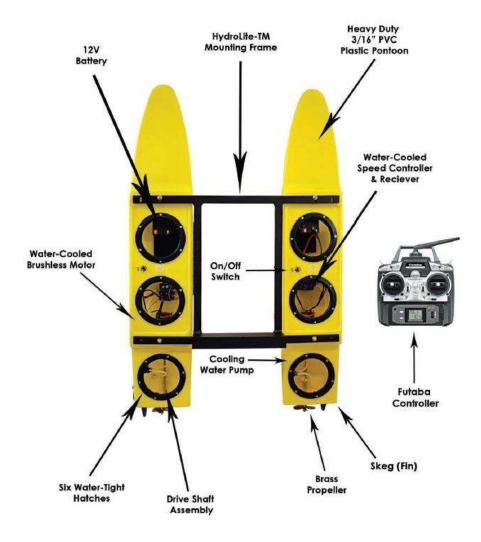
#### **Preamble**

The HyDrone™ RCV is a hand-portable, remote radio controlled small boat platform, working in conjunction with various instruments to conduct survey operations in ponds, lakes, rivers, and streams. The HyDrone RCV accomplishes the same results as much more expensive RC survey systems, has a wide profile to avoid tipping, and watertight construction. It is rugged, lightweight, and manufactured from high quality marine components. The system is easily disassembled for transport and shipping. Work environments can include mines, sewage treatment plants, contaminated lakes, harbors, and rivers.



The equipment consists of a radio control transmitter with two plastic hulls and frame forming a small catamaran vessel, each hull includes the following components ....

Radio Control receiver and PWM motor control

**Brushless DC motor** 

Motor EMC

12v 10A/Hrs battery

50mm Brass Propellor and drive shaft

Water cooling pump

#### The Machinery Directive 2006/42/EC (formerly 98/37/EC)

Directive 2006/42/EC applies to machinery and safety components. A machine is defined as "an assembly of linked parts or components, at least one of which moves".

The nearest relevant clause in the directive is appendix iV section one which references guards for rotating saw blades. In this case it is the rotating blades of the propellor which are potentially a source of danger. In normal use there is no need for a person to be in the water and adjacent to the rotating blades however there is a slight risk so a guard is available to shield the blade from direct contact. As the unit is designed for use in shallow water this guard will need to be set in a withdrawn position to give clear passage when the vessel is working amongst surface and near surface weed.

#### International Maritime Organization - Life saving appliance code 4.4

Since the publication of Life-Saving Appliances including LSA Code, 2010 edition, the Maritime Safety Committee (MSC) has adopted resolutions amending the International Life-Saving Appliance (LSA) Code and the Revised recommendation on testing of life-saving appliances.

When searching for propeller shields LSA 4.4 is referenced several times but was found not relevant as it concerns safety equipment required for lifeboat outboard motors with personnel in the surrounding water.

# The Low Voltage Directive 2006/95/EC

The Low Voltage Directive is the oldest of the New Approach Directives and deals with the safety **of** electrical apparatus. It applies to all apparatus running on (or generating) an electrical supply in the range 50 - 1000 volts a.c. or between 75 and 1500 volts d.c.

The HyDrone motors are powered by 12dc batteries which convert dc power to three phase 30v ac by a CE marked EMC (Electronic Motor Control) module. All of these units comply with and are below the lower voltage limits of the directive.

## The Electromagnetic Compatibility (EMC) Directive 2004/108/EC

The EMC Directive differs from most other directives in that its primary requirement is protection of the electromagnetic spectrum rather than safety of the equipment. The vast majority of electrical products must comply, whether battery or mains powered. Exceptions include – but are not limited to – components and sub assemblies with no intrinsic function and products already covered by other directives (medical, military, automotive, some agricultural, transmitting and communications equipment). The Directive requires that products must not emit unwanted electromagnetic pollution (interference) and must be immune to a normal level of interference. Compliance with these requirements is usually demonstrated by testing to harmonized standards but testing is not

mandatory and a manufacturer may choose provide a technical assessment for compliance as an alternative.



Small, lightweight 2.4 GHz FHSS six-channel receiver incorporating Frequency Hopping technology. No crystals, no spot frequency selection, and maximum protection from same-channel interference thanks to high-speed 2.4 GHz FHSS technology. High-speed Frequency Hopping for effective suppression of interference signals. Frequency Hopping system with thirty channels at 1.5 MHz spacing in the 2404 - 2447.5 MHz range. Maximum 28 simultaneous users. Not compatible with FASST transmitters. Only for FHSS systems such as T2PL, T3PL, T4YF, T4PL, T6JG. This Futaba product is CE certified, range up to 1000m

The radio control components consist of a 'Futaba T6J'' radio control transmitter using two separate channels with independent receivers converting radio messages to PWM (Pulse Width Modulated) signals which control each motor via its related controller. Steering and directional motion are provided by rotating/counter rotating the two motors. Both the transmitter and controllers are CE marked and comply with model Radio Control equipment operating in the 2.4GHz ISM radio frequency band.

# The Batteries Directive 2006/66/EC

This directive imposes a take-back and recycling obligation on producers (defined as any company that puts batteries or products integrated with batteries on the EU market) and covers all battery types including button cells.

# **EC Declaration of Conformity**

In accordance with EN ISO 17050-1:2004

We OHMEX Ltd Of Unit 9 Gordleton Ind.Park, Hannah Way, Sway, Lymington SO41 8JD, UK. acting as authorized import and distribution body on behalf of manufacturers SEAFLOOR SYSTEMS Inc., 3113F Alhambra Drive, Cameron Park, CA 95682, USA.

## In accordance with the following directives

The Low Voltage Directive 2006/95/EC

The Electromagnetic Compatibility (EMC) Directive 2004/108/EC

The Machinery Directive 2006/42/EC (formerly 98/37/EC)

hereby declare that

**Equipment** 

**Model Number** 

**Serial Number** 

Is in conformity with the applicable requirements

We hereby declare that the above equipment has been designed to comply with the relevant sections of the above referenced specifications.

Signed E.Read

**Position Director (Authorised person)** 

Date