Sanity Check

L. Krieger, P. Samimi

September 2020

1 Introduction

Different Traumschreiber are tested with a sine generated by the function generator, induced to various channels. Sinus signals with 5 Hz, 40 Hz, 50 Hz, 60 Hz, 80 Hz and 50 mV are tested.
We are testing the newly implemented filtering.

2 Setup

Function Generator:
Traumschreiber: Internal Reference
Bluetooth Receiver: App 1.05-beta (10/11.09.2020)

3 Experiment Overview

All recordings can be found at the project's GitHub.

3.1 10.09.2020

Exp1: Board 07, 5Hz, 50 mV. Newest Board Programming
Exp2: Board 03, 5Hz, 50 mV. Newest Board Programming
Exp3: Board 03, 80Hz, 50 mV. Newest Board Programming
Exp4: Board 03, 50 Hz, 50 mV, newest Board Programming
We detected an error in the decoding, experiment was postponed to the next day when the error was fixed. The following experiment descriptions start again with Exp 1 but are with the new (11.09.20) board programming.

3.2 11.09.2020

Exp1: Board 03, 5 Hz, 50 mV. Channel 0
Exp2: Board 03, 50 Hz, 50 mV. Channel 0
Exp3: Board 03, 70 Hz, 50 mV. Channel 0

Exp4 : Board 07, 5Hz, 50 mV. Channel 0
Exp5 : Board 07, 40Hz, 50 mV. Channel 0
Exp6 : Board 07, 70Hz, 50 mV. Channel 0
Exp7 : Board 07, 5 Hz, 50 mV. Channel 1
Channel two was visually inspected and looked fine. So we're moving on to Board 8
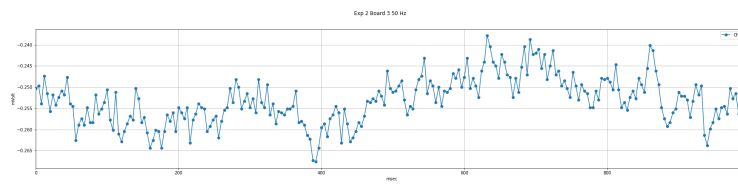Exp8: Board 08, 5 Hz, 50 mV. Channel 0

Figure 1: 50 Hz with Filtering (Board 03)

3.3   EOG (11.09.2020)

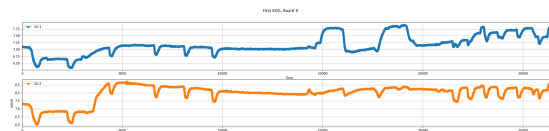Subject Ground to Ear lobe. Active Reference to Forehead Channel 0 to temple Channel 1 to Under the Eye

Figure 2: Results and Setup of the First EOG Experiment