HELP YOURSELF!

mobos®

THE INDEPENDENT CONCEPT

product description

Seareq

mobos® Man-Over-Board-Operating-System

DESCRIPTION OF MOBOS®-SYSTEM

MOBOS®-System is a self-contained Man-Over-Board-System which operates on its own responsibility. It is absolutely autonomous and does not need any support of other external rescue institutions .

The System is GPS supported and makes a speedy and precise rescue operation possible – even in remote areas. It enable crews to manage rescue operations immediately and to rescue casualties directly.

MOBOS®-System does not interfere into the international emergency system GMDSS such as COSPAS/SARSAT (406 MHz) and Marine Radio/VHF/DSC 70.
Therefore it relieves the international rescue chains particularly!

HELP YOURSELF AND RELIEVE INTERNATIONAL EMERGENCY FREQUENCIES !

MOBOS®-System consists of two units, both are GPS supported:

1. the MOBOS®-Receiver MRX, aboard the boat
2. the MOBOS®-Beacons MTX, permanently attached on the PFD.

With the aid of MOBOS®-System people can be located immediately and rescued directly after they fell over board.

Thanks to its royalty-free radio frequency MOBOS® can be used without any restrictions (radio certificate/SRC), license free and free of charge. No costs have to be paid after any rescue operation!

mobos®

LOCAL GPS SUPPORTED MAN-OVER-BOARD-OPERATING-SYSTEM

PRINCIPLE OF FUNCTIONING OF MOBOS®-System

1. The MOBOS®-Receiver is onboard the boat and has determined its GPS position [A] after switching on. It's now ready to receive and evaluate emergency calls from the MOBOS®-Beacons.

2. The MOBOS®-Beacon is attached on the lifejacket and permanently carried by the person. In case of MOB the automatic lifejacket inflates and activates the MOBOS®-Beacon automatically.

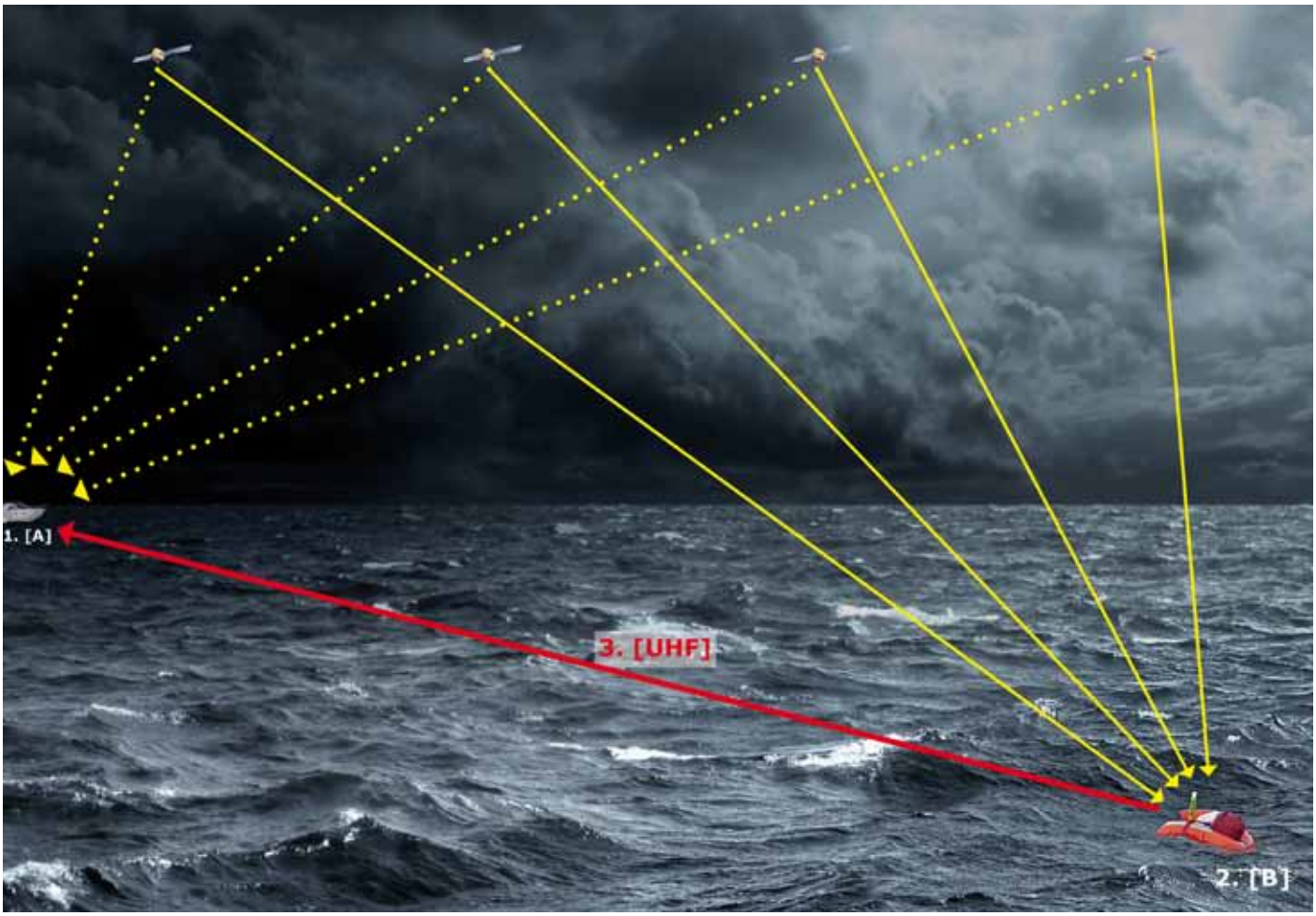
Immediately after activation the MOBOS®-Beacon relays its first alert to the boat to inform the crew instantly about the incidence. In this moment the MOBOS®-Beacon hasn't yet evaluated its GPS data.

