

# DIAMOND Intercom and Radio Combiner System



Drumgrange has developed a digital intercom and radio combiner system for use on land and maritime platforms. An ideal solution for patrol craft and vehicles, Diamond provides voice connectivity between multiple users and on-board radios and also integrates engine & system alarms to ensure platform and crew safety.

Driven by the toughest user requirements in the harshest of environments, the Diamond system balances intuitive functionality and ease of use with a robust, low-maintenance design. In the most challenging situations, crew members can be confident of independent access to both secure and non-secure communications, uninterrupted intercom facilities and voice-activated comms.

Diamond's 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 single hand operation under high-speed transit
- User-specific VOX sensitivity control. User can personalise voice-activated comms at any time
- Designed to Def Stan 00 35 Environmental Requirements
- Designed to Def Stan 59-41 I and EN60945:2002 ACI:2008 EMC
- Can accommodate up to 8 users and 6 radios with an additional 2 configurable digital outputs
- Clear, reliable communications
- Simple operation/Compact footprint/Lightweight/Low power/Fast, easy maintenance
- Fully isolated for secure and non-secure operation
- Headset agnostic through the use of smart cables
- 8 user-defined audible alarm inputs e.g. engine alarm, engine temperature and low battery warnings



## Technical Specification

General	
Audio Interfaces and Processing:	High quality, digital audio (300Hz – 8kHz). User-controllable VOX function.
Power:	9 - 32 VDC, Max 1500mA @ 12V
Weight (ea):	Hub: 2.5kg User Node: 0.7kg
Size (W x H x D):	Hub: 220mm x 160mm x 89mm User Node: 100mm x 120mm x 40mm

STORAGE / OPERATING ENVIRONMENT	
High Temperature:	Storage: 70°C Operating: 55°C
Low Temperature:	Storage: -34°C Operating: -25°C
Sealing	IP66 / IP67 Protected against dust, powerful water jets and temporary immersion in water Tested in accordance with DEF-STAN 00-35 Part 3, Issue 4, Test CL25, Blowing Dust and Blowing Sand 3 CL5.
Random Vibration:	Tested in accordance with DEF STAN 00-35, 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 00-35 Part 3, Issue 4, Test M3, Table 1

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

User Controls	
Control Subsets on User Node:	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
Radio TX Inhibit.	Single switch places system in radio "listen only" mode.

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