

Sniff-Exp



Sniff-Exp is a two-channel independent input expansion to our Sniff-0 olfactometer which allows for the use of source gases other than ambient air as is the case for all Sniff-0 channels. It can be connected via daisy-chain network to other *Sniff-0* devices to increase the total number of channels available and provides independent channels for additional stimulant mixtures containing gases such as O₂, air, N₂O, CO₂ *. Alternatively, it can be used with large odor vessels able to contain actual items, including live animals, in order to present “real” fresh odorants.

Sniff-Exp uses a standard controller and highly optimized proprietary electronics to provide complete control over your experiments, ensuring speed, accuracy, and reliability. Additional features, such as automated proportional valves, the measurement of propagation delays, and channel-by-channel auto-calibration, significantly reducing configuration times and ensuring maximum repeatability of experimental protocols. The integrated digital input and output trigger channels allow you to design experiments in complete freedom.

Sniff-Exp can be programmed and updated from a standard PC via USB interface, is built into a ruggedized carrying case and can handle up to two independent sources of clean oil-free gas mixtures.

Main features



It is compatible with O₂, air, N₂O, CO₂ and mixtures



Our open-programmable Arduino-based architecture enables you to customize and personalize all aspects



USB interface service port supported by all operating systems



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



Connects easily to Sniff-0 and other CyNexo CAN bus products



Multiple channels, digital I/Os, serial ports 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>CAN Bus daisy chain connectable, USB 2.0 / USB 3.0 compatible (updates and programming only)</i> |
| I/O | <i>Digital I/Os for real-time triggering applications (TTL compatible): 2 BNC connector Inputs (0-5V, 10V tolerant) 2 BNC connector Outputs (0-5 V)</i> |
| Flow control | <i>Each channel is fitted with manual needle valves (knob adjustment), ultrafast solenoid valves (< 4ms) and proportional servo valves (allowing variable odor concentration levels, odor gradients and mixing)</i> |
| Flow metering | <i>Built-in gas flow stabilizer and flow meter sensitive to +/- 0.01 L/min</i> |
| Dual-channel | <i>Ability to run two channels simultaneously, each with specific and even variable flow rate and independently of constant flow rate, if desired</i> |
| Delay Measurement | <i>Delivery delay measurement function is a built-in firmware function to calculate delivery delay of the odor pressure wave propagation: the manifold can be at any distance from the main unit and you can confidently adjust triggering signals timing to compensate for the actual delivery delay</i> |
| Time Saving | <i>Automatic flow calibration and determination of delivery delay per channel requires no user interaction</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>380x270x180mm and 8.5 kg</i> |
| Power | <i>12V operating voltage via provided 110-220V 50-60Hz universal power supply (CE/FCC compliant)</i> |
| Operating pressure | <i>Up to 6 atm (88 psi), standard operation at 3 l/min (max 6 l/min)</i> |
| Noise level | <i>Extremely quiet operation (<40 dB @ 1m/3.3ft, excluding external compressor or other air sources)</i> |

| RELATED PRODUCTS | |
|--------------------------------|-------------------------------------|
| Main control unit | <i>Sniff-0</i> |
| Breathing cycle monitor | <i>Spir-0</i> |
| Video triggering device | <i>Response Box</i> |
| Audio triggering device | <i>Spir-0 with Audio Box plugin</i> |

| OPTIONS / ADD-ONS |
|--|
| <ul style="list-style-type: none"> • <i>Customizable glass jars (0.2 to 4.2l)</i> • <i>Second flowmeter for leak tests</i> • <i>Other gases calibration - please ask for details</i> • <i>Customized software solutions for your research requirements</i> |

* N.B.: Device compatibility with all non-air solutions must be carefully tested prior to experimental use. Non-air solutions may affect calibration results.