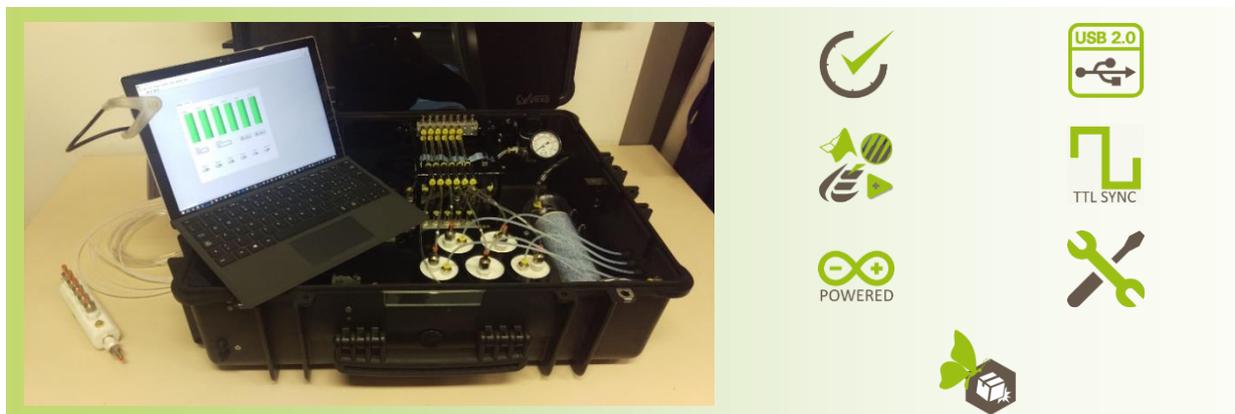


Sniff-0 Olfactometer



This Olfactometer-in-a-suitcase is a completely redesigned, multichannel, high speed, precise and transportable odor dispensing unit. By integrating a standard computerized software controller to our custom build electronics modules, it provides you with full control of your experimental designs while providing the speed, accuracy and reliability you require. Additional features such as automated valves and system calibration, drastically reduce setup and experimental time. The compatibility with the most common programming platforms and built-in digital input/output trigger channels give you the freedom to design the experiments you want, and not those your hardware allows.

Main features



Real-time system: high speed valves, calibrated flow rates, precise trigger management and dynamic user interface means you can manage your experiments in real time



USB interface to communicate to the host PC through an emulated serial port supported by all operating systems



Compatible with the most diffused application frameworks such as MatLab®, Octave, E-Prime®, LabView®, PsychoPy



Custom build electronics module minimises noise and delays to allow a precise valve and motor control as well as synchronization from/to external TTL compatible devices



Open programmable Arduino based architecture, allowing you to configure and personalize all aspects: standard firmware means you will be able to program the unit yourself, or choose to have us build a customized solution for your research needs



Multiple channel, inputs, comm and level of automation configurations available as well as customizable interface for your specific research needs (available upon request)



Elegant and portable rugged protective case to safeguard your equipment wherever you may want to use it

Specifications

OS support	<i>Windows®, MAC®, GNU/Linux using Arduino Due IDE drivers</i>
Communication	<i>USB 2.0 / USB 3.0 compatible (no additional software should be needed)</i>
Programing	<i>Python, MatLab®, Octave, C, C++, E-Prime®, LabView®, PsychoPy</i>
I/O	<i>Digital I/O ports (1+1) for "Real time" triggering applications BNC ports, TTL or Open Collector Compatible 1 Input (0-5V, 10V tolerant) and 1 Output (0-5 V)</i>
Triggering Speed	<i>Up to 200Hz; Pulses as short as 1ms</i>
Compliance	<i>CE EN 61000-6-3:2007; Meets Electromagnetic Compatibility – Radiated Emissions EN 61000-6-3:2007 standard</i>
Dimensions	<i>670 x 520 x 270mm and 25 kg (approximately for 12+1 ch. Model)</i>
Power	<i>12V operating voltage via provided 110-220V 50-60Hz universal power supply (CE/FCC compliant)</i>

Features

Valves	<i>Ultrafast solenoid valves (< 4ms) and proportional servo valves (make variable odor concentration levels, odor cross-over and controlled fade-in or fade-out possible)</i>
Multi-channel	<i>Ability to run multiple channels simultaneously, each with specific and even variable flow rate and independently of constant flow rate if desired</i>
Flexibility	<i>Ability to run randomised trials (channel and flowrate) within a single experiment; Fully flexible programing of odor stimulation including flow rate, ramping (fading in or out of odor), timing, delays and trigger events</i>
Precision	<i>Built-in gas flow stabilizer and meter sensitive to +/- 0.01 L/min</i>
Connectivity	<i>Built-in microcontroller can be accessed via USB from almost any computer</i>
Open Source	<i>Use of open source libraries and fully flexible Arduino programming platform</i>
Silent	<i>Extremely quite operation (<40 dB @ 1m/3.3ft)</i>
Triggers	<i>2 digital I/O channels compatible with any TTL 5V input/output triggers</i>

Options/add-ons

- Incoming air active carbon filtration module (only necessary if you are not sure of the purity of your incoming air)
- Automatic airflow calibration for each channel in a matter of seconds
- Built-in touch GUI with in-unit data synchronisation and recording features
- Alternative tube and nasal adapter lengths and materials
- Customized and split nostril stimulation manifolds
- Additional digital I/O channels (TTL trigger input/output compatible)
- Push button subject response keypad to trigger or to measure feedback/subject response (multiple button keypads and fMRI compatible keypads coming soon)
- Additional modules for monitoring subject physiological functions under development - please ask for details