



**SIMPLE MOVING MICROSCOPE BASED ON AN MP-285/MPC-385  
MOTORIZED MICROMANIPULATOR**

**X, Y AND Z AXES OF MANIPULATOR USED TO POSITION THE  
MICROSCOPE OVER THE SAMPLE AND FOCUS. NO NEED FOR  
LARGE TRANSLATORS OR MOVING STAGES**

**OPTIMIZED TO ALLOW *IN VIVO* AND *IN VITRO* EXPERIMENTATION  
ON ONE SETUP**

**FREE MULTI-LINK™ SOFTWARE COORDINATES MOVEMENT  
WITH MICROPIPETTE POSITIONING OF MPC-200**

**TRANSMITTED AND EPI FLUORESCENT IMAGING MODES**

**FLEXIBLE EXCITATION PORT ALLOWS ADDITION OF SECONDARY  
LIGHT SOURCES FOR PHOTOSTIMULATION**

**STANDARD CONFIGURATION ACCEPTS RMS THREAD OBJECTIVES.  
CONTACT SUTTER FOR ADDITIONAL OPTIONS**

**MPC-200 CONTROLLER WITH USB INTERFACE AND OPEN  
SOURCE COMMANDS**



Shown with optional  
condenser and camera.  
Objectives not included.

## SOM® SIMPLE MOVING MICROSCOPE

The Son of MOM (**SOM**®) is a small, simple microscope designed to allow a single experimental setup to be used for both *in vivo* and *in vitro* experimentation. As in our two-photon Movable Objective Microscope® (**MOM**®), positioning over the sample and focusing is accomplished robotically. This removes the need for the large translators and stages that normally limit the available space beneath the objective for *in vivo* experimentation. For example, the **SOM** will allow whole-cell patch recordings from neurons *in vivo* on one day followed by multi-cell recordings in slices on the next.

The **SOM** opens up experimental possibilities that otherwise might be limited by the ever growing space constraints in modern laboratories. The **SOM** is designed to take full advantage of our new free Multi-Link™ software program for micromanipulator positioning.

For instance, during whole-cell patch recording in slices it is commonly necessary to search over a large area of tissue to find neurons appropriate to your experiment. With the **SOM**, you simply translate over your sample to search for your target. The software programs will then retrieve your recording and stimulation pipettes so that you can begin recording immediately. Moreover, if you then find you need to stimulate a region outside of the current objective's field of view, the programs will allow you to lock the position of your recording pipette and reposition the objective and stimulating pipette(s) to their required positions.

An optional Oblique Coherent Contrast (OCC) condenser that is illuminated with an LED is also available. The condenser translates with the microscope in the X & Y axes which allows for consistent illumination during re-positioning of the **SOM** over the sample.

### *How it Works:*

The **SOM** is designed with a two-position filter cube to allow for identification of fluorescently-tagged cells for recording or for photostimulation. The fluorescence excitation port of the microscope has C-mount threading as well as mounting holes for standard cage components. This allows for customization by the user to various experimental needs. For instance, multiple light sources can be coupled to the excitation port with small cage assemblies.

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**SUTTER INSTRUMENT**®

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**BASIC SYSTEM**

**SOM-T** SOM® Microscope system with MPC-200 controller and ROE, mounted on tall (MT-75T) tower.

**SOM-XT** SOM Microscope system with MPC-200 controller and ROE, mounted on extra tall (MT-75XT) tower.

**COMPONENTS**

**SOM-COND** OCC condenser with TLED

**BUNDLED SYSTEMS**

Includes a SOM, TLED+ white LED light source with 50/50 beam splitter, one micromanipulator, a gantry stand, and P-1000 Micropipette puller.

**SOM-T-QUAD** SOM-T with Quad 4-axis manipulator

**SOM-T-285** SOM-T with MP-285 mechanical manipulator

**SOM-T-225** SOM-T with MP-225 mechanical manipulator

**SOM-XT-QUAD** SOM-XT with Quad 4-axis manipulator

**SOM-XT-285** SOM-XT with MP-285 mechanical manipulator

**SOM-XT-225** SOM-XT with MP-225 mechanical manipulator



(Shown: SOM-T-QUAD with additional QUAD. P-1000 not shown.)