

GIB-SAR

Underwater GPS tracking system:
Positioning black-box or distress
submarine



By combining 4 buoys and a deck unit which can be installed either on a small boat or on large vessel, ALSEAMAR has designed an accurate positioning system that is very easy to deploy and perfectly fitted for underwater positioning in shallow as in deep water, even with rough sea conditions.

KEY BENEFITS

- Real-time 3D tracking in longitude & latitude in D-GPS mode with a metric accuracy & depth
- Very wide tracking area: up to 2Nm x 2Nm
- Fast installation and deployment (< 1h)
- No calibration
- High repetition rate and real-time Quality Control
- Long autonomy (many days)

GENERAL PRINCIPLE

In order to save time, navies consider as a major key of success to accurately localize DISSUB prior to MOSHIP arrival on site.

Based on ALSEAMAR's expertise in fast aircraft's black boxes relocation, ALSEAMAR proposes a suite of

equipment flown to the accident site to be operated by a 3 men scout team.

ALSEAMAR equipment can be deployed from a fast patrol boat or any ship of opportunity mobilized in the nearest harbor.

Within few hours upon arrival on the search area, DISSUB is localized in longitude and latitude with a metric accuracy, DISSUB's depth is then measured using an echo-sounder.

Further a portable underwater telephone is used to communicate with the DISSUB's crew for information exchanges, relayed to SUBOPAUTH in real time.

Upon arrival on site, MOSHIP enters in dynamic positioning mode right above the DISSUB coordinates given by the GIB-SAR.

SYSTEM COMPONENTS

- 4 Buoys
- 4 hydrophones with 30 m cables
- 1 Pinger exercise
- 1 Deck Unit composed of:
 - 1 Junction Box (Jbox)
 - 1 Aerial box
 - 1 PC with AQUATIC software

SPECIFICATIONS

Positioning accuracy:	1 m @ 1 s
Radio range:	5 km with antenna at 3 meters high above sea level
Acoustic range:	Typical: 5 km @ 11 kHz - 3 km @ 32 kHz
Coverage area:	2 NMiles x 2 NMiles x 600 m depth
Number of vehicles:	Up to 5 simultaneously

BUOYS TECHNICAL DATA

Radio modem:	380 - 450 MHz – 1 W
Battery life:	40 hours – Charging time 5 hours max
Size:	2.5 m height – diameter: 1 m (1.3 m height when folded)
Weight:	29 kg
Number of acoustic channels:	5 max.
GPS unit:	Compatible with WAAS/EGNOS
Sea state:	≤ 4

OPTIONS

Long autonomy:	Up to 80 hours (in operation)
Additional buoys:	Up to 6 additional buoys



GIB-SAR SYSTEM REFERENCES

The French MoD (DGA) used the GIB System since 2004



The UK MoD - Salvage Marine Operation used this system since 2011



The Royal Malaysian Navy used this system since 2012 on the Diving Support Vessel MEGA BAKTI



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