



Medical and Biotech
Developments, Inc.



ValveBank Controllers

- Run experiments automatically – even unattended

By running experiments automatically, Systems will leave you free to accomplish other tasks – saving you both time and money.

- Microprocessor-based for accuracy and flexibility

The ValveBank® can store sixteen user programs with 10 millisecond switching accuracy. It includes powerful perfusion commands and capabilities not offered by competing valve drivers: open single or multiple valves, master channel for control/buffer solution, computer control.

- Low noise & low voltage valve control

Designed for electrophysiology. CE marked for Europe.

- Manual, TTL (digital), and serial (RS-232) inputs

Control valves manually (by keypad) or by computer – simultaneously thanks to the microprocessor design.

- Low cost & low profile, simple design

Optional BNC cables and 19" rack-mounting brackets.

All valve controllers switch 12V DC solenoid valves open and closed rapidly using full power, then hold-in at 1/2 power to prevent thermal transfer to your solutions. Low noise circuitry minimizes recording artifacts in electrophysiology. Both ValveBanks and AutoMate's ValveLink controllers are designed for use with pClamp, Pulse, AxoGraph, et al. All AutoMate products include a one-year limited warranty covering both parts and labor (see manual for more details).

The ValveBank® remains the only programmable valve controller for physiology that does not require a computer. ValveBanks include digital and manual control, plus they can be programmed through their keypad and LCD screen or EasyCode® software from a Macintosh or PC. ValveBanks run user valve sequences without a computer and include eight programmable digital outputs for control of external devices such as stimulators, pumps and recording devices. Entire ValveBank programs can even be triggered by a single TTL pulse. Digital inputs activate valves by computer or external devices including level sensors, flow meters, and UV/VIS detectors.

EasyCode® - Expand the computing power of your ValveBank

Optional EasyCode software helps you program your ValveBank with a Macintosh or PC-Windows using easy "click-and-drag" time bars. Save and load unlimited programs to disk, print out program listings, then download your sequences into the ValveBank's memory with the included serial cable in one simple step. Transfer and run programs on the ValveBank, which can be disconnected from the computer.



ValveBank or ValveLink8.2: Which controller is right for you?

Features	ValveBank	ValveLink8.2
CHANNELS	4 or 8 channels available	8 ch. each, USB network to 64 ch.
COMPUTER I/O	8 digital in, 8 digital out, serial (RS-232)	8 digital in, USB, analog input, event marker out
DIGITAL INPUTS	One pulse can start a ValveBank program, or TTL inputs each control 1 valve	One TTL input per valve, or demultiplex and control up to 16 valves with 4 inputs
PROGRAMMABLE	Yes- ValveBank keypad, EasyCode software or digital outputs from your data acquisition software	Only using real-time analog or digital outputs from your computer / data acquisition software.
SOFTWARE	Mac and PC "EasyCode" software to pre-program ValveBanks (up to 16 ch.)	Free Windows XP real-time USB control and networking software for up to 64 valves at once
MANUAL CONTROL	External keypad	Front panel buttons
MANUAL FEATURES	1-on, master channel, timed open, TTL outputs	1-on, master channel
SPEED	10 milliseconds	1 millisecond
VALVE POWER	4 Watts per channel or 8 Watts total	Up to 12 Watts (1 Amp) per channel, 24 Watts (2 A) total
PRICE	Higher	Lower



ValveBank® Controller Specification

Increase reproducibility with 10 millisecond accuracy

Stand-alone design - no computer necessary

Run experiments automatically - even unattended

Microprocessor-based for accuracy and flexibility

Because they lack a microprocessor, competing valve

controllers do not offer a serial port, or simultaneous manual and computer valve control.

Manual, TTL (digital input) and RS-232 inputs

Features:

- *10 millisecond (0.01 sec) switching accuracy
- *16 user programs of 256 commands per channel - up to 99 hours long
- *Non-volatile battery memory program storage
- *Menu-driven interface
- *Detached 16-key membrane keypad and 4 line, backlit LCD screen
- *Eight programmable digital inputs and outputs
- *Dual RS-232 serial port
- *Many manual perfusion features built-in

Valve Driving:

- *Control 8x 12V DC solenoid valves
- *User selected normally open or closed
- *Valves are opened or closed rapidly using full power, then held-in at 1/2 power to prevent thermal transfer to your solutions
- *Low noise circuitry for electrophysiology

Includes:

- *Power supply and manual
- *One year limited warranty covering both parts and labor





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ValveLink8.2[®] Controller

- ValveGuard™ technology detects bad valves
Prevent damage to your ValveLink and easily observe problem valves.

