

SYMBIOS SYSTEM

ECCR Text and Photos By: Ronaldo Possato



In May, I had the opportunity to receive training to become an instructor for the Symbios system from @halcyondivesystems, together with IT IANTD Carlos Janovich, in High Springs-USA, at the Halcyon factory, with instructor John Kendall.

We were very excited about the possibility of having access to the ECCR equipment, which should be launched on the market in the coming months. Still, the future instructors are already doing the necessary hours so that when the machine is launched, they will already have 50 hours of experience operating it, which is already in the final phase of CE certification.





The System has an ultra-thin Handset with intuitive controls and a state-of-the-art hybrid transfective color screen for visibility in all lighting conditions. It is completely wireless, with no wires connecting the ECCR, HUD, Handset, and other systems.

The compact, high-resolution HUD computer offers a full range of features in a compact format.

The tank pod (which is connected to the first stage of each tank) can provide wireless communication with computers and up to 9 devices in total, also providing diver positioning readings - TRIM.



With integration with a growing set of devices and buddy-sharing capabilities, so when you log into the Buddy screen, you can see the computer information of the nearest diver, a great feature for checking PO₂.

It can also be connected to DPVs, and GPS markers and used in open-circuit dives. The HUD (which is connected to the diving mask) and the Handset work independently and can be programmed by cell phone, through the

Halcyon App, making dive preparation much easier (types of gases, gradient factor, screen configuration, alarms, including vibration for potentially risky situations).



The highlight is the front mount rebreather weighing only 7.5 kg, which is completely different from what has been revamped by manufacturers. The equipment is small in size, without any wired connections, and easy to maintain and replace parts. It integrates two types of O₂ sensor technologies, the traditional galvanic sensor and the solid

sensor, which lasts up to 10 years and is not sensitive to humidity, as it reads the amount of O₂ through an LED light and a fluorescent membrane. These two technologies provide redundancy in the PO₂ reading. It has an axial scrubber that holds 2.5 to 2.7 kg of soda lime.



It has a BOV integrated into the ECCR, where the diver switches from a closed to an open circuit and vice versa, turning a valve in the center of the rebreather, which automatically switches also on the HUD and Handset.

We started the course with an explanation about the new technology developed for the equipment. It really is something totally new, designed from scratch, and not adapted to something already existing.



THE DIVES:



We did some dives in Peacock, Ginnie Springs, and Little River, and quickly got the hang of the machine.

Back in Brazil, we did several dives in the sea and quarries, and the equipment proved to be extremely robust, and easy to configure pre-dive, for choosing gases and planning, through the brand's cell phone and app, which made operation much easier. The dive log is also available on the Halcion APP, which also ends up functioning as a social network, where

it is possible to include friends, photos, post dives, etc. I have dived with ICS Megalodon 2.7, MEG 15, Tiburon, Triton, Kiss Sidewinder, and Sidekick, but diving with the Symbios is a different reality. Its small size, combined with the lack of wires, means we have much more freedom of movement. With low respiratory effort and extreme ease of operation, which provides a much greater safety margin for the operator, it will mark a new level in the world of closed-circuit diving.