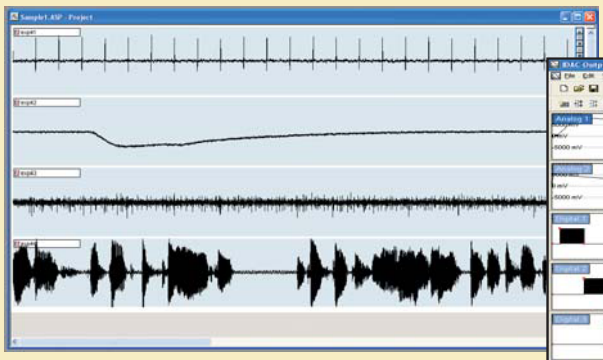
4-CHANNEL FULLY PROGRAMMABLE SIGNAL AMPLIFIER WITH PROGRAMMABLE CONTROL SIGNAL OUTPUTS

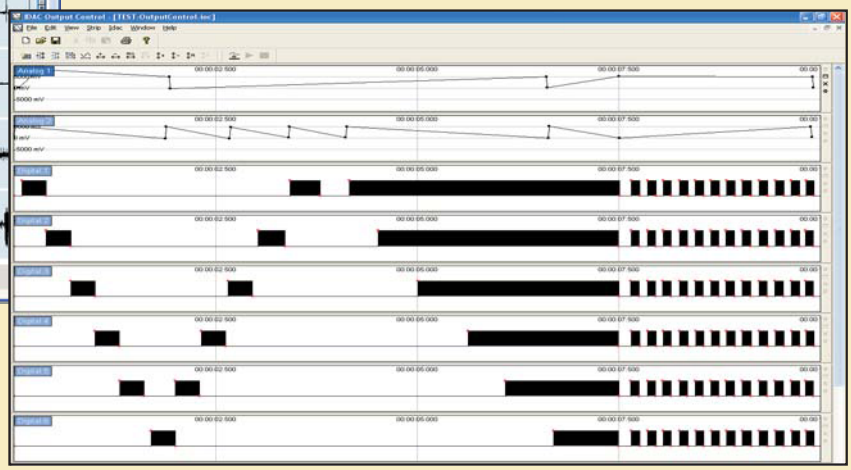
IDAC-4

The Syntech IDAC-4 interface for the USB port combines a programmable 4-channel signal amplifier with programmable output signals for direct control of solenoids, flow controllers, multichannel olfactometers, and other actuators (motors, lights, sounds).

With the IDAC-4 it is now possible to record electrophysiological signals while presenting complex, multimodal, and dynamically programmable stimuli, without the need of a separate control interface.



4-channel analog signal recording



analog and event output signal sequences
(test program)

Specifications programmable amplifiers:

* 4 independently programmable amplifiers
* 8 digital (trigger, event, control) input signals
* Input range: 20 uV - 1000 mV
* Frequency range: DC- 50 kHz
* Resolution: 16 bit
* Sampling rate: 1s - 100kHz
* All 4 channels independently programmable
* Programmable high cut-off: 10Hz - 50 kHz
* Programmable low cutt-off: DC- 400 Hz
* Special EAG filter (blocks ALL interference frequencies)
* Input offset control range: 16 bit over full scale
* Pre-trigge r 1 - 100s
* Auto-trigger on signal level
* All settings stored in configuration file
* Audio signal output
* Real-time signal display at adjustable time base
* Effect of offset, filters, sampling rate visible on screen
* Power (+, - 12V) for active input headstages (probes)
* LED indicators showing status of digital inputs
* MATLAB programmable

Specifications Output Control::

* 2 analog output signals; range +10V to - 10 V.
* 8 digital output signals ; TTL(5V) and 12 V (or 24V)
* Digital signals suitable for direct drive of actuators
* Time base resolution: 1 ms (analog and digital)
* Maximum program time: 10 hours
* Any sequence and combination programmable
* Easy graphical and/or numerical programming
* Trigger can be linked to signal acquisition
* Control of acquisition sequences over up to 10 hours
* Direct control of 8-channel olfactometer
* LED indicators showing digital output status

The instrument communicates with the PC via the USB port (both the signal acquisition and the output control simultaneously); It runs on any PC or laptop with Windows (XP- 7&8) and on any voltage/frequency from 100 - 240 V 50 - 60 Hz. All inputs and outputs are optically isolated.

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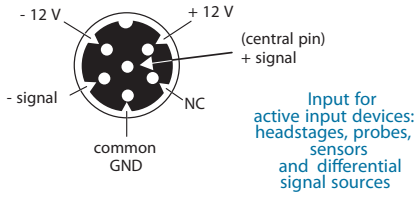
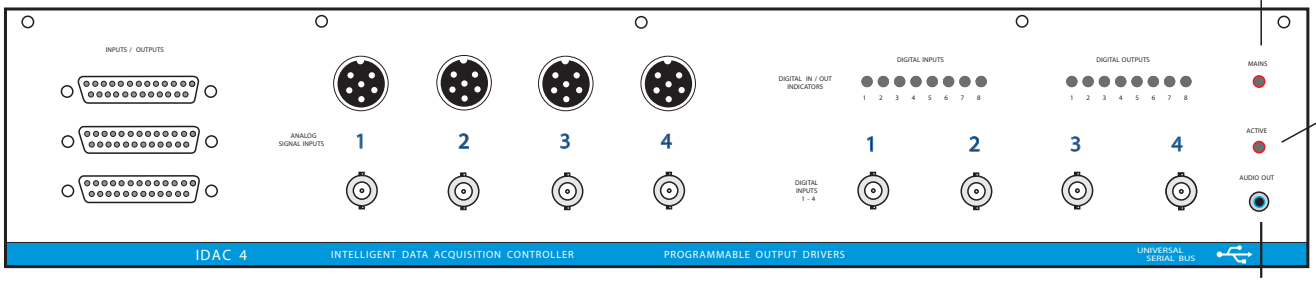
FRONT and REAR PANEL CONTROLS and RECEPTACLES

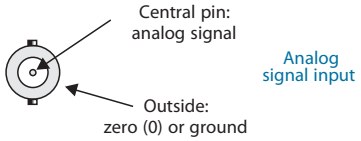




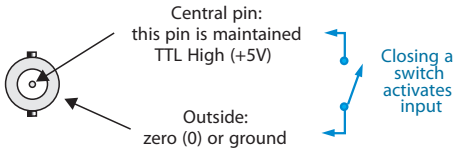
25 pin input/output
combi receptacle

1. Dig.out 1
2. Dig.out 2
3. Dig.out 3
4. Dig.out 4
5. Dig.out 5
6. Dig.out 6
7. Dig.out 7
8. Dig.out 8
9. Analog out 1
10. Analog out 2
11. +12 V
12. Common Ground
13. - 12 V
14. Dig. in 1
15. Dig. in 2
16. Dig. in 3
17. Dig. in 4
18. Dig. in 5
19. Dig. in 6
20. Dig. in 7
21. Dig. in 8
22. Analog in 1
23. Analog in 2
24. Analog in 3
25. Analog in 4

BNC Receptacles
to connect analog input signals



BNC Receptacles
to connect digital input signals



AUDIO
output
(connect to
loudspeaker set)

Mains Power receptacle
and power switch
100 - 240 V
50 - 60 Hz

Additional Power Input
(from external DC power supply)
to boost digital output power
12 - 24 V DC

Digital (TTL, +5V) inputs
(1- 4 also on front)

Digital (12V) outputs

Connect actuator (valve)
between upper and lower
terminal swrews;
upper terminals are + 12V

Analog outputs
-10 to + 10 V

USB
receptacle