Then, after the first alert was relayed, the MOBOS®-Beacon automatically begins to determine its GPS position [B].

3. After the GPS position [B] is evaluated, the MOBOS®-Beacon sends these data automatically to the boat via radio frequency [UHF] all 15 seconds. Thus the crew gets a permanently update about the position of the person in need.

Using its own GPS position [A] and the GPS position [B] from the MOBOS®-Beacon the MOBOS®-Receiver then determines the exact distance and bearing from boat to the Man-Over-Board and displays this as an easily understandable table and graph on the MOBOS®-Receiver screen.

THE KEY FOR A SPEEDY RESCUE !



THE TWO UNITS OF MOBOS®-SYSTEM

1. MOBOS®-RECEIVER MRX

The MOBOS®-Receiver onboard the boat has to be switched on prior to casting off. It determines its GPS position through the GPS satellites and is now ready to receive alerts from the MOBOS®-Beacons.

Thus it initiates the rescue operation promptly and the crew is supported specifically.

Once an alert is received from a MOBOS®-Beacon a high frequency signal is audible and informs the crew about the incident!

If the crew member is still visible and reachable he can be rescued instantly.

If the crew member is not visible, the crew onboard just have to wait a few minutes only until MOBOS®-Receiver has evaluated the precise distance and direction from the boat to the casualty which will be displayed on MOBOS®-Receiver screen.

MOBOS®-Receiver is available as
+ permanent installation on captain‘s bridge or
+ in a comfortable handy portable case for easy use even in dinghies and inflatable vessels.

[In 2015 MOBOS®-Receiver will be also available as ”BlackBox“ with connector to the plotter aboard to present the position of the MOB on the already existing screen. MOBOS®-BlackBox will even visualize the graph of the MOB on tablet PC.]

THE TWO UNITS OF MOBOS®-SYSTEM

2. MOBOS®-BEACON MTX

MOBOS®-Beacon is attached on the PFD and permanently carried by the person.
It has a handy and compact size which is the reason why it does not impede movements of the skippers or workers. The housing is very carefully produced, robustly made, shock proofed and without any sharp edges. And it contains a great deal: All antennas are protected inside the MOBOS®-Beacon - a maximum protection against damages

The Beacon is available with a manual switch (model MTX-M) to attach it with a pouch on foam lifejackets.

Or MOBOS®-Beacon is embedded into the automatic lifejacket (model MTX-A).

MOBOS®-Beacon MTX-M with manual switch

Attached on foam PFD with a pouch.

It has to be activated by hand and held upright over the surface.

MOBOS®-Beacon MTX-A with automatic switch

It is totally embedded into automatic PFD.

It will be activated automatically by self-inflation of the lifejacket.

After the automatic lifejacket is fully inflated the MOBOS®-Beacon is placed on the top of the PFD – the highest point of a MOB on the surface.

Thanks to its compact measurements the Beacon fits in all kind of automatic lifejackets – even into SOLAS lifejacts.

