Neurofeedback and biofeedback therapy

Train your brain, Clean Your mind, Enjoy your life

神经反馈、生物反馈疗法

训练大脑 清净思维 享受生活

- RubyMind provides one of the best system for Neurofeedback and biofeedback therapy. That available in 2/4/8 channels, coming with much precise bio-sensors and flexible cap and connectors. Our powerful and user-friendly software to play much games and videos lets you have a rich setup to neuro/bio-feedback training in treatment of mental diseases such as ADHD, stress , anxiety, phobia and more.

- Neurofeedback System (eWave)

- Bio-Sensors

- eProbe / eLife

RubyMind 公司为神经反馈和生物反馈疗法提供了最好的系统之一。产品 2/4/8 频道可用，配备高精度的生物传感器和灵活的头套以及连接器。我们的软件功能强大且人性化，可播放大量游戏和视频，让用户通过完备的计划来进行神经/生物反馈训练，以治疗精神疾病。如注意力缺陷多动障碍，压抑，焦虑，恐惧症等等。

- 神经反馈系统（eWave）
- 生物传感器
- eProbe / eLife

- What is Neurofeedback?

Neurofeedback is a non invasive technique of a self-regulation in which the current parameter of the electrical brain activities recorded from the subject’s scalp are presented to that subject through game, video, auditory while she/he tries to reach a more efficient mode of brain functioning.

Neurofeedback is a direct training of brain function, by which the brain learns to function more efficiently. In this method the information back to the person, and her/his brain get a reward for modifying its own

activity to more appropriate patterns. It allows us to modulate brain activity.

什么是神经反馈？
神经反馈是一种非侵入性的自我调节技术，在游戏，视频，听力过程中，通过头皮记录受试者脑电波活动的当前参数，并呈现给受试者，使她/他能尝试拥有更高效的大脑功能运行模式。
神经反馈是对大脑功能的直接性训练，能使大脑更有效地发挥功能。 在此方法中，信息将反馈给用户本身，同时他/她的大脑相应的作出反馈，将其活动调试为更适当的模式。通过神经反馈使我们能够调节大脑活动。

- Who has been using the Neurofeedback therapy?

Astronauts (NASA)

Football players

Professional Golfers

Musicians (Imperial College of London)

Working Executives

People with Special Needs

Students

谁一直在使用神经反馈疗法？
宇航员（美国宇航局）
足球运动员
职业高尔夫球手
音乐家（伦敦帝国学院）
企业高管
特殊需求的人群
学生们

- The Harmony of Science and Precision

科学与精度的统一

- Neurofeedback can be helpful for :

Stress

Anxiety

Attention deficits (ADD/ADHD)

Autism

Depression

Migraine

Addiction

Enuresis

Obsession

Inability to learn

phobia

神经反馈将有助于：
压抑
焦虑
注意力缺陷（注意力障碍 /注意力缺陷多动障碍）
自闭症
抑郁
偏头痛
瘾症
夜尿
强迫症
学习无能症
恐惧症

- Neurofeedback therapy recommended for:

Improving Learning

Enhancing Memory

Improving speech and Language

Improving Focus

Increasing Alertness

Achieving peak academic performance

maximizing work and sporting performance

Getting better sleep

Reducing anxiety/depression

Reducing stress

神经反馈疗法推荐用于：
改善学习
增强记忆力
改善口语和表达能力
提高注意力
提高敏感度
达到学术成就巅峰
最大限度地提高工作和运动表现
获得更好的睡眠
减少焦虑/抑郁
减轻压力

- eWave

- Available in 2/4/8 analog channels for the best applicability
- Neurofeedback & Biofeedback system
- 8 channel 24 bit analog to digital converter
- highly precise recording data (1KS/S)
- Wireless transferring data
- lightweight, portable and easy to use
- Rechargeable battery, perfectly isolated
- 2 digital input channels, 2 digital output channels
- Empowered with GSR, BVP/HR, skin conductance and temperature sensors
- coming with eProbe an accurate and flexible software for data recording and analyzing bio-signals.

