

Diamond Intercom & Radio Combiner System

Integrating multiple secure onboard radios into one easily navigable system, simplifying complex communications requirements.

Diamond provides crystal-clear voice connectivity between multiple users and onboard radios, both within the same platform as well as to and from other platforms. User-friendly, lightweight, and ergonomic, the system was designed for intuitive single-hand operation under high-speed transit at night, making it the ideal solution for land and maritime patrol craft and vehicles.

Driven by the toughest user requirements in the harshest of environments, Diamond balances intuitive functionality and ease of use with a robust, low-maintenance design. Crew and passengers can be confident of independent access to both secure and non-secure communications, uninterrupted intercom facilities and voice-activated communications. Its modular design and intuitive interface allows for rapid fault-finding and module replacement with no need for complicated and expensive diagnostic equipment.

Key Features

- Designed for gloved, single-handed operation under high-speed transit
- User-specific VOX sensitivity control. User can personalise voice-activated comms at any time
- Designed to DEF STAN 00-035 Environmental Requirements
- Designed to DEF-STAN 59-411 and EN60945:2002 ACI:2008 EMC
- Each Hub can accommodate up to 8 users and 6 radios with an additional 2 configurable digital outputs
- Hubs can be daisy-chained together to increase the number of users on the network
- Lightweight with compact footprint
- Compatible with night vision goggles
- Will remain Lights Out when required
- Headset-agnostic through the use of smart cables
- 8 user-defined audible alarm inputs
- Upgradable to allow for the integration of engine and system alarm, ensuring platform and crew safety



USER NODE



COMBINER HUB

Technical Specifications

General

Audio Interfaces & Processing	High quality, digital audio (300Hz – 8kHz) User-controllable VOX function
Power	9-32 VDC 700 mA @ 12V
Weight (each)	Hub: 2.5 kg User Node: 0.7 kg
Aiding Message Formats	PDM2/3/4/5, PIDS, Synchro 36, 48, 64, 72, 96 kn/rev
Size (W x H x D)	Hub: 220 x 260 x 89mm Node: 100 x 120 x 40mm

Interfacing

Headset	Flexible headset options for different microphones and sensitivities Monaural or binaural options
Radio	Flexible radio input/output allows use of any radio Fully isolated analogue output to radio, audio and PTT lines
Alarm	8 user-definable audible alarms (spoken, tonal, etc.)

Storage & Operating Environment

Operating Temperature	-25°C to 55°C
Storage Temperature	-34°C to 70°C
Sealing	IP66 / IP67 Protected against dust, powerful water jets and temporary immersion in water Tested in accordance with DEF-STAN 00-035 Part 3, Issue 4, Test CL25, Blowing Dust and Blowing Sand 3 CL5
Random Vibration	Tested in accordance with DEF STAN 00-035, Issue 3, Part 3, Test M1 Annex A, Figure A26 + A27 - Light Vehicle - Material on Sponson or Installed in Hull, Tracked Vehicle - High Level Test (Vertical Level Only) Annex A, Figure A29 - Material Deployed in Ships Smaller than Mine Sweepers
Shock	Tested in accordance with DEF-STAN 00-035 Part 3, Issue 4, Test M3, Table 1

User Controls

Control Subsets on User Node	<ul style="list-style-type: none">• Radio Selection• Volume (Min/Max)• VOX Sensitivity (PTT/Open)• Push-To-Talk button (Selected Radio)• Push-To-Talk button (Intercom)• Illumination activation button to check radio selection
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