



## RELAX

### Accurate relaxation monitoring device for everyday life

#### What is RELAX?

**RELAX is one of the most compact and lightweight EEG device measuring and monitoring brain activity outside a clinical environment.**

It can be used by anyone at home, work or elsewhere to provide real-time neurofeedback by measuring, for instance, alpha brain waves. Users can monitor their own level of attention and enhance their mindfulness using this safe, user friendly, affordable and non-invasive device. RELAX is fitted with dry electrodes that sense and measure the alpha waves generated by the brain when in a relaxed, laid-back mood.

To make the most out of RELAX, CEA-Leti has developed the RELAX App, which live-tracks your relaxation levels by processing and recording your alpha waves.

#### Applications

Relax offers various well-being applications including brain fitness through "Neurofeedback": this powerful stress management and sleep enhancement technique leads to spectacular improvement in a person's quality of life.

## What's new?

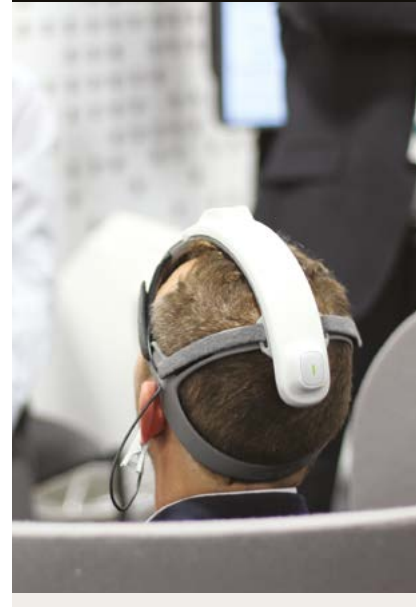
- EEG (Electroencephalography) device to operate with dry electrodes
- Highly compact and lightweight solution
- Simplified technology making alpha wave measurement available outside the clinical environment
- Embedded in a proprietary electronic platform
- More than 10 years of experience in brain activity measurement
- RELAX is built using "off-the-shelf" components

## What's next?

CEA-Leti researchers continuously work on improving the performance of the RELAX system, including the development of new applications. Because decision support is vital for healthcare, emergency medicine is a special focus. Monitoring brain electrical activity can help make the right decision in the event of sudden loss of consciousness, comas, monitoring of neurological disorders (schizophrenia, bipolarity...), etc.

We are working on the possibility of controlling the contact pressure of the electrodes on the skull for optimized signal quality.

The team is currently working towards the miniaturization of the system. They are investigating optimizing the electronics within, embedding data treatment of evoked potentials, implanting electrodes for improving signal to noise ratio, as well as improving measurement using multimodality, in particular fNIRS transducers (functional Near Infra Red).



## Interested in this technology?

Contact:  
**Olivier Fuchs**  
[olivier.fuchs@cea.fr](mailto:olivier.fuchs@cea.fr)  
+33 645 755 715

**CEA-Leti, technology research institute**

17 avenue des Martyrs, 38054 Grenoble Cedex 9, France

[cea-leti.com](http://cea-leti.com)

   @CEA-Leti

 **Research**  
for industrial  
innovation