It does not impede movements and activities.

SCREEN OF MOBOS®-RECEIVER MRX

1. After switching on MOBOS®-Receiver the Logo is displayed on the screen.

2. Then the screen changes to the start display. Immediately after switching on the GPS data are not evaluated.
But the MOBOS®-Receiver is already able to receive and to evaluate alerts from the MOBOS®-Beacons.

3. After valid GPS data are evaluated a semicircle is placed below the satellite symbol (”smiling satellite“).

4. MOBOS®-Receiver has received an alert and shows MOB on its screen. Parallel a loud signal is audible.
This alarm can be switched off by pushing the red button on the receiver’s pad.

5. A MOB alert was received from MOBOS®-Beacon with ID number 28.
It is the 1st alert of one in total, symbolized by index 1/1.
It was received 8 seconds ago (8 s).
Here the GPS data of MOBOS®-Beacon 28 are not valid and not relayed yet which is the reason why neither GPS position of the casualty is indicated on the screen nor distance and bearing to him.

6. Just a short time later MOBOS®-Beacon has evaluated its valid GPS data which are instantly and automatically relayed to the MOBOS®-Receiver.
Now clear information are displayed on the screen for a speedy rescue operation:
DST - Distance to Beacon/MOB
BRG - Bearing (Direction) to Beacon/MOB
LAT/LON - GPS Coordinates of MOB
UPD - Last update was received 5 sec. ago.

FEATURES OF MOBOS®-SYSTEM

MULTIPLE ALERTS SIMULTANEOUSLY

If several MOB are in need on the surface MOBOS®-Receiver is able to receive, to evaluate and to indicate multiple alerts simultaneously.

Fig. 6 shows that MOBOS®-Receiver has received a 2nd alert, to identify at index 1/2. By pushing the red button the display on the screen changes to further received alerts.
Above the data an arrow is placed in a menu bar which is divided in 4 sectors.
This arrow moves in-between these 4 sectors according to the movements of the boat during rescue operation: If the arrow is placed on the right the MOB is starboard abaft. If the arrow is placed in the center of the menu bar, the boat‘s heading is right in the target.

Due to safety reasons every MOBOS®-Receiver receives all alerts from MOBOS®-Beacons located in its receiving range.

EASY TO UNDERSTAND – EASY TO HANDLE

The display of the MOBOS®-Receiver gives precise information concerning the casualty and is easy to understand to avoid further stress!

In case of need/MOB the MOBOS®-Beacons are easy to activate and can‘t handled wrong. Thus erroneous switching off is impossible.

INDIVIDUAL ENCRYPTION

For professional and military applications of the MOBOS®-System the transmission of the alert can be encrypted individually.

ROBUST HOUSINGS, COMFORTABLE AND COMPACT

The portable MOBOS®-Receiver is manufactured in a comfortable, handy, very robust shock and splash-water proofed case for easy use: 206 x 167 x 90 mm (L x W x H), 1250 gram, re-chargeable batteries. Water protection: IP 67, if closed.

MOBOS®-Beacon is very carefully produced, robustly made and without any sharp edges. It has very compact measurements and does not impede movements and activities:
200 x 35 mm (L x D), 170 gram incl batteries. Water protection: MTX-A IP 67, MTX-M IP 68

PROTECTED ANTENNAS INSIDE

For maximum safety and to minimize damage all antennas are protected inside the housing of MOBOS®-Beacon.

WORLDWIDE AVAILABLE BATTERIES

MOBOS®-Beacon is powered by worldwide commercially available batteries.
The change of batteries can be handled easily by the customer. No return to manufacturer required, due to battery change.

LICENSE FREE AND FREE OF CHARGE

MOBOS®-Beacon relays its data via a UHF radio frequency which is license free and free of charge.
No radio certificate required, even no SRC.

WHY MOBOS®-SYSTEM ?

TO RELIEVE INTERNATIONAL EMERGENCY FREQUENCIES !

Several GPS rescue systems are on the market base upon varying functional principle.
However, all these systems depend on external support such as Coast Guards, MRCC, SAR etc. and rely on external technologies such as GMDSS, Marine Radio or AIS – which all are overloaded.

Not one of these systems is autonomous and sends an active audible alarm directly to the crew.

