

The CANSTAT-4

This was the first four-channels potentiostat specially designed for the on-line recording of catecholamines released from adrenomedullary tissues.

We have successively used CANSTAT-4 for analysing secretory responses from isolated chromaffin and PC12 cells as well as from perfused rat adrenal glands.

This is a three-electrode potentiostat that can work at fixed- or at variable-voltage (cyclic voltammetry).

The amplifier has been recently upgraded for improving the display. CANSTAT-4 incorporates

Basic features.

Output voltage: ± 12 V

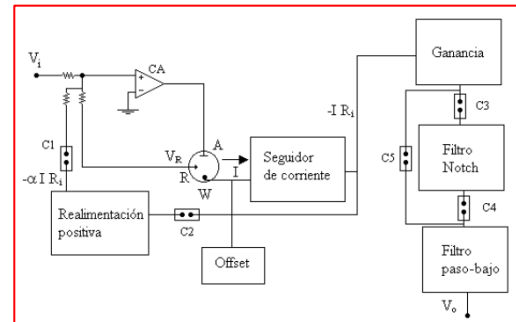
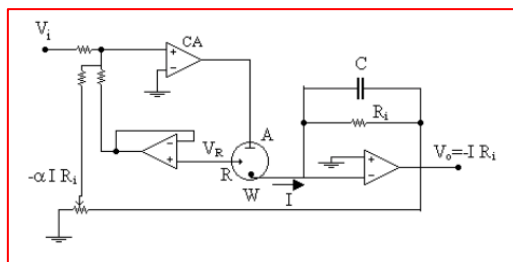
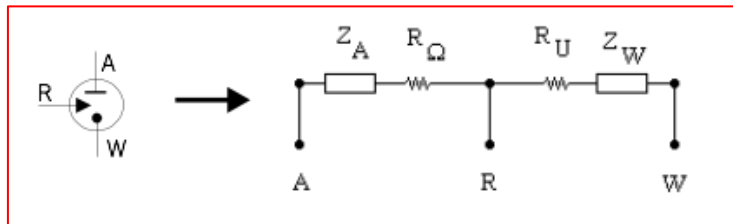
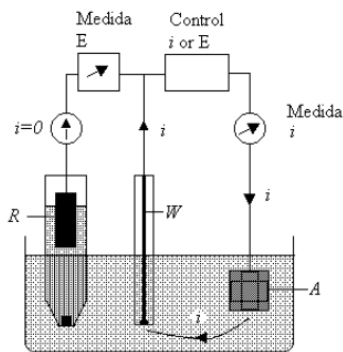
Current output: ± 1 pA to ± 10 μ A

Offset range: 0-1000 nA

Gain range: 1-5,000 nA/V

Analog filter range: 0.1- 2 Hz

Basic electronics



Front view and one of the modules

CANSTAT-4 was created with the collaboration of **Dr. José F. Gómez** (a part of his PhD Thesis) and **Mr. Francisco Barreto** (Head Technician of ULL Workshop).

ACCESSORIES

CANSTAT cell.

New developed **electrochemical cell** specially conceived for on-line recording of catecholamine secretion from adrenomedullary tissues.

(see the description in this web)

CANSValve.

New **electronic valve controller** driven by TTL signals provided by the dedicated or general software (PowerLab/Labchart, ADInstruments, Australia). It can also work manually.

(see the description in this web).

CANSInject.

A system for drug application for perfused tissues. It uses 4 syringes driven by a step motor.

(see the description in this web).

CANSCollect.

A fraction collector adapted to almost any kind of tubes. It permits the parallel collection of samples from the perfused/perifused tissues. All of the pieces needed for its construction are in a public repository. Its final cost is under 100 €.

(see the description in this web).

Accessories from commercial sources.

Roller-pump also can be controlled from the software.

Data acquisition. We currently use Labchart.