



MT-73 stand and dPatch® headstage not included

MPC-365 System

Narrow-Format MP-865 Based Multi-Micromanipulator Systems

The MPC-365 System consists of the MPC-200 controller and one to six MP-865 micromanipulators.

MPC-200 Controller and ROE

Neurobiological experiments are becoming more complex. Many require multiple manipulators with control units that quickly become space and/or cost prohibitive. The MPC-200 is the solution you have been asking for. A single controller capable of running two manipulators! Sutter Instrument has taken the simplicity of the MP-225 controller and expanded it to run two manipulators from a single controller/ROE. The MPC-200 works with one or two of our world-renowned mechanicals, the MP-285 (MPC-385), the MP-225 (MPC-325) or the narrow format MP-865 (MPC-365).

If two manipulators aren't enough, a second controller can be daisy chained to allow the single ROE-200 to move up to four manipulators. Thus the system can be easily expanded to control highly sophisticated experiments.

The Sutter MPC-200 is electrically quiet. Unlike the competition, our multi-unit controller employs linear output circuitry. Sutter adds additional manipulators to the same controller without requiring potentially noisy chopper drives.

In all our manipulators, the 4th axis can be set up and changed without the need to connect an external computer to download and configure software. A separate configuration is allowed for each output on this manipulator controller. If desired, each manipulator can approach the prep at a different angle from the

horizontal. The 4th axis can be configured between the X and Z-axes or the Y and Z-axes (useful when manipulator is rotated 90 degrees relative to the preparation).

Faster automated pipette exchange. The MPC-200 has faster "Home" and "Work Position" moves for quicker pipette exchange. Automation is set up and run via the same interface used in the MP-225 controller; however, the speeds of the automated movement are much faster.

Accelerated manual mode. For users who prefer manual pipette exchange we have added "Accelerated Mode" to the ROE. Using Accelerated Mode, the user can make quick manual moves in and out of a setup. Accelerated Mode amplifies the speed attainable in a manual move by smoothly accelerating to the maximum speed during sustained, fast turns of the ROE. Accelerated movement ends as soon as the user stops turning the knob. This mode can be fully disabled for those who feel the need for direct control of the pipette.

MP-865 Micromanipulator

Our new MP-865 "narrow format" mechanical is designed specifically for patch-slice work that require more than 2 or 3 pipettes, as well as for other setups where space is limited. We designed the MP-865 to minimize the width, allowing as many manipulators to be grouped together as possible. Travel in the Y-axis is shortened (12.5 mm) because radially oriented manipulators do not require long travel in the traverse axis. Travel in the X-axis has been increased to 50 mm to facilitate fast and easy pipette exchange.

The optional narrow-format stand and linear slide or rotating base is available for mounting the MP-865 mechanical. With the 150 mm throw of the linear slide, the manipulator can be quickly and smoothly retracted out to a location where there is easy access to the pipette for replacement. A rotating base can be used for mounting to large platform stages like the Sutter MT-78, or smaller Sutter MD Series platforms.

Additional components can be added at any time, allowing the user to develop a system tailored to his or her particular needs. The controller is self-detecting so there is no need for manual configuration of the components.

FEATURES

- Quietest electronics in the industry optimized for single channel recording
- Single controller and ROE will run two stepper motor drive manipulators
- Self-detecting, daisy-chain capability allows control of four manipulators from one ROE-200
- User-friendly interface: single button access to all major functions
- Easily configurable virtual 4th axis set without external computer
- Accelerated Mode for fast, manual manipulator movement
- Easy toggle selection of Mode (speed/resolution, pulsed diagonal, Accelerated Mode)
- Display indicates X, Y, Z coordinates, Mode, active manipulator
- Robotic Home and Work Position moves for easy automated pipette exchange
- Faster robotic moves than previous versions
- Definable 4th axis for coaxial pipette movement, angle selected by DIP switches
- Simple USB interface
- Toggle switch selects which manipulator is connected to input device
- LED and display indicate active manipulator
- Ultra-low drift, ultra-smooth movement
- Low-drift mechanical stability

FEATURES: MP-865 Mechanical

- Mechanically robust construction for high stability
- Precision cross-roller bearings
- Three independent axes - 50 mm travel in X, 12.5 mm in Y and 25 mm in Z
- Carries up to a kilogram
- Suited for *in vitro* and *in vivo* electrophysiological recording
- Universal mounting system for headstage or pipette holder
- Optional MT-73 narrow stand with linear slide and built in rotating base