- Run experiments automatically – even unattended

By running experiments automatically, AutoMate Systems will leave you free to accomplish other tasks – saving you both time and money.

- Microprocessor-based for accuracy and flexibility

Our low-cost ValveLink controller has powerful perfusion commands and capabilities not offered by competing valve drivers: open single or multiple valves, master channel for control/buffer solution, computer control.

- Low noise & low voltage valve control
Designed for electrophysiology. CE marked for Europe.

- Manual, TTL (digital), analog, and USB inputs

Control valves manually (by push button) or by computer – simultaneously thanks to the microprocessor design. Spill sensor protects your equipment when a leak is detected.

ValveLinks can switch 12V DC solenoid valves open and closed in one millisecond using full power, then hold-in at 1/2 power to prevent thermal transfer to your solutions. Low noise circuitry minimizes recording artifacts in electrophysiology. Both ValveLinks and ValveBanks are designed for use with pClamp, Pulse, AxoGraph, et al. All AutoMate products include a one-year limited warranty covering both parts and labor (see manual for more details).

ValveGuard™ technology detects bad valves to prevent damage to your ValveLink and easily observe problem valves. Front-panel LEDs are dark for broken or disconnected valves, or blink for short-circuited valves.

Automatic networking lets you connect up to eight ValveLinks to a USB hub and PC to create a single 64-channel controller. One analog input can control eight valves: zero volts closes all valves, and each half-volt increment opens the next valve (i.e. 3 volts opens valve six). Analog event marker allows you to record all valve activity.

ValveLinks are less expensive than AutoMate's ValveBank controllers and include manual pushbuttons, digital/TTL, analog and USB inputs to control valves. They are designed for easy control by your data acquisition software. The ValveLink is the controller of choice for dose response work at pharmaceutical companies and the NIH. Its sophisticated design allows control of sixteen valves with only four digital outputs from pCLAMP. A spill sensor stops all valves when a leak is detected to protect your microscope and table. All LEDs blink until you press a button to continue. ValveLinks can now power individual valves up to 1 amp (12 watts), and a total of 2 amps for all valves open simultaneously.



ValveBank or ValveLink8.2: Which controller is right for you?

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CHANNELS	4 or 8 channels available	8 ch. each, USB network to 64 ch.
COMPUTER I/O	8 digital in, 8 digital out, serial (RS-232)	8 digital in, USB, analog input, event marker out
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PROGRAMMABLE	Yes- ValveBank keypad, EasyCode software or digital outputs from your data acquisition software	Only using real-time analog or digital outputs from your computer / data acquisition software.
SOFTWARE	Mac and PC "EasyCode" software to pre-program ValveBanks (up to 16 ch.)	Free Windows XP real-time USB control and networking software for up to 64 valves at once
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Heka EPC Customers

Now offered is an interface box which provides the previously unavailable digital output lines of the Heka EPC-9 (single) or EPC-10 Patch Clamp amplifier to control external devices, like the ValveLink controllers. The ADP-16MUX brings out digital outputs 0 through 13 to a DB-15 male connector. We also offers several cables for connecting the ADP-16MUX directly to both ValveLink8 and ValveLink16 controllers

ADP-16MUX - EPC-9 digital output adapter

The ADP-16MUX allows the use of the previously unavailable digital output lines on the Heka EPC-9 (single) to control external devices. This device brings out digital output 0 through 13 to a DB-15 male type connector.

VL-MUX/32 cable

The VL-MUX/32 cable connects the ADP-16MUX to the Automate Scientific Valvelink 16 controller.

VL-MUX/8 cable

The VL-MUX/8 cable connects the ADP-16MUX to the Automate Scientific Valvelink 8 controller.

Custom cables

Contact us if you require any custom cables made. We will evaluate your requirements and quote a price and delivery for the cable.

Free ValveLink8.2 PC Software

Please note: This program will not work without a ValveLink8.2 connected to your computer by USB cable. It will not do anything with an old ValveLink or ValveBank controller. You may wish to download and read the readme.pdf before downloading the entire program. You must follow the instructions on USB driver installation carefully and in the right order before running the program. This software requires Windows .NET version 2.0 or higher.