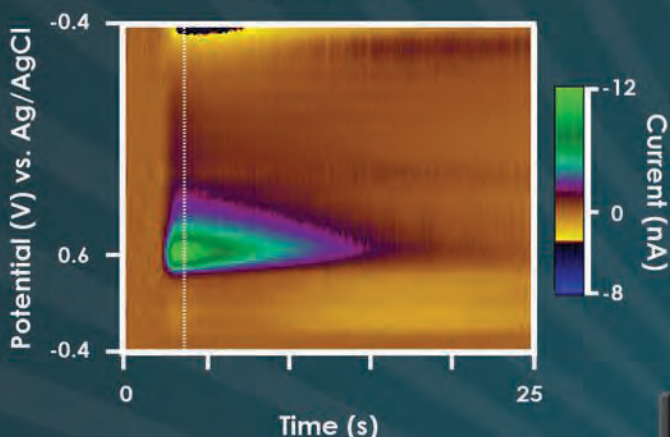




WaveNeuro

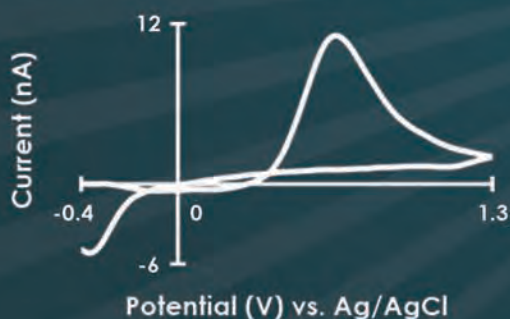
Fast-Scan Cyclic Voltammetry
Potentiostat System

Color Plot



Evoked release of dopamine from the dorsal striatum *in vivo*. Color plot and single background subtracted cyclic voltammogram obtained with WaveNeuro and Pine Research headstage and cable.

Cyclic Voltammogram



Experience the WaveNeuro Advantage

- Small, one-case solution (no breakout box required)
- Designed by FSCV electrochemists for FSCV users
- Compatible with existing software
- Uses Pine Research headstage cables
- Full technical support available
- Regular production item - no excessive lead times
- Designed, tested, and built in USA



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WaveNeuro Specifications

Electrode Connections

Headstage Connector:	Female DB-25 connector provides electrode signal lines and power to the electrochemical headstage, supports electrical stimulation
Stimulation Connector:	Male two prong connector, receives stimulation current from external source
Reference Electrode:	White lead from the electrochemical headstage
Working Electrode:	Yellow lead from the electrochemical headstage

Grounding

Signal (DC Common):	Signal ground isolated from power and floats with respect to the instrument chassis and earth ground
Chassis Terminal:	Chassis terminal is a banana jack on back panel

Measured Current

Current Range:	Defined by electrochemical headstage ($\pm 2,000$ nA/V headstage included)
ADC Input:	16-bit resolution provided by interface board
Filters:	Selectable; lowpass up to 14 kHz, wide bandpass, narrow bandpass, bypass

Applied Potential (Potential Ramp Waveform)

Ranges:	± 3.3 V (maximum range)
Resolution:	100 μ V (min. resolution, interface board imposed)
DAC Output:	16-bit resolution
Filters:	Selectable; lowpass up to 2 kHz, 5 kHz, or 10 kHz, & bypass
CV Scan Rate Limit:	5,000 V/sec

Measured Potential (Software and Interface Board Imposed Limits)

Resolution:	100 μ V (min. resolution, interface board imposed)
Accuracy:	$\pm 0.02\%$ of range (interface board specifications)
ADC Input:	16-bit resolution

Data Acquisition (Software Imposed Limits)

Point Interval:	500 nsec (minimum)
Synchronization:	simultaneous sampling of all analog input signals
Raw Point Total:	>10 million per experiment

Accessories

Dummy Cell:	external dummy cell included
Headstage Cable:	DB-25 connector
Headstage Amplifier:	2000 nA/V, working electrode driven
Electrode Connectors:	white = reference; yellow = working
Power Supply:	C14 socket accepts variety of C13 style cables

Output Connections (Top Panel)

STIM +:	Digital, BNC female, TTL compatible
STIM -:	Digital, BNC female, TTL compatible
CVF:	CV Frequency, Digital, BNC female, TTL compatible
FLOW:	Flow Cell Trigger, Digital, BNC female, TTL compatible
E-PHYS:	Timing Trigger, Digital, BNC female, TTL compatible
ABS:	Analog Background Subtraction, BNC female, max ± 10 V bipolar output (requires special headstage)
STIM OUT:	Stimulation Waveform, Analog, BNC female, max ± 10 V

Input Connections (Top Panel)

NON-CV:	Auxiliary Analog Input, BNC female, max ± 10 V
PASSTHRU:	External Stimulus to Headstage Input, BNC female
BEHAVIORAL:	Female DB-25 connector for recording up to 15 TTL signals such as switch press, lever out, light on, etc.



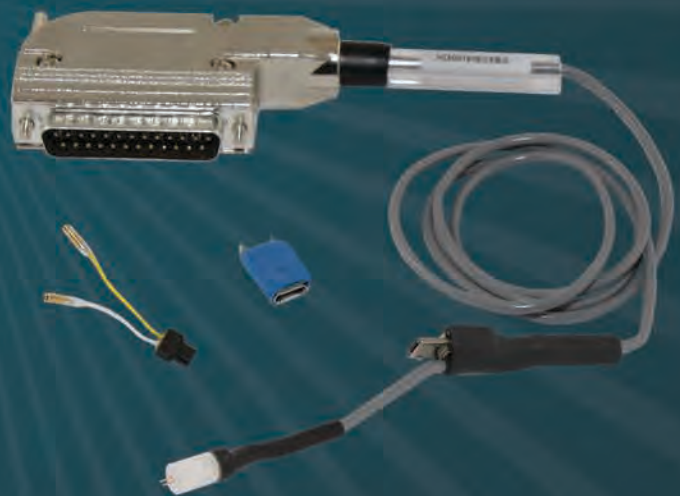
Interface

Connector 0:	68-pin VHDCI male connector
Connector 1:	68-pin VHDCI male connector
Compatible DAQ Interface:	National Instruments PCIe-6363 (sold separately)
DAQ Interface Cables:	National Instruments SHC8-68 EPM x2 (sold separately)
Control Software:	Industry-common LabView-based software available to researchers (not provided)

General Specifications

Power Required:	12.0 VDC ($\pm 5\%$)
Power Supply:	Input: 100 to 240 VAC, 2.3 A, 50 to 60 Hz Output: 12.0 VDC, 2.0 A
Power Cord:	various international cables available separately
LED Indicators:	power, input and output filter selection, BNC activity
Instrument Dimensions:	58 x 242 x 242 mm (2.25 x 9.5 x 9.5 in)
Instrument Weight:	2.0 kg (4.5 lb)

Headstage & Cable



- Novel three-part design consisting of independent cable, headstage, and electrode connectors
- Fully compatible with WaveNeuro and other major FSCV systems
- A compact design with lightweight components
- Each component is fully replaceable
- Cable includes stimulus connection
- All items in stock - no long lead times

**All specifications are subject to change at any time.*

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