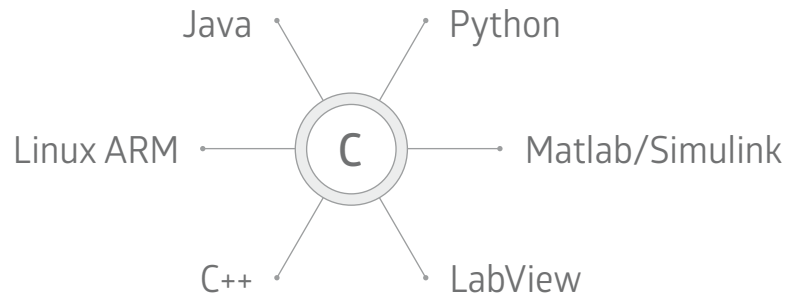


C-library for a simplified integration

Low- and Mid-level protocols were directly supported by a pre-compiled C-library. This library simplifies the integration in customer-specific applications or computer programming environments such as Matlab/Simulink, Scilab/Xcos or Python.



Performance

- 4 stimulation channels
- frequency 1-500* Hz
- pulse width 10 μ s - 4 ms (1 μ s steps)
- amplitude 0-130 mA (0,5 mA steps)
- adjustable stimulation waveform (16 characteristic points)
- compatible for Demux/Array applications
- MatLab/Simulink library
- pre-compiled library for several compiler (e.g. MSVC, GCC)

* full load on 4 channels

More information: Tel. +49 391 6107 645

HASOMED is certified according to DIN EN ISO 13485 and thus authorized to develop, manufacture and market medical devices. Made in Germany



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HASOMED

RehaMove[®] 3

Functional Electrical Stimulation



Research Application

ScienceMode – central tools for FES research & development

The effect of Functional Electrical Stimulation (FES) is topic of scientific investigations worldwide. Research requires high performance stimulators with multiple options concerning individual adjustment and external control.

Succeeding RehaStim1 and RehaStim2, HASOMED presents RehaMove3 – the 3rd generation within 15 years to satisfy clinical and research needs. The ScienceMode protocol for scientific FES applications was developed in close cooperation with the Technische Universität Berlin.

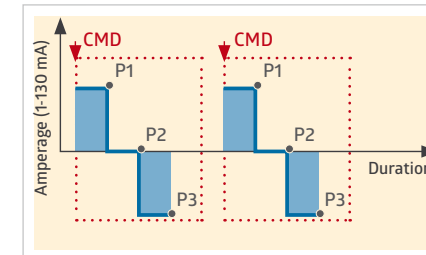
ScienceMode enables the communication between a PC or external device and the Stimulator via USB using an extensive protocol to control all stimulation tasks.



ScienceMode - serial USB communication

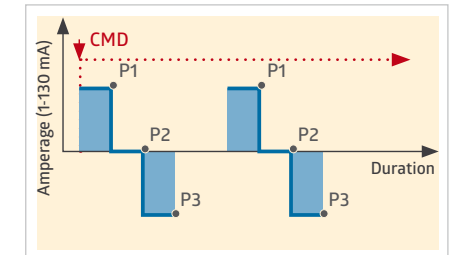
New Low-Level & Mid-Level communication protocol

LOW-LEVEL



The Low-Level Layer allows explicit manipulation of every aspect of the stimulation waveform and the stimulation timing. Each stimulation impulse must be initiated by the control program, which enables individual non-periodic stimulation patterns.

MID-LEVEL

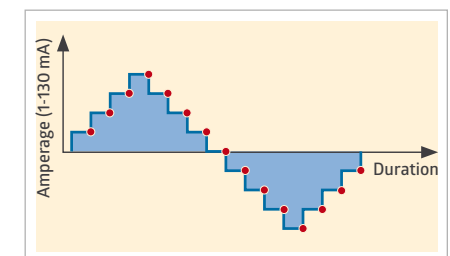


The Mid-Level Layer implements a minimalistic command set with most common stimulation parameters. Corresponding stimulation commands are generated directly by the RehaMove3 with the favored stimulation frequency.

Adjustable stimulation waveform

Up to 16 characteristic points allow an extensive level of control over the waveform.

Each point is defined by a duration and a current. Any number of waveforms can be created this way. The duration of each point can be chosen in 1 μ s steps between 10 μ s and 4095 μ s. The current has a resolution of 0.5 mA and is limited to 150 mA at the highest setting.



HASOMED FES solutions have been applied in worldwide scientific projects for more than 10 years. Your contribution is warmly welcomed for investigations regarding the effectiveness of FES with RehaMove3. HASOMED will support research activities.