Product Development

actiCAP - technical innovations

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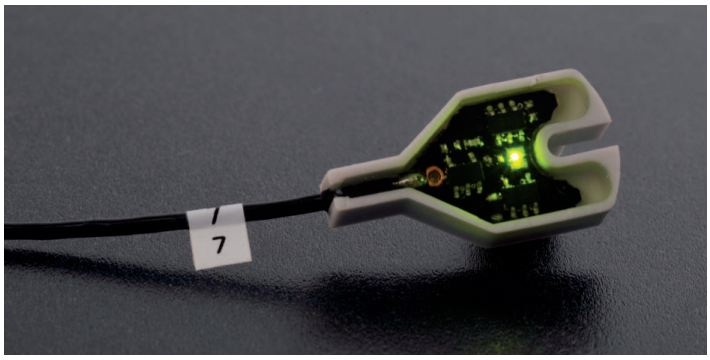
Is there anyone who has not yet heard of our actiCAP systems?

actiCAPs are high-tech active electrode caps which make it possible to record EEG signals that are practically free of artifacts both in the laboratory as well as in more natural, and also more extreme, situations (find example at www.brainproducts.com/extreme_eeg.php). Some of the more interesting features they offer are: Special miniaturized processors which convert elec-trode input impedance directly at the sensing site, thus boosting signal resistance against electromagnetic artifacts during electrode-to-amplifier transmission. What is more, noise reduction circuits (active shielding) guarantee an optimized signal-to-noise ratio. Three-color LEDs indicate the impedance level directly at the electrode, thus making it possible to prepare subjects without connecting them to the amplifier. Last but not least, actiCAPs can be used with all our amplifier systems.

Since market launch in 2005, the quality and standards characteristic of actiCAPs have been continuously improved in the light of both Brain Products' experience and our customers' opinions and re-quirements. Brain Products is now proud to present a summary of the most important product improvements of recent months.

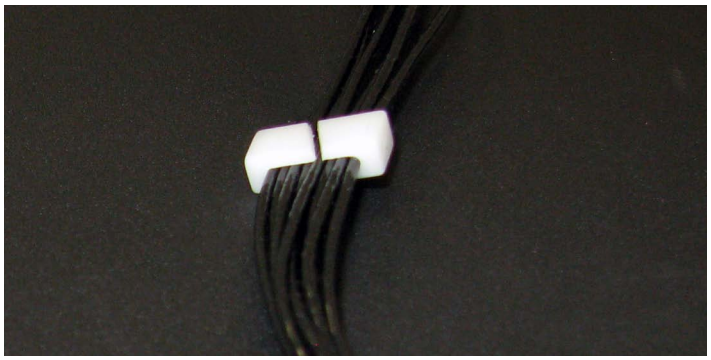
Electrodes

- The electrodes are fixed in a rigid case (see picture 1). This design has a number of advantages: better fit in the electrode holders, better electrode protection against pressure and improved protection of pellets against breaking, easy to clean.
- Gel is now applied through an elongated aperture (see picture 2) instead of a small hole. This is not only more accurate but also permits faster cleaning by reducing washing times by about 30%.
- Transparent casting compound to enhance electrode visibility and provide a more attractive appearance.
- Clips on cable harness (one clip for 4 cables) keep cables separate (see picture 3)



Pic. 1

Pic. 2



Pic. 3

Splitter Box

- Connector fastening inside box: electrode coupling to the connector is more stable and the electrodes cannot be accidentally detached from the connector.
- Clip on splitter box (see picture 4): boxes can now be fixed on the subject's clothes and there is therefore no risk of the cap becoming displaced due to cable and box weight.

Pic. 4

We are currently working on further improvements to the actiCAP control software itself and its implementation within our well known acquisition software (BrainVision Recorder). We will keep you informed of these developments in forthcoming Press Releases. ●