- Compatible with many games and videos for neurofeedback therapy.
- Coming with a novel tool to control some toys by bio-signals in neuro/biofeedback therapies
- Dimensions (w x h x d): 117 x 66 x 20 mm
- Net weight 138 g

2/4/8 模拟通道可用 提供最佳适用性
神经反馈和生物反馈系统
8 频道 24 位数字转换器
高精度的记录数据（1KS / S）
无线传输数据
轻巧，便携和易使用
可充电电池，完全绝缘
2 个数码输入通道，2 个数码输出通道
配备 GSR（皮肤电流反应），BVP / HR（血容量脉冲），皮肤电导和温度传感器
与 eProbe 一起使用一个精确而灵活的软件来记录和分析生物信号
与许多用于神经反馈治疗的游戏和视频兼容
在神经/生物反馈疗法中用一种新颖的工具来控制一些玩具的生物信号
尺寸（宽 x 高 x 深）：117 x 66 x 20 毫米
净重 138 克

- Specifications of eWave

eWave 参数

- Data Acquisition

Technology: ARM Cortex 32
Processor: 160 MHz
Data Connection: bluetooth wireless, 1 Mb/s, up to 10 meters

- 数据采集
  技术：ARM Cortex 32
  处理器：160 MHz
  数据连接：蓝牙无线，1 Mb / s，高达 10 米
  模数转换器
  频道号码：2/4/8
  ADC 分辨率：24 位
  线性误差：7.6ppm（最大）

采样率：每通道每秒 1000 个采样

- Analog to Digital Converter

Channel numbers : 2/4/8
ADC resolution : 24 bit
Linearity error : 7.6ppm (maximum)
Sample rate : 1000 samples per second per channel

- 模拟数字转换器

通道号码：2/4/8
ADC 分辨率：24 位
线性误差：7.6ppm（最大值）
采样率：每通道每秒 1000 个样本

- Bio Amplifier

Channel numbers: 8

Amplifier type: Differential; DC

Gain: 50

Common mode rejection ratio: 75dB @ 500Hz

Low cut filter: DC

High cut filter: 500Hz

Input voltage range: 2.5 V

Maximum analog input voltage : 2.5 V

Input impedance : 1000 Giga ohm

Input leakage current : 60pA (typical)

Input capacitance: 8p

- 生物放大器
  频道号码：8
  放大器类型：差分; DC

增益：50
共模抑制比：75dB @ 500Hz

低切滤波器：DC
高切滤波器：500Hz
输入电压范围：2.5 V
最大模拟输入电压：2.5 V
输入阻抗：1000 千欧姆
输入漏电流：60pA（典型值）
输入电容：8p

- Other Specifications

AUX channels: Skin conductance, Temperature, BVP/ HR

channels: EMG, EEG, EOG, ECG (8 channels)

Power: Battery(Lithium, 3.7V) , Battery Charger 5V

- 其他参数
辅助频道：皮肤电导，温度，BVP / HR
频道：EMG，EEG，EOG，ECG（8 频道）
电源：电池（锂电，3.7V），电池充电器 5V

➢ Simultaneously measuring a wide variety of physiological signals

同时测量多种生理信号

Brain waves

Muscle tension

Heart rate

Blood volume pulse

Skin conductance

Temperature

脑电波
肌张力
心率
血容量脉冲

皮肤电导
温度

- New generation of eWave

Enhancing the resolution of analog to digital converter to 24 bit and having the sample rate of 1000 sample/second for all channels gives you a highly precise view of the signals in a wide frequency range(0-500 Hz)

Embedding our novel differential amplifiers for all channels remove the common mode noise. Also DC wide range low gain amplifier prevents any possible saturation during movement.

