



„Efficient learning with ultrasound – our mental trainer needed good usability in a contemporary design.

That’s when I called Elektrosil.“

To increase concentration and learn languages, the handy device transmits inaudible sound directly to the body. Elektrosil realised a contemporary housing design including a touch display.

THE CHALLENGE

The customer wanted his mental trainer with ultrasound function to have a slim and compact look similar to the latest smartphones. The device should be easy to operate and have a touchscreen as a further development of the preceding version.

THE SOLUTION

Elektrosil completely redesigned the device and provided the client with sound development advice. The engineers chose a display model with high brightness level and an advantageous reading angle. They adapted a suitable projected capacitive touch screen to the small display, added a chemically anti-reflective protective screen and integrated the touch driver into the Linux software environment. In cooperation with the manufacturer, they ensured the optimal surface function of the sensitive technology – e.g., in case of interference radiation of the display – by means of software modifications.

Subsequently, the engineering team worked with the designer to develop a device housing optimised from surface design to impact stability. The power consumption of the touchscreen was adapted using

a sleep mode feature. A customised silicone cable with piezo sensors for ultrasonic transmission and a power supply unit with logo embossing were further components. The PCB for generating the ultrasound and the programming software of the mental trainer were manufactured externally.

The customer now has the first mental trainer available on the market with an intuitive touch display.

OUR STRENGTHS

- Extensive expertise in display & touch, cable assembly and construction
- Established partner networks in best cost countries
- One-stop shop: From consulting, development and simulation to production and delivery

Are you also looking for a custom-fit solution for your system and a competent partner? Then give us a call: +49 40 840001-0.

Project information

- Client: A German company for learning strategies
- Project size: 1,000 units per year
- Sector: Home Appliances, Industry
- Product area: Displays & Touch
- Services: Housing development incl. moulding, touchscreen modification, application consulting, complete assembly, testing in clean room

Elektrosil's services

- Application consultation, development assistance, design-in support
- Quality assurance
- Engineering and production
- Completely customised applications