UNDERWATER INSPECTION EQUIPMENT

R.O.V. SYSTEM
PHANTOM HD2+2

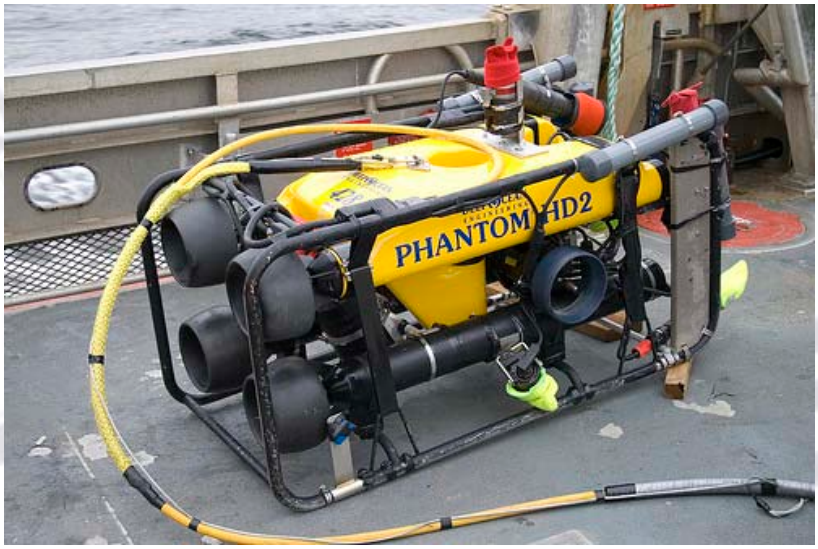
Feines d'Aigua
SUB 2B s.l.
sub2b@sub2b.com
www.sub2b.com
B-57/401.341

C. Sales, 11
07200 / Felanitx
ILLES BALEARS
Tel/Fax: 971825427
Mob: 609222419

- **The growing importance of knowledge of the marine environment and especially the tasks carried out on its bed, mean that underwater activities are being carried out at ever-greater depths.**

- **A collaboration agreement with two of our country's pioneering companies in the oceanic research sector allows us to operate their remote research equipment and thereby include them in our inspection services.**

  - *In this case we would like to introduce the light inspection class Phantom HD2+2, Remote Operation Vehicle (R.O.V.), which can safely reach a depth of 600m and face moderate currents with its 90Kg of thrust from its four horizontal motors.*



  - *It is equipped with two Video Cameras with 720 line colour, fitted with Wide angle lens and digital zooms. Lack of sun light is not a problem for carrying out the requested work since it can be equipped with up to 4 spotlights with an intensity of 2600 lumens each or in special cases it can be fitted with night vision cameras and infrared spotlights.*

  - *The system is a real equipment platform capable of carrying up to 12Kg of payload. The complexity and detail of the system will be conditioned by the objective and the work which it is used for.*

  - *For extremely turbid water it can be equipped with an Image Sonar which would provide invaluable help with the navigation.*

- **The purpose of the system we are presenting is to collect diverse real time information; depending on the equipment at that time. In order to be able to inspect areas which, due to complicated access, strong currents, depth or extreme turbidity, are difficult to reach with conventional systems.**

Feines d'Aigua
SUB 2B s.l.
sub2b@sub2b.com
www.sub2b.com
B-57/401.341

C. Sales, 11
07200 / Felanitx
ILLES BALEARS
Tel/Fax: 971825427
Mob: 609222419

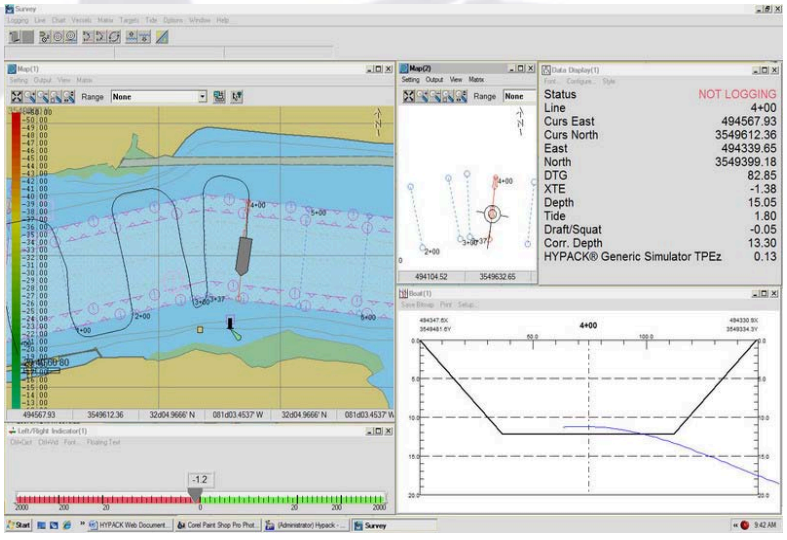
- *Capable of showing the task or work which is being carried out at that moment while other types of data are being collected, such as geographic position, salt levels, temperatures, sample collection, etc.*

