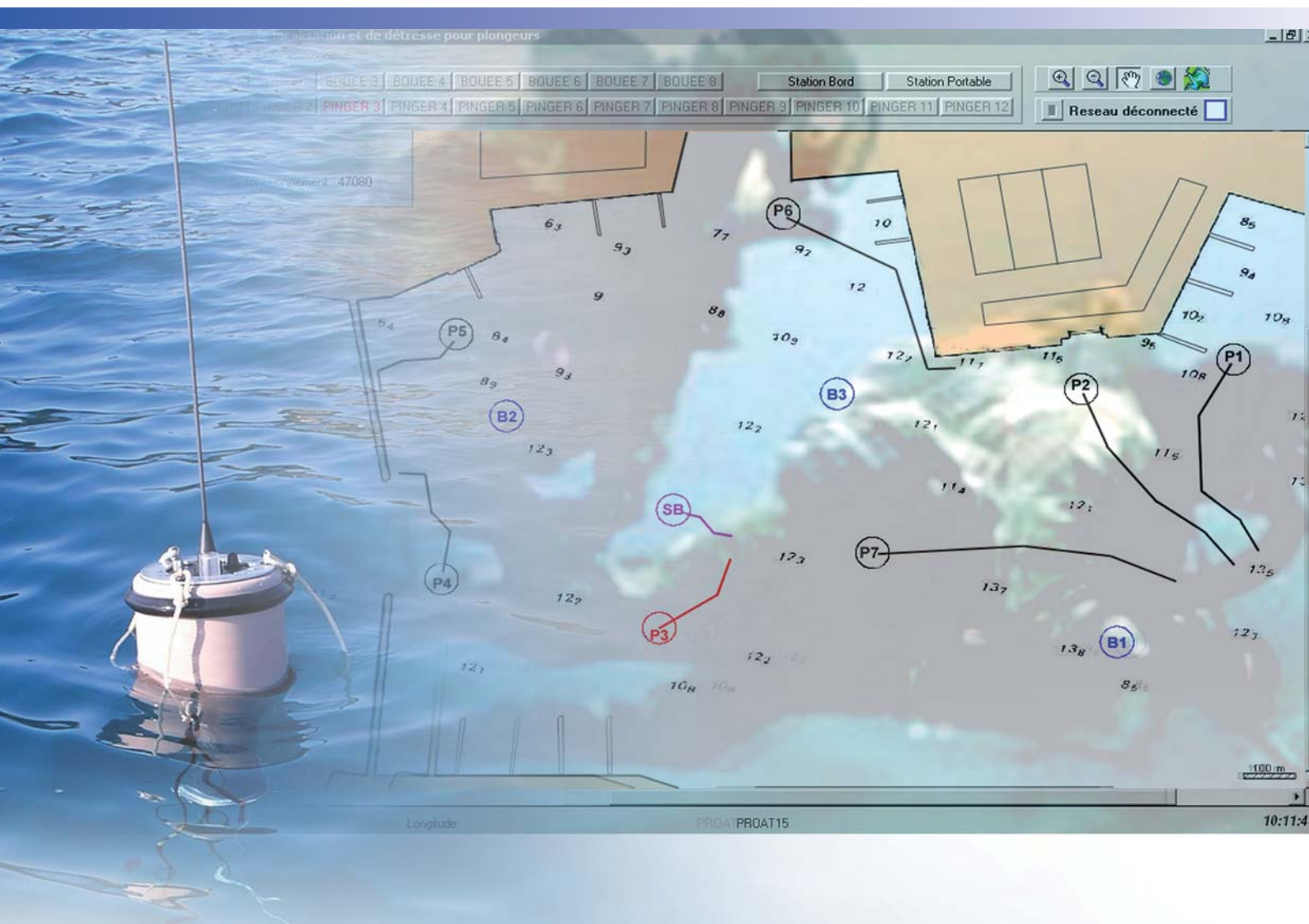




# ASTRID

## Acoustic System for TRacking & surveillance of Divers



**ASTRID** is a light weight, easy to deploy modular chain of acoustic pingers and buoys, ensuring tracking and safety of divers operating under difficult circumstances (vast sites, discreet interventions,...). The system is used either for following divers during sub-sea work or for managing top level training and exercising. It combines underwater acoustic and surface GPS positioning. It enables the divers tracking when they are either on the surface or underwater.

**ASTRID** provides 3-D information to the head of diving operations and transmits alert to the safetyembarcation in case of an emergency for quick and efficient rescue.

# ASTRID

## Acoustic System for TRacking & surevillance of Divers

### Main advantages

- high level security for divers
- high precision in location and tracking
- particularly well-suited for shallow waters and harbors
- easy-to-operate
- real-time coverage and accurate guidance for assistance
- replay capability for analysis or operational debriefing

**ASTRID** is composed of **buoys**, their number being determined by the area to be covered, **pingers** for divers, a **control console** for the head of diving operations and a **portable case** on board of the rescue embarcation.

### System performance

- real time operation tracking
- electronic chart support
- position accuracy better than 15 meters (depending on area characteristics)
- area coverage up to 1.5 nq2 with 12 buoys
- tracking capability up to 12 divers
- more than 6 hours autonomy
- 2 to 30 meters dive depth
- tracking, recording and replay capability
- divers tracking on surface and underwater



Control console display

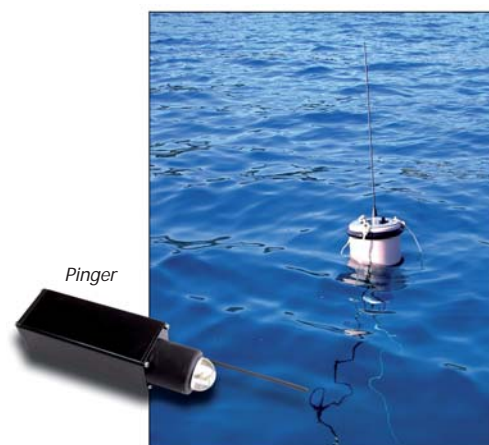
### General characteristics

#### Buoy

- Size : L 800mm, diam. 300mm
- Weight : 20 kg
- Li-ion battery
- Autonomy : up to 6 hours
- Adjustable hydrophone immersion

#### Pinger

- Size : L 200mm, l 55mm, H 44mm
- Weight : 300 g in water
- Autonomy : up to 6 hours (Li-ion battery)
- Frequency : FSK from 20 kHz to 36 kHz
- Max standard depth : 30 m
- Emergency signal : manual, exceeded depth or time



Buoy

#### Control console

- 3D calculation and tracking of diver's position
- Emergency alarm control
- Recording of dive parameters
- Guidance for rescue embarkation
- Recording and replay capabilities
- Size : 570 x 350 x 300 mm
- Weight : 20 kg
- Watertight & portable

#### Portable case

- Size : 360 x 300 x 200 mm
- Weight : 7 kg
- Watertight & portable
- Real time information: bearing, depth and distance to diver



Control console

ECA reserves the right to vary the specifications and details contained in this publication