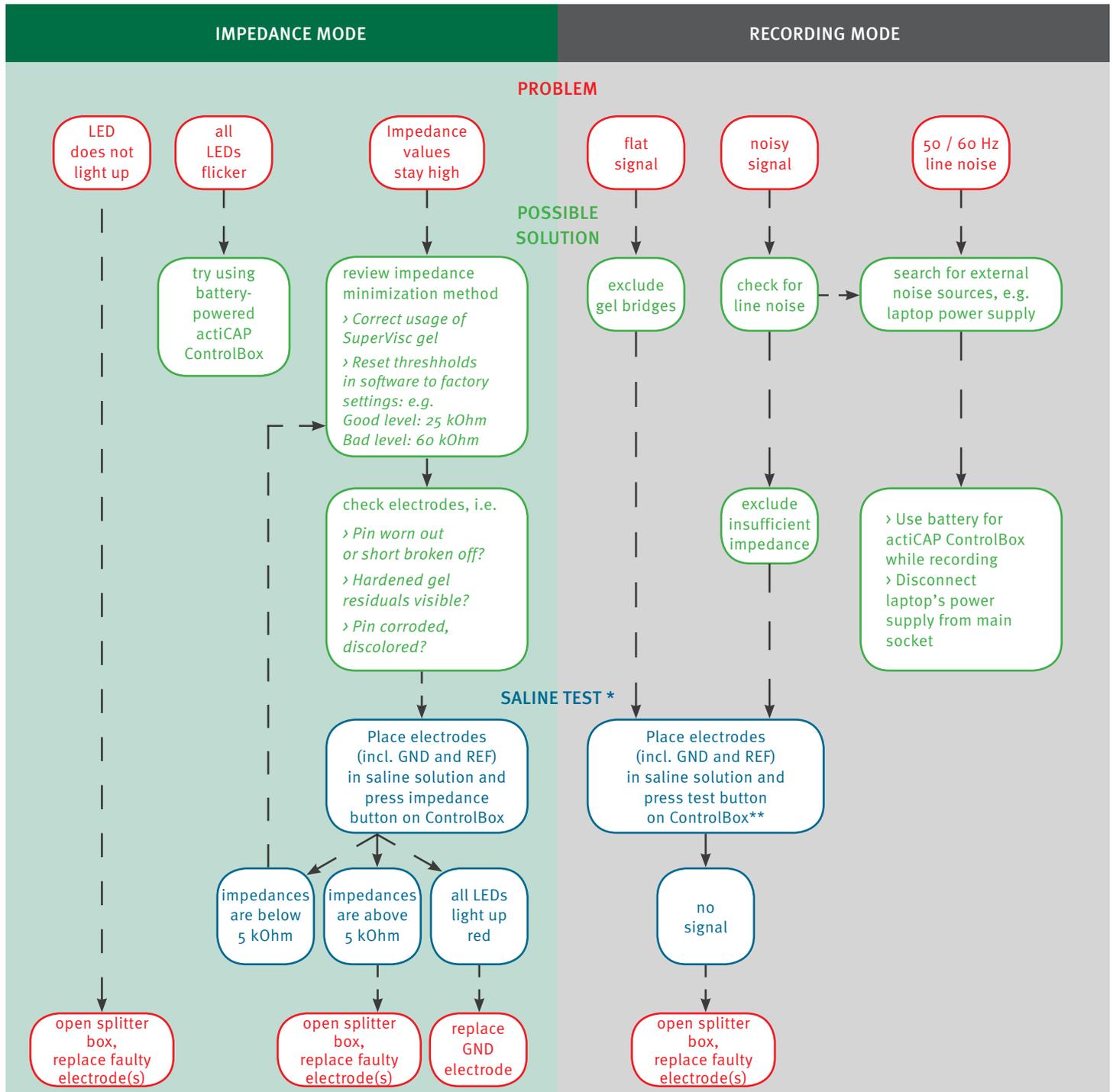


**Support Tip****Trouble-shooting actiCAP**

by Lydia Timm, Ph.D

Since the actiCAP came on the market in 2006 it has impressed researchers from laboratories all around the world. With this active electrode EEG cap, any impedance measurement can be made in an ergonomic fashion: the LEDs on the electrodes indicate the current impedance range directly on the subject's head via colour-coding. Its major strength lies in

low noise recordings due to the integrated impedance converter ("impedance matching"), which offers an excellent signal to noise ratio. No tiresome and time-consuming preparation is needed, e.g. lowering impedances below 5kOhm. In addition, the actiCAP may be flexibly combined with all of our existing amplifiers.



\* Saline bath (approx. 3 tablespoons of salt in 1 liter of water). Only ever use a plastic bowl for this.

\*\* not supported by QuickAmp

Currently more than 400 hundred systems are used by research facilities all over the world to carry out experiments in a time- and cost-efficient way. The actiCAP provides high data quality, whether in the lab, outdoors, at sports, or even in space. For some video clips see [https://www.youtube.com/watch?v=7nt6PgUx9cQ&list=PLgBQatx-tYbCgPMzXso7N\\_saggR8DtDsO](https://www.youtube.com/watch?v=7nt6PgUx9cQ&list=PLgBQatx-tYbCgPMzXso7N_saggR8DtDsO).

The actiCAP and its electrodes are precise measurement tools, designed as a durable EEG cap system. However, the electrodes are subject to wear. You can increase the lifespan of your actiCAP system by handling it carefully and following our guidelines on preparation and cleaning (<http://www.youtube.com/watch?v=AWNWhLWcriY>).

But what if an electrode needs to be exchanged? How can you distinguish between a noisy signal due to inadequate preparation or a faulty electrode? How can you rule out the possibility that it is the LED that is not working rather than the electrode itself? To help you in handling your actiCAP, I offer a flowchart which will hopefully help if you encounter any inconvenience with your actiCAP.

First of all it is always worth checking in the actiCAP ControlSoftware whether all electrode sets are recognized. This information can be found under: Help > About.

With this you may already rule out if a problem is arising on the level of the flat ribbon cable or the amplifier. If all sets are recognized correctly, steps as indicated in the flow chart may be followed.

If your issue cannot be solved by the trouble shooting above, don't hesitate to contact Brain Products' Technical Support ([techsup@brainproducts.com](mailto:techsup@brainproducts.com)).

#### **Extra tip**

actiCAP electrodes should be cleaned with lukewarm water after each use. However, the water quality can affect the durability and performance of the electrodes, especially if your water supply has high iron(II) oxide levels. If you know that this could be the case in your laboratory you might consider using water filters in your research facility.