- *The captured images are saved on a digital backup as required, for immediate submission or for subsequent processing and editing of the data using specific software.*

- *The recordings are made in an MPEG or AVI format for their subsequent transfer to a physical backup such as a Pen-drive or, if they are very long, HDD.*

- *The navigation data is treated by the HYPACK MAX program installed in the surface check, being able to work on them subsequently and add to them different systems based on CAD and GIS.*

- **The system is capable of real time integration of the vehicle's geographic position or other relevant data about the images we are observing. All using specific software.**



- **As long as there is telephone coverage; preferably broadband; we can also send the images in question, with reference to the points, problem or data, in real time via the INTERNET wherever necessary, in order to be able to view it and compare it every minute.**

Feines d'Aigua
SUB 2B s.l.
sub2b@sub2b.com
www.sub2b.com
B-57/401.341

C. Sales, 11
07200 / Felanitx
ILLES BALEARS
Tel/Fax: 971825427
Mob: 609222419

- *The system is particularly suitable for satisfactorily carrying out tasks of the following type:*
- *General Graphical Documentation.*
- *Scientific studies and sample collection.*
- *Environmental Impact Studies, species censuses, artificial reef monitoring*
- *Examination of wharfs, jetties, pivots, anchor points, electric dam walls, Chains, ballasts.*
- *Inspection of areas with dangerous access.*
- *Inspection of hulls, propellers, cold storage area entrances and exits.*
- *Rescue Missions and Missions for the Reconnaissance of flotsam, people and objects, among others.*
- *Exterior and interior recognition of emissary Piping, gas pipelines, desalinisation plants, water intakes.*
- *Monitoring and surveillance of safety for underwater work, sporting competitions, depth tests.*

Or anything else you may think of.

- *The complete system is modular and can be transported in a ten foot ISO container, where all the equipment is previously fitted and therefore immediately operational, the same container acting as a Control Centre, with a total weight of 2.0 Tons. The undercover space necessary for working, with room to spare, is 20m³*

- *We can also adapt it to the vessel which is assigned to us, gaining a few metres for undercover deployment but in that case an additional period of time for conditioning and additional mounting should be expected.*

- **The complete team for its operation has three specialised technicians; assigned to different functions so that each one of them can change positions within the group; plus two assistants. In exceptional cases and where there is exterior, qualified help, the team, being multi-skilled, may be significantly reduced in numbers.**

- **Our working day is in the same way adapted to sea workers regulations with a maximum duration of 12 Hours in the field of data collection or eight hours in an office for editing or development; be they continuous or spread across the course of a day.**

1. *As mentioned previously this equipment represents a considerable increase in the operational depth in the field of inspection and data collection, reaching depths to which humans are not capable of going alone to carry out the required activities.*
2. And, if we add to that the safety of not having submerged personnel and therefore not having time on the seabed restricted by nitrogen

Feines d'Aigua
SUB 2B s.l.
sub2b@sub2b.com
www.sub2b.com
B-57/401.341

C. Sales, 11
07200 / Felanitx
ILLES BALEARS
Tel/Fax: 971825427
Mob: 609222419

saturation, it can be seen that use of operational time is better and therefore more profitable.

- According to BOE 280, of 22/11/1997; the working day of a diver is limited to a maximum of three hours water time, extendible to five hours as long as the immersion is carried out at a depth not exceeding 10m at any time.

We have a complete Post-Pro service for completing any type of project which is requested of us. From specific software for image processing which allows us to edit the recorded images, the transformation and recording of other formats and backups, and even the uploading to our servers for their rapid ONLINE download, to the production of CAD drawings, through data conversion, data logging or the total or partial creation of the final report.

We would be more than happy to answer any question or requests which you may have. Please do not hesitate to send them to us by the following means:

- ***Telephone**: Tel. 971825427 / Mob. 609222419*
  ***Email**: sub2b@sub2b.com, tienda@sub2b.com , aiguasub2b@sub2b.com*
- ***Skype**: Bartsub2b.*