



NEW!

FOUR INDEPENDENT AXES – 30mm TRAVEL
IN DIAGONAL FOR COAXIAL PIPETTE
MOVEMENT, 25mm TRAVEL IN X, Y AND Z

SUB-MICRON 100nm RESOLUTION

DIGITAL DISPLAY INDICATES COORDINATES
IN RELATIVE OR ABSOLUTE

USER-FRIENDLY, FANLESS COMPACT
CONTROLLER WITH ROE PRESERVES
BENCH SPACE

PUSH BUTTON CONTROL OF MULTIPLE
FUNCTIONS – WORK, HOME, QUIET, PULSE
AND RