel Frequency Response 300 Hz to 12 kHz

Input Impedance 600 ohms, transformer isolated DSP Unscrambler Common to all 3 diver channels Voice Correction Range 0 m to 400 m (0 ft to 1,312 ft) Recording level control with VU display Audio Recording

4 pin socket P/No EM3008 & 4 pin plug Connectors Divers 1 & 2 P/No EM3011, rear panel

Diver 3 (bellman & bell comms box)

10 pin socket P/No EM3009 & 10 pin plug P/No EM30012, rear panel

Bell Remote PTT 2 pin socket P/No EM3007 & 2 pin plug

P/No EM3010, rear panel Supervisor Headset 1/4" headset socket, front panel

Recording Output BNC bulkhead socket, rear panel

Height - 19" Sub-rack H 4U (177.8 mm) Width - 19" Sub-rack W 84 HP (426.7 mm)

Depth 355 mm Weight 7.5 kg

Environmental Operating & Storage -20°C to +40°C **DEFENCE COMMERCIAL**

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