

VA-10X Voltammetric Amplifier

for amperometry and cyclic voltammetry on single cells



Ref: L. Feinshreiber et al.(2010), J.Cell Sci., **123**, 1940-1947
 A. Horner et al.(2009), Biophys.J. **96**, 2689-2695
 T. Ladas et al.(2009), Eur.J Neurosci. **30**, 602-610
 J.C. Mathai et al. (2009), PNAS, **106**, 16633-16638
 C. Maucler et al. (2013), ACS Chem Neurosci., **4**, 772-781

Features:

- ➔ Optional frequency booster for recording very fast signals
- ➔ Filter settings from 20 Hz to 20 kHz in **sixteen** steps, 4-pole or 8-pole Bessel filter (1-pole filter on request)
- ➔ 3-electrode headstage for a floating command potential available
- ➔ Gain settings from 0.5 to 50 mV / pA in seven steps
- ➔ Precise built-in voltage source for DC amperometry (+/- 1000 mV standard, +/- 2000 mV optional)
- ➔ Low noise, works in picoampere range
- ➔ Ideally suited for recordings from single cells
- ➔ Can be operated with external waveforms for cyclic voltammetry
- ➔ Telegraph outputs for easy interfacing to data acquisition systems
- ➔ Applications:
 - Allows simultaneous electrophysiological recordings during voltammetric or amperometric investigations using headstages with differential inputs
 - Can be used in scanning electrochemical microscopy
 - Also suitable for **lipid bilayer** recordings

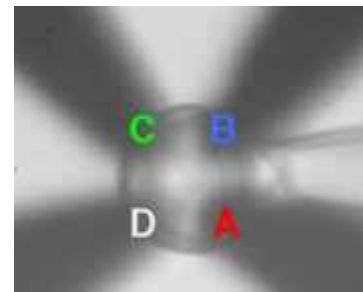


also available
as EPMS-07
module

Use with 5 μ m carbon fiber electrodes also available from npi

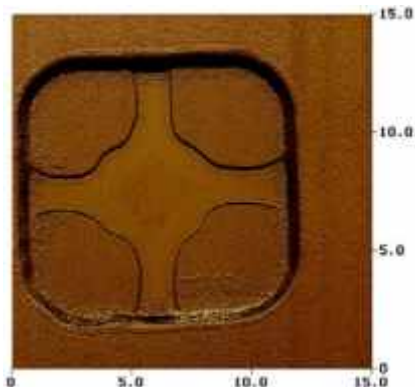


made to measure

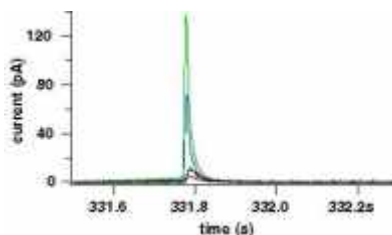


chromaffin cell on top of the detector array

pictures kindly provided by Prof. Lindau



electrochemical detector array
dimensions are in μm



VA-10 Voltammetric Amplifier Module

Module for amperometry and cyclic voltammetry



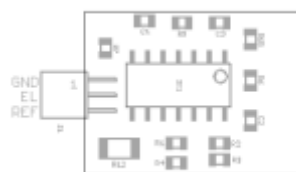
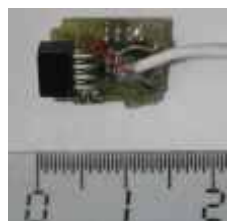
⇒ Modular concept for highest flexibility

⇒ Economically priced

⇒ Suited for electrochemical detector arrays

⇒ Compact 4-channel headstage

Ref: Y. Zhao et al. (2013), PNAS, **110**, 14249-14254
I. Hafez et al. (2005), PNAS, **102**, 13879-13884
C. Spiegel et al. (2007), Electroanalysis **19**, 263-271



Size: 13x19 mm

⇒ Complete potentiostat with frequency booster on one PCB

⇒ Mini headstage for measurements in freely moving animals

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