

The ANY-maze Operant interface L



Overview

The ANY-maze Operant interface L is designed to directly connect ANY-maze to the popular range of Operant conditioning equipment available from Lafayette instruments.

General

- Allows ANY-maze to read inputs and control outputs.
- Works as a drop-in replacement for an existing Lafayette instruments *ABET Mini I/O Module Connection Block*.
- Connects directly to the computer via USB; no Lafayette Instruments ABET interface is required.

- The interface can either be powered from the ANY-maze Operant hub, or from a standalone power supply.

Inputs

- 8 independent inputs
- Inputs use the same screw terminals as the Lafayette Connection Block.

Outputs

- 16 independent outputs
- Outputs are available both on screw terminals and *intensity* connectors, the same as the Lafayette Connection Block.
- All outputs can optionally dim lights or LEDs connected to them

Technical specification

Connection to PC									
Connection type	USB (USB1.1, USB2.0, USB3.0 compatible)								
Interface power	The interface itself is powered from the USB bus								
Maximum current drawn from USB	130mA								
Power supply									
Input voltage	90 - 264 VAC								
Output voltage	28 VDC								
Output current	2.5A minimum								
LED (note 1)	<table border="0"> <tr> <td>Off</td> <td>No power connected</td> </tr> <tr> <td>Red</td> <td>Connected to 28V power but not to USB</td> </tr> <tr> <td>Flashing green</td> <td>Connected to USB but not to 28V</td> </tr> <tr> <td>Solid green</td> <td>Connected to USB and 28V</td> </tr> </table>	Off	No power connected	Red	Connected to 28V power but not to USB	Flashing green	Connected to USB but not to 28V	Solid green	Connected to USB and 28V
Off	No power connected								
Red	Connected to 28V power but not to USB								
Flashing green	Connected to USB but not to 28V								
Solid green	Connected to USB and 28V								
Inputs									
Number of channels	8								
Input isolation	3750 V _{RMS}								
Input voltage range	0 – 28V								
Connector	Two row screw terminal block: Upper row = GND (0V) Lower row = Input signals								
Outputs									
Number of channels	16								
Output isolation	3750 V _{RMS}								
Output on voltage (note 2)	0V								
Output off voltage (note 3)	28V								
Light/LED dimming capability	Available on all channels (note 4)								
Connectors	Two row screw terminal block: Upper row = 28VDC power Lower row = Output signal Five RJ12 <i>Intensity</i> connectors: Intensity connector 1 uses outputs 1, 2, 3 Intensity connector 2 uses outputs 4, 5, 6 Intensity connector 3 uses outputs 7, 8, 9 Intensity connector 4 uses outputs 10, 11, 12 Intensity connector 5 uses outputs 13, 14, 15								

Notes

- LED can be suppressed, which is useful for tests performed in darkness and/or to avoid providing potential cues to the animals.
- When on, each output signal pin can sink a maximum of 0.5A. The absolute maximum current across all outputs is 2.5A.
- When off, each output signal pin can source almost no current (it is pulled high through a 10K resistor).
- Light dimming is performed using Pulse Width Modulation (PWM) at 320Hz.

Supported Lafayette Instruments components

If you have a component that is not listed here please contact us at support@anymaze.com to confirm compatibility.

Audio stimuli

- 80223M Sonalert module
- 80223M14 Sonalert module
- 80223 Sonalert audible stimulus system
- 80223HM High frequency Sonalert module
- 80136M White noise generator module
- 80136M14 White noise module
- 81415 Tone generator
- 81415M Tone generator for modular operant chambers
- 81407TM Volume Controller
- 80135CTL Speaker control cable

Stimulus lights

- 80221 Stimulus light
- 80225M White stimulus light for rat modular chamber
- 80225M14 White stimulus light for mouse modular
- 80226M White variable intensity stimulus light for rat modular chamber
- 80226M14 White variable intensity stimulus light for mouse modular chamber
- 81407LM Light intensity controller

House lights

- 80224 Top panel house light
- 80224AM House light for rat modular chamber
- 80224AM14 House light for mouse modular chamber
- 80227M IR House Light for Rat Modular Chamber
- 80227M14 IR House Light for Mouse Modular Chamber

Levers

- 80110 Standard response lever
- 80110M Response lever for rat modular chamber
- 80120M Mouse response lever for rat modular chamber
- 80120MM Response lever for mouse modular chamber
- 80112M Thick profile response lever for rat modular chamber
- 80111 Omnidirectional lever
- CI4460-M Low profile retractable response lever for rat modular chamber
- CI4461A-M14 Retractable lever for mouse modular chamber
- CI4461A-M Retractable lever for mouse modular chamber (grid floor)
- 4460A Retractable lever for rat
- 4460A-M Retractable lever for rat modular chamber

- 4461A Retractable lever for mouse
- 4461A-M14 Retractable lever for mouse modular chamber
- 4461A-M Retractable lever for mouse modular chamber (grid floor)
- 80113 Retractable lever
- 80113M Retractable lever for modular test chamber

Nose pokes

- 80116OR Rat nose poke with open hole
- 80116ORM Nose poke with open hole for rat modular chamber
- 80116O Mouse nose poke with open hole
- 80116S Mouse nose poke with stimulus light
- 80116T Mouse nose poke with tri-color light
- 80116TR Rat nose poke with tri-color stimulus light
- 80116TM Nose poke with tri-color light for modular chamber
- 80116TM14 Nose poke with tri-color light on mouse modular panel
- 80116TRM Nose poke with tri-color light on rat modular panel
- 80117RM Nose poke (conical entry) with tri-color light on rat modular panel

Pecking keys

- 80125 Standard pecking key
- 80125M Standard pecking key for modular panel
- 80123 Pecking key with 3-colour display
- 80123M Pecking key with 3-colour display for modular panel
- 80130 Multi-display pecking key

Photobeam sensors

- 81413 Infrared photobeam
- 81413A Infrared photobeam
- 80004AM Ambulatory monitor

Liquid dispensers

- 80201 Liquid dispenser
- 80204 Liquid Pump
- 80204A Precision Liquid Feed Pump
- 80204M Peristaltic pump for liquid reward

Pellet and food dispensers

- 80209-20 Pellet dispenser
- 80209-20M Pellet dispenser for modular chamber
- 80209-45 Pellet dispenser (45mg)
- 80209-190S Pellet dispenser (190mg)

Pellet and liquid dispenser receptacles

- 80210M-R Pellet trough for rat modular chamber with head entry and door
- 80210LM-R Liquid / pellet trough for modular chamber with head entry and door
- 80210RAX Pellet/dual liquid reward area for rat
- 80210RAX-M Reward area for rat modular panel
- 80211RAX Liquid and pellet reward area for mice
- 80211RAX-M Liquid and pellet reward area for mouse modular chamber
- 80211RAX-MM Liquid and pellet reward area for modular chamber
- 80210RAXMML Extra-large reward area for mouse modular panel

Syringe pumps

- 80203 Modified syringe pump