



UNDERWATER INSPECTION EQUIPMENT

MiniRov VIDEORAY SYSTEM

Exploring the marine environment, its importance to the Environment as a whole results in ever-longer time underwater, meaning that we have to increase our intrinsic safety measures with each operation.

- *The more time on the bed, the less operational time there is, just as the greater the depth, the less bed time there is. These two axioms greatly limit our useful work.*

✚ So, in order to increase the time on the bed to the same extent as the operating depth without reducing the effective work time and minimising, by any means possible, the risk which all this implies, we would like to present one of our state-of-the-art underwater devices.

- *This is the EXO/GTO VideoRay; Remote Operation Vehicle (R.O.V.), fully operational up to a depth of 150m, or 300m of horizontal displacement.*



- *The basic parts which make up this system are a vehicle driven by three motors, two for moving on the horizontal plane and one on the vertical plane; equipped with a 490 line Colour Video Camera; a supply cable which connects the vehicle to the surface and with the control box and this, in turn, to the electrical network, capable of being equipped with an independent monitor and different associated recording systems which will allow us to view and record our object of interest in real time.*
- *For areas with weak luminosity or deep waters it has its own illumination system made up of 2 spotlights with 20W intensity adjustable from the surface.*
- *It also has a measurement prefixed by laser in order to be able to relate the dimensions of objects observed.*

✚ The purpose of the equipment which we are presenting is to be able to show, in real time or recorded for those who are not able to observe it in situ, the details of a job, the relative

situation or position of an object, the possible defects in a hull, the condition of a tank, the way of life or a species or the composition of a bed, to mention some of the more common cases.

- *In this way, we can demonstrate the activity carried out without having to leave it solely to the comprehension of one of the plans or sketches which, in some cases, do not on their own explain or make all of its aspects understandable.*

- ✚ **The images captured are saved on a digital backup, for immediate delivery if required or for their subsequent treatment and editing of the data by means of specific software.**



- *The recordings are normally made to a Hard-Disk, in MPEG or AVI format for their subsequent transfer to a Pen-drive or HDD type physical back-up*

- *If required we have specific state-of-the-art software for editing and converting to other formats (DVD, AVI, MPEG, Windows Media, MP4, DivX, etc.) or recording onto different backup formats (DVD, CD, Pen-Drive, MiniDv, HDD).*



- *We also have a virtual server so that you can access, through a link to the direct ONLINE download, all or part of the file generated and requested.*
- *After their digital processing, onscreen overlays of the standout features of each of the points in question can be added to the recordings made, or they can be Georeferenced by means of a global positioning system, GPS.*

- ✚ **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 INTERNET wherever necessary, in order to be able to view it and compare it every minute.**

- ✚ **The team using it, depending on the location and the depth of the work we want to work at, has two technicians; each one being able to carry out a different task at the same time. As**

long as we have external help, the team will in special cases be completely operational with one operator.

➤ *The whole system is particularly suitable for satisfactorily carrying out tasks of the following type:*



- *Inspection of areas with difficult or dangerous access. Boat hulls, Propellers, Tanks, Cesspits, Inlet grates.*
- *Monitoring and surveillance of safety for underwater work, sporting competitions, depth tests.*
- *Examination of wharfs, jetties, pivots, Buoys, Anchor Chains, ballasts.*
- *Checking potable water deposits, tanks, electric dam walls, pipe work, refrigeration inputs and outputs.*
- *Exterior and interior Emissary reconnaissance.*
- *Search for flotsam, people, objects and others.*
- *Monitoring of marine species, reefs, fish farms*

Or anything else you may think of.

➤ *If we add to that its diminutive size (35cm) which makes it extremely manoeuvrable in almost any environment, its relatively light weight, the ROV weighs 4Kg and all the parts, including the recorder and spares box, do not exceed 75Kg, it means that the whole system is easily transportable and making it highly operable as a unit.*

➤ *A lack of electricity at the work point can be solved with an Inverter Generator.*



1. *This equipment represents a considerable increase in safety as it does not involve submerged personnel, who are therefore no longer susceptible to nitrogen saturation which could lead to decompression, as well as making greater use of the working day.*
 - According to BOE 280, of 22/11/1997; the working day of a diver is limited to a maximum of five hours water time, as long as the immersion is carried out at a depth not exceeding 10m at any time,
2. *The smaller size of the device itself used in the intervention also means that a significant reduction in costs has been achieved, and these are very important factors in today's climate.*

✚ **Its versatility in any environment; its reduced size and high manoeuvrability; which makes it ideal for working in narrow places; its intrinsic safety due to not having submerged personnel, the exponential increase in the maximum operating depth without losing actual useful time, are factors which lead us to consider the equipment's work potential and functionality to be highly interesting.**

✚ **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.*