The high number of worldwide existing rescue systems caused an overloading of the international emergency systems. Nearly every seaman and skipper is protected with a beacon regardless if he belongs to the professional shipping industry or to a private yacht/sailing boat.
In case of emergency rescue institutions receiving the alert by the international emergency frequency 406 MHz or VHF. In other cases an indication is given by AIS frequency to all ships in the area around.

Furthermore the number of alerts enlarge by numerous false alarms sent out by beacons which are misused, wrong handled or activated due to nescience of private skippers.

High costs are the result!
For instance, in 2012 German SAR records salvage expenses of > 25 Millions EUR.

HELP YOURSELF !

Thanks to its self-contained principle of function MOBOS® does not interfere radio traffic. It is absolutely autarkic because the signals of MOBOS®-Beacons will be received from MOBOS®-Receivers only.
Thus it relieves international emergency frequencies and saves money because it makes a speedy rescue operation possible, managed on crew‘s own responsibility.

In more than 95 % of MOB cases the boat is the closest help to the casualty! But in the majority of cases it‘s rather difficult to spot the MOB on the surface ... which is the reason why external help of rescue institutions is necessary currently.

Here MOBOS®-System provides substantial help:
It informs the crew immediately after a crew member fell over board. So the crew can initiate the rescue operation promptly if the MOB is visible on the surface.

If the MOB is not visible anymore the crew just have to wait until MOBOS®-Receiver has received the data from the MOB‘s MOBOS®-Beacon.
Using its own GPS position and the received data from the Beacon, MOBOS®-Receiver then displays clearly distance and heading from the boat to the MOB. Additionally Latitude and Longitude are indicated on the screen as well as when the last update was received from casualty‘s MOBOS®-Beacon.

No external support is necessary and no search operation due to the precise and complete information about the casualty‘s position which are displayed on MOBOS®-Receiver screen!
Therefore no high costs have to be paid caused by rescue operations, missed slots, delays etc.

TO COMPLETE RESCUE PRODUCT RANGE

MOBOS®-System is a local rescue system for speedy self managed rescue operations.
It shall NOT replace international supra-regional rescue systems (like COSPAS/SARSAT for instance)!

Instead of that MOBOS is a wise, meaningful addition to the rescue product range to enable crews speedy rescue operations on their own‘s responsibility.

HIGH TECH RESCUE FOR INLAND TERRITORIES

MOBOS®-System is the perfect rescue system for workers at domestic ports!
If a worker fell into the river strong currents sweeps him away immediately! Passing by freighters increasing danger!

With MOBOS® the casualty can be rescued immediately.

HIGH TECH RESCUE FOR TOURISM TERRITORIES

MOBOS®-System can be used for multiple touristic applications which result in benefical effetcs on safety and image – and this in turn result in improved business.

Wind- and Kite-Surfing
Wind- and kite-surfers can be protected by carrying MOBOS®-Beacon during surfing.
It is easy to store in the surf-bag (on their back) and does not impede sportive movements due to its light weight of 170 gram incl. batteries.
In case of need, e.g. strong wind pushed the surfer too far away from the coast and he has not enough experience and/or power to surf back MOBOS®-Beacon offer life-saving help. With its aid he can send an alert directly to the surf center to bring him back.

Local Recreation Areas
Furthermore MOBOS® can easily be installed at fresh water lakes of local recreation areas to give highest safety to tourists – which increases attractiveness and business of the tourism area.
MOBOS®-Beacon is attached to the sportsmen equipment (PFD of boaters, wind-surfer‘s bag etc.) and to Anti-Capsize Bags (catamarans, sailing boats). In case of emergency it relays the alert directly to MOBOS®-Receiver located at the central station of the recreation area.
Surfers, boaters, canoeists are protected most efficiently!

TARGET GROUPS

PROFESSIONAL APPLICATIONS

+ Shipping Industry
+ Sea Ports/Harbours
+ Domestic Ports
+ Offshore Oil Riggs
+ Offshore Wind Farms
+ Governmental Institutions (Coast Guards, River Police, Navy etc.)
+ Rescue Institutions (SAR)
+ Tourism Industry
+ Counties, Communities (Recration Area)

PROFESSIONAL CUSTOMERS

+ Sailing Charter Companies
+ Yacht Charter Companies
+ Wind- and Kite-Surfing Centers
+ Canoe Charter Companies

PRIVATE CUSTOMERS

+ Sailors
+ Yacht Crews
+ Windsurfers
+ Kite-Surfers
+ Canoeing

CE FC

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ENGINEERING SAFETY

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Safety and Rescue Equipment

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