MIM 3 Micromanipulator

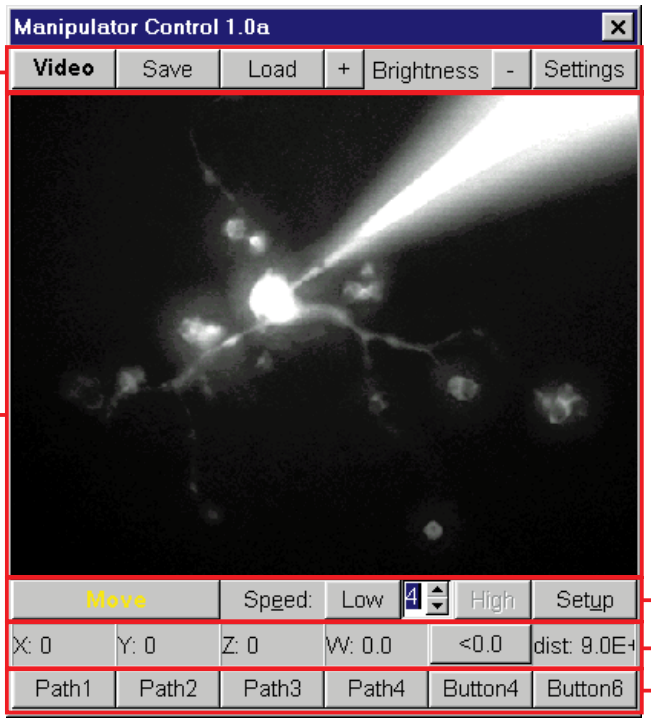
Features

- High mechanical stability
- Visual control of the configuration of your experiment
- Video image of the microscope picture
- Saves video image
- Coarse and fine positioning with one instrument (4 steps available)
- Programmable paths and home function
- Movement range of 25 mm in each axis
- Fast operation with a maximum speed of 6 mm/s
- No background noise in electrophysiological recordings
- Usable with any microscope

The HEKA micromanipulator enables an accurate and secure positioning of your micro tools and a simultaneous monitoring of the microscope image on the computer screen. The experimenter has full control of all the important features of a patch-clamp experiment, like stimulation, acquisition, video monitoring, and EPC 9 settings. With the visual control of the configuration of the experiment, mechanical distortions can easily be discovered. A new dimension of documentation of experimental data is achieved by recording the morphology simultaneously. It is recommended to use the MIM 3 manipulator in conjunction with the POS software and the joystick for positioning of any micro tool both for coarse and fine movements. You can position any micro tool along each of the three mechanical axes. The MIM 3 is not only used in electrophysiological operation. Under control of the POS stand-alone software, it can be used in any experiment which needs fast, precise, and reproducable micromanipulation, like microinjection, local application of drugs, etc.

Video Control Panel
Functions to control the video image:
Live video on / off
Save image
Control of brightness, contrast, etc.
Default parameters for the video

Video Image
Live video during experiment
Display of saved images



Manipulator Control Panel
Joystick control settings

Position Control Panel
Display of the actual position
Distance to a reference point

Path Control Panel
6 programmable paths
Home function
Repositioning

Electrophysiological experiments:
- Software POS as extension to TIDA 4.x and PULSE
- Ideal in conjunction with HEKA EPC 7, EPC 8 or EPC 9 as well as EPC 9 double or EPC 9 triple patch- clamp amplifiers
- Stand-alone software POS for other patch-clamp amplifiers
- Simultaneous monitoring of video image, stimulation, and EPC 9 settings

Product:
- HEKA micromanipulator MIM 3
- HEKA software POS as stand-alone version or as TIDA 4.x, PULSE extension
- Joystick
- Graphic card
- Video module
- Joystick port

Required accessories:
- Video camera: for instance, Hamamatsu C3077
- Cmount on 2/3´ adaptor for your camera

Technical specifications:
- Vertical movement
  manually:
  depends on mechanical fixing
  motor driven: 25 mm
- Horizontal movement:
  X-Axis:
  manually: 65 mm
  motor driven: 25 mm
  Y-Axis:
  manually:
  depends on mechanical fixing
  motor driven: 25 mm
- Angle of inclination:
  0-90° related to stage plate
- Minimum graduation: 157 nm
- Maximum speed: 5500 µm/s

System requirements:
- Pentium (> 90 MHz) computer with a free bus-master-capable PCI-slot
- MS-Windows 95
- Free RS 232 interface (> 115000 kBits/s)
- For software extension: TIDA 4.x, PULSE
- Microscope with video camera (NTSC, PAL, CCIR standard)

We reserve the right to effect technical changes as development progresses. Special versions are available on request. Further technical data are provided by a detailed description, which is available on request. A guarantee of one year applies on all instruments.

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