新一代的 eWave
将数字转换器的分辨率提高到 24 位，所有频道的采样速率为 1000 采样/秒，使用户能够在很宽的频率范围内（0-500 Hz）查看高精度信号。
在所有频道中植入我们最新的差分放大器以消除共模噪声。 此外，直流电宽波段低增益放大器可防止移动过程中可能出现的任何磁饱和。

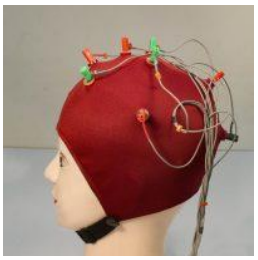
Bio-Sensors

- eWave comes with highly precise and flexible bio-sensors for biofeedback therapy

eWave 配备高精度和灵活性的生物传感器，用于生物反馈疗法

(BVP) sensor

血容量脉冲传感器



ecap

e 头套

(GSR) sensor

皮肤电流反应传感器

Respiration sensor

呼吸传感器

Temperature sensor

温度传感器

cable& connectors

缆线和连接器

- The flexible blood volume pulse (BVP) sensor

The BVP sensor actually measures the heart rate based on the volume of blood that passes through the tissues in a localized area with each beat of the heart. BVP is a critical parameter that can be used for biofeedback training to control and treat tension, headaches and migraine.

- It available in two kinds of finger and forehead models
- Recording HRV, BVP and HR
- Using infrared transmitter and receiver

- Connectivity of multiple sensors to eWave and RubySense

灵活的血容量脉冲传感器

血容量脉冲传感器实际上是根据心脏每次搏动时局部区域中穿过组织的血液量来测量心率。BVP 是一个关键参数，可用于生物反馈训练，以控制和治疗紧张，头痛和偏头痛。

- 手指和前额两种型号可用
- 记录心率变异，血容量脉冲和心率
- 使用红外发射器和接收器
- 将多个传感器连接到 eWave 和 RubySense

➢ eCap

Standard, flexible and beautiful cap for EEG/ERP and Neurofeedback recording

- Compatible with connecting to any kind of EEG/ERP recording systems
- fits in several cap sizes (S, M, L)
- Quick application and easy to use
- Durable and easy to clean
- Designing based on 10-20 standard map brain

e 帽盖

标准，灵活和美观的脑电图/ 事件相关电位和神经反馈记录

- 可兼容连接任何种类的脑电图/ 事件相关电位记录系统
- 适用多种帽盖尺寸（S，M，L）
- 快速熟练且易于使用

- 耐用且易于清洁
- 基于 10-20 标准脑谱图的设计

➢ Ideal Galvanic Skin Response (GSR) sensor

Standard, flexible and beautiful cap for EEG/ERP and Neurofeedback

Galvanic skin response (GSR) or skin conductance that measures the electrical conductance of skin, which varies depending on the amount of sweat-induced moisture on the skin.

理想的皮肤电流反应（GSR）传感器
标准，灵活和美观的帽盖，用于脑电图/ 事件相关电位和神经反馈
皮肤电流反应（GSR）或皮肤电导用于测量皮肤电导率，根据皮肤上由汗水引起的水分量变化而变化。

➢ Wearable respiration sensor

- Respiration monitoring is a critical parameter for biofeedback training.
- Our respiration sensor belt can be worn over clothing. It is also better to place it in the abdominal area.

佩戴式呼吸传感器

- 呼吸监测是生物反馈训练的关键参数
- 我们的腰带式呼吸传感器可以穿在衣服外，亦可穿在腹部区域

➢ High precision temperature sensor

The highly precise sensor for measuring the skin temperature.

The temperature of our body is related to our stress level. Having a highly precise temperature sensor beside other sensors of RubyMind provides you a rich setup for biofeedback therapy. e.g increasing relaxation and reducing stress.

高精度温度传感器
用于测量皮肤温度的高精度传感器

身体的温度与我们的应力水平有关。 除了 RubyMind 的其他传感器之外，还有一种高精度的温度传感器，可为您提供丰富的生物反馈治疗。例如增强舒缓感和减轻压力。

- Flexible cable and connectors for EXG recording
- 10 pin- (8 Channel EXG signal + 1 reference +1 GND)
- 9 Pin-1X (4 channel differential EXG recording +1 GND)
- Compatible with all types electrophysiological signals (EEG/ECG/EMG/EOG)

用于记录 EXG 的灵活缆线和连接器

- 10 接口 -（8 通道 EXG 信号+ 1 参考+1 GND）
- 9 接口-1X（4 通道差分 EXG 记录+ 1 GND）
- 兼容所有类型的电生理信号（EEG / ECG / EMG / EOG）