



Success Story Power Supplies

High-tech controller for jet surfboard: with lithium-ion battery and wireless charging

Surfing the calm water at high speed – this enjoyment is provided by a new type of surfboard with a jet drive. This ultra-modern sports device achieves speeds of up to 54 km/h. Elektrosil developed a remote control for the manufacturer which has Bluetooth and wireless charging. It is also waterproof, and easy to operate whilst travelling at speed.

► The challenge

The customer wanted an easy-to-use controller for the surf board with a Bluetooth connection to the board. The battery pack with universal charging and control electronics is intended to provide a high capacity, have full IP protection and float on the water.

► The solution

When the customer-specific solution was designed, the guiding principle was optimum functionality in the water. The team constructed a plastic housing with a double seam in the joystick design requested by the customer, and adapted it to the electronic components that were required. The flotation needed in the water is ensured by an appropriately calculated cavity. A special sealing procedure ensures that the device is impermeable to water in accordance with protection class IP 68.

The energy storage was provided by Elektrosil in the form of a powerful lithium-ion battery and a sophisticated wireless charging unit that is compliant with the Qi standard. The safety tests that the lithium ion battery must undergo for transport were carried out in the certified laboratory in Asia in accordance with UN standard 38.3.

The engineering experts optimised the electronics and coils of the battery unit in the controller for charging using any 5VDC power supply. The charging intelligence and protection electronics were integrated in the battery pack, which protects the charging procedures from short circuits, undervoltage and deep discharging.

The Bluetooth components and the associated software were developed by subsidiary MCS.

Project information

- Client: Sashay GmbH
- Sector: Entertainment
- Project size: Ongoing project. 600 – 1,000 items per year

Elektrosil's services

- Application advice, development supervision, design-in support
- Quality Assurance
- Engineering and production
- Completely customised applications



“We needed a wireless controller for our surfboard – ergonomic, watertight and with a long service life.
That’s when I called Elektrosil.”

► Advantages and benefits

The controller has given the client one of the essential components for his jet surfboard. Its intelligent design makes a major contribution to the innovative quality of the sports device. Together with subsidiary and software partner MCS, Elektrosil provided the customer with all of the development work from a single source.

With top-class know-how and unique engineering bandwidth, Elektrosil has proved itself to be the ideal development partner for companies such as Sashay GmbH that are going in new directions with innovative products.

Are you looking for a precisely tailored solution for your system and a competent partner? Just give us a call.

+ Elektrosil’s strengths

The Elektrosil team used a considerable amount of its core expertise in the engineering: Data connection technology, moulding, electronics development, software programming and power supplies. The engineers also made use of their experience and knowledge of 3D design and tool construction.



Controller for jet surfboard

