

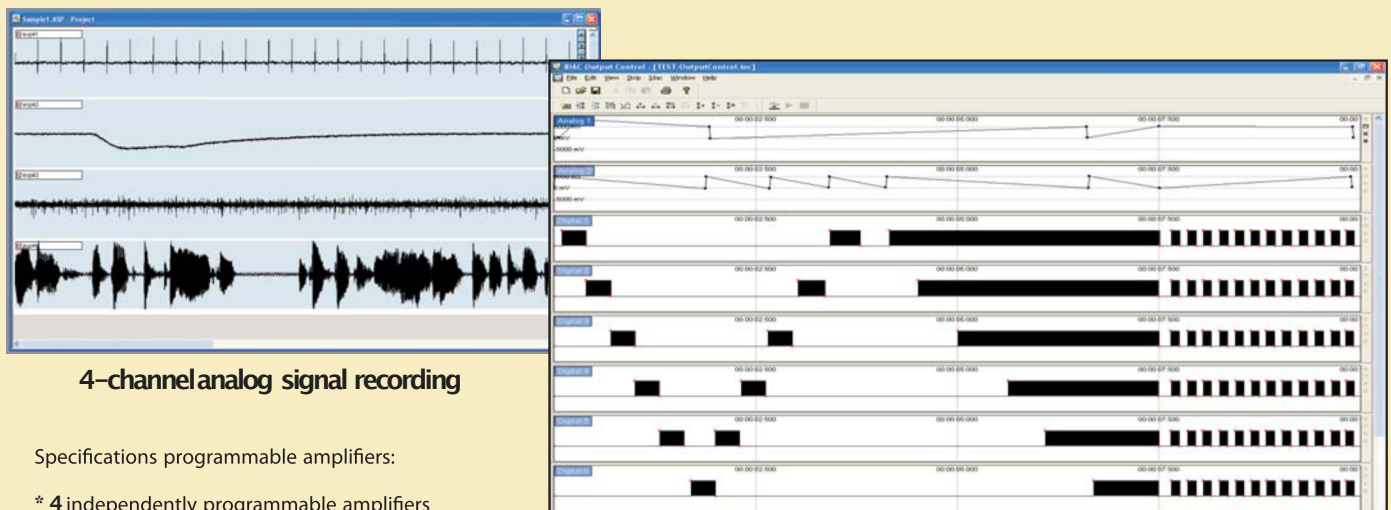
4-CHANNEL FULLY PROGRAMMABLE SIGNAL AMPLIFIER WITH PROGRAMMABLE CONTROL SIGNAL OUTPUTS



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:

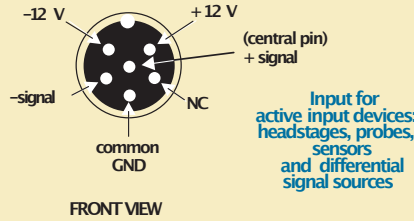
- * 4 independently programmable amplifiers
- * 8 digital (trigger, event, control) input signals
- * Input range: 20 μ V - 1000 mV
- * Frequency range: DC - 50 kHz
- * Resolution: 16 bit
- * Sampling rate: 1s - 100kHz
- * All 4 channels independently programmable
- * Programmable high cut-off: 10Hz - 50 kHz
- * Programmable low cut-off: DC - 400 Hz
- * Special EAG filter (blocks ALL interference frequencies)
- * Input offset control range: 16 bit over full scale
- * Pre-trigger r1-100s
- * 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.

FRONT and REAR PANEL CONTROLS and RECEPTACLES



25-pin Receptacles providing digital input, output and power connections

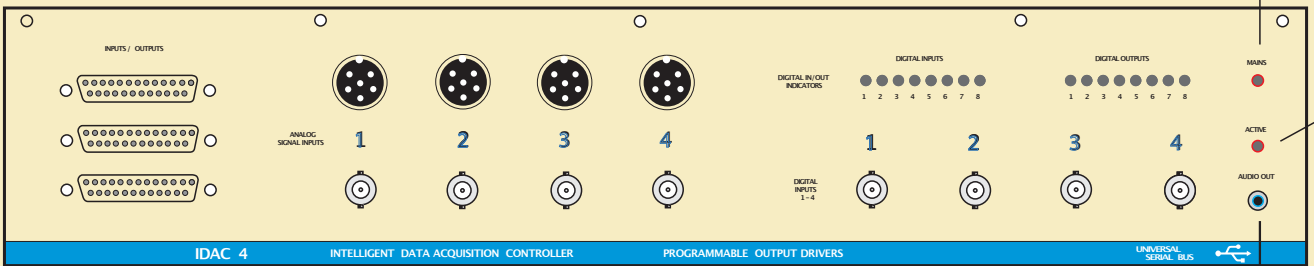
6-pin Receptacles to connect analog input devices (probes) and differential signals

LED Indicators showing status of digital inputs

LED Indicators showing status of digital outputs

LED indicates mains power

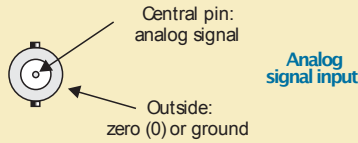
LED indicates running



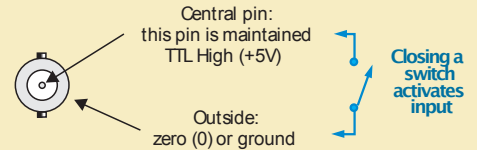
25 pin input/output combi receptacle

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



Digital (12V) outputs

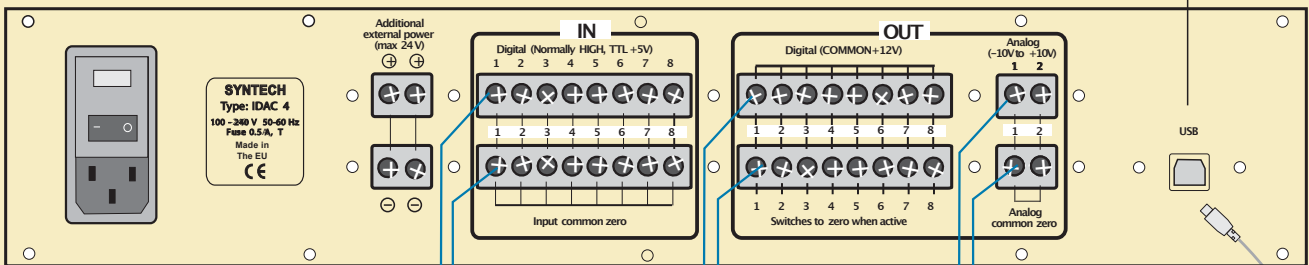
Connect actuator (valve) between upper and lower terminal screws; upper terminals are +12V

Analog outputs -10 to +10 V

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

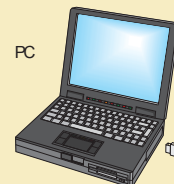
Digital (TTL, +5V) inputs (1-4 also on front)



Closing a switch activates input

+12V
Valve is activated on software command

to control input of analog device



USB cable