Internal Communication Systems for Maritime Operations
Ensuring safety and efficiency with clear and reliable communications
Challenges of Maritime Operations

Crew personnel on vessels or offshore environments require effective internal communication systems to ensure both staff safety and operational success.

Reliable communication is essential for offshore activities such as coordinating bell dives, the lifting or lowering of ROVs, or alerting and engaging ship-wide personnel in critical procedures. These kinds of demanding responsibilities involving different functional teams require rapid communications and a high level of cooperation in order to get the job done. Inflexible systems and push-to-talk handsets are often not capable to meet these requirements.
Promoting Safety
Highly audible messages are delivered at an ultra-fast, sub-millisecond speed. Noise from the surrounding environment can be blocked out with noise-cancellation capabilities to ensure every instruction or announcement is clearly heard.

Maintaining Privacy
Clear-Com talkback systems are closed-circuit systems that safeguard sensitive and confidential conversations. Multiple line systems provide users with the option of setting up private conversations with individual users on assigned channels and/or calls with different groups of users that have common job functions.

Yielding Efficiency
Crew members need to be well coordinated in order to perform complex jobs with a high degree of intricacy. These types of tasks require a wired and/or wireless communication system that switched on so that they can instantly respond to given instructions at any moment.

Clear-Com Intercom Systems: The Proven Choice for the Job

In an environment when every second counts, your operation requires proven communications systems. For over 40 years, Clear-Com has been considered the industry standard for crew intercommunications.

Clear-Com intercom systems are ideal for private communications, team collaborations and public announcements. In offshore and shipping operations, Clear-Com ensures staff safety, communication security and workflow efficiency.
High Coordination Operations Rely on Clear-Com

For decades, Clear-Com has been widely used in many critical applications as the intercom system of choice for its clarity, reliability and performance. Clear-Com’s basic to advanced wired and wireless systems provide the most options for operations of any size.

Unlike push-to-talk handsets or other two-way communication systems, Clear-Com talkback systems enable large number of users to maintain high-quality, continuous conversations on one or more lines. This guarantees anyone on the line can talk and listen without delay or fear of losing communications.

Simple Group Communications

Clear-Com Encore™ Partyline Systems provide basic, group communication capabilities. These systems are ideal for small to mid-size operations that only require a few positions to have intercom access and a minimal number of group conversations.

Matrix Communications

Eclipse Digital Matrix Systems offer more advanced group and/or direct one-to-one communications. Eclipse systems are perfect for large-scale operations that demand high user capacity, numerous talk positions, flexibility, programmability and functionality.

Wireless Communications

Clear-Com’s portfolio of Wireless Intercom Systems and belt packs provide crew members with the convenience of hands-free communication for complex operations that require users to be mobile. These systems are typically used to augment the wired systems, providing power, flexibility and superb audio quality. Clear-Com carries UHF and license-free wireless systems, designed to be interference free.

Vessels/Ships With Clear-Com Intercom Systems for Crew Communications

- Skandi Arctic
- Dsv Toisa Polaris
- Highland Eagle
- Well Enhancer
- James Cook
- European Supporter
- Acergy Discovery
- Mermaid Endurer
- Grand Princess
- Hugin Explorer
- Toisa Paladin
- Seven Atlantic
- Cs Sovereign
- Rockwater 1
- Wave Sentinel
- Acergy Petrel
- Skandi Salvador
- Oasis Of The Sea
World-Class Vessel Maximizes Well Intervention Collaboration

In well intervention, a vessel's deck mounted Multi Purpose Tower lowers the Subsea Intervention Lubricator to the subsea well while concurrently deploying both ROVs and a diving bell for operations such as the replacement of flow control devices, building pipelines, and laying heavy concrete mats on the seabed. These undertakings require a constant exchange of information and rapid responses from crew members to smoothly coordinate the precise movement of heavy equipment and the vessel. To facilitate this knowledge-sharing, partyline intercom systems are installed in the alternate control room as well as Deck 2 and linked to wired speaker stations which are distributed throughout the vessel's decks.

Challenges and Solutions

- Locating a necessary crew member is difficult when the only form of vessel-wide communication is through a public address system at the ship's bridge. By installing speaker stations on all decks, communications capability is extended throughout the vessel, accelerating decision making.
- Nearby operations and turbulent waters are safety hazards when launching and recovering the diving bell. Clear audio enables the careful deployment of the diving bell.
- Complex procedures, such as moving the vessel or transporting equipment into and out of the sea, call for unified collaboration. Interconnectivity between all crew members enhanced cooperation.
Advanced Systems Case Study

Advanced Dive Support Vessel Responds Faster to Shifting Demands

An advanced saturation diving vessel offers dive support as well as inspection, repair, and maintenance operations for offshore platforms. It is equipped with a diving chamber complex along with ROVs, cranes, and heavy subsea equipment for construction work. Diving bells are used to lower the divers through the moon pool into the sea. The crew members are constantly communicating over intercom systems and assisting the divers to ensure that all of their varied operations are successfully executed. Connecting to the digital matrix intercom system in B-Deck are user control panels and desktop panels which are set up at the dive control, saturation control, utility stations, ROV control rooms, and more.

Challenges and Solutions

- A vessel receives many assignments, each vastly different with separate communication requirements. Easy programmability of intercom systems provides a versatile solution for the changing applications.
- Certain job functions require customized conversation channels with high user capacity. Many key assignments on the intercom panel allow groups to have tailored conversations, eliminating distractions and improving teamwork.
- Crew members must ensure that multiple operations conducted within close proximity do not clash with the divers or one another. The reliable systems with clear audio enable secure, efficient coordination.
Multi-Role Vessel Establishes Safety for Critical Operations

A versatile, global offshore vessel, equipped with air and saturation diving capabilities and ROV, performs drilling support and subsea construction of oil production platforms. In addition to connecting tie back cables and installing risers, divers cut pipelines and inspect sea beds. These divers are transferred to their work site by the diving bell chamber, which is supplied with breathing gas, electricity, hot water, and means of communication through an umbilical. For treacherous deepwater inspections, the crew will often use a launch and recovery system (LARS) to deploy and retrieve the ROVs, which are equipped with cameras, lighting systems and manipulators. High performance intercom systems are essential to significantly reduce dangers arising from these difficult responsibilities.

Challenges and Solutions

- Vessel crew must collaborate across multiple decks and work spaces. Since all intercoms are interconnected, they can converse anywhere, enabling wider collaboration.
- Highly mobile operators must transfer crew members on the ship via the work basket, which is hoisted by the winch, as well as discharge and recover ROVs. Extreme flexibility of wireless beltpacks enables smooth and careful coordination.
- The wet environment and vessel itself often causes multi-path signal and frequency interference on wireless beltpacks, hampering information sharing. Wireless beltpacks with unique RF design deliver clear audio quality for faster response during critical undertakings.
About Clear-Com®
Clear-Com, an HME company, is a global provider in professional voice communications systems since 1968. We develop and market proven intercom technologies for critical communication applications. Recognized for our legacy of intercom innovations, work teams around the world have come to depend on Clear-Com for clear, reliable and scalable communications solutions.

Americas and Asia-Pacific Headquarters
California, United States
Tel: +1.510.337.6600
Email: SalesSupportUS@clearcom.com

Europe, Middle East, and Africa Headquarters
Cambridge, United Kingdom
Tel: +44 1223 815000
Email: SalesSupportEMEA@clearcom.com

China Office
Beijing Representative Office
Beijing, P.R.China
Tel: +86-10-65811360/65815577
www.clearcom.com