GABLER
NAVAL TECHNOLOGY

EXPENDABLE COMMUNICATION BUOYS

Ensuring operational capabilities.
Passing on information.

www.gabler-naval.com

They who have better information remain ready to act.

Information has at all time had its share in determining success or failure of military operations. In time, secure and concealed relaying of data essentially contributes to prevailing in challenging situations, minimizing exposure and operational risk.

We at GABLER Naval are able to provide a flexible submarine communication solution that allows reliable and covert communication under even the most demanding operational conditions.

Together with our partners we are developing an entire family of expendable communication buoys (ECBs) that is compatible with most ejector locks down to a calibre size of only 100mm without the requirement of expensive retrofits.

The ECBs provide functionalities essential to data communication, navigation, safety and even surface intelligence.

The Standard ECB version supports unidirectional transmission of uploaded data. Acoustic and fibre optical gateway buoys even support bidirectional real time communications.

1. Uploading the data

Voice, image or other digital data is transferred via the ECB onboard unit into the buoy. Various onboard unit options including interfaces to combat management systems are available.

2. Buoy ejection

The ECBs are loaded into the signal or garbage ejector lock and launched via compressed air or water pressure. GABLER is able to accommodate all common signal ejector calibres down to 100mm.

3. Data transmission

Once launched, the ECB ascends to the surface and starts transmission of the preloaded data via L-band satellite link. Scuttling of the ECB is activated after successful transmission or battery depletion.

4. Buoy variants

Options for standard ECBs include delayed ascent – allowing the submarine to escape before breaking the surface or EPIRB transponder enabling transmission of distress signals.

Our standard ECB suits a wide variety of usage scenarios

Standard version

The standard ECB version supports unidirectional data transfer. Data uploaded to the ECB before launching is transmitted to a remote recipient after surfacing of the ECB. Data transmission is conducted via L-band satellite link.

		Standard ECB version
Usage features	Dimensions (adaptable)	Ø 99.5 x 1015 mm (or larger)
	Secure usage depth	1,000 m
	Max. ejection pressure	160 bar
	Max. speed at launch	20 kn
	Scuttling	Per SatCom, timer, battery depletion
	Endurance	up to 21 days
	Shelf life	10 years
	Integration requirements	On board programming unit
Communication / Tracking	GNSSs	GPS, GLONASS, Gallileo, Beidou
	Surface Transponder	IRIDIUM
	Gateway ECB <-> Sub	–
	Range ECB <-> Sub	–
	System health diagnosis via onboard unit	X

Additional ECB versions that are in the works:

Standard version with delayed ascent

Additional feature of this ECB variant will be a programmable ascent delay.

Acoustic Gateway version

The acoustic gateway ECB will enable bidirectional digital communication between the submarine and remote parties.

Fibre Optical Gateway version

Besides enabling bidirectional communication, the fibre optical ECB will also support subsea navigation via the integrated GNSS receiver.

ECBs by Gabler Naval – Unique Features

Compatible with all common signal and garbage ejector locks down to 100mm calibre without retrofit [1]

For a wide range of usage scenarios

Low maintenance and long shelf live

Custom variants available

Quality “Made in Germany” – meets standard requirements world-wide

1) Applies to standard versions, gateway versions may require additional adaptation

FROM THE OVERALL SYSTEM TO INDIVIDUAL COMPONENTS

Our mast systems and submarine components represent highest reliability and innovation – to the delight of shipyards and navies all over the world, for almost 60 years. Our products can be integrated into every conventional and nuclear submarine base and meet all common military standards.

165 submarines equipped

130 GABLER submarine experts

60 years of experience

900 masts delivered

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CONNECTING TWO WORLDS
FROM DEEP BLUE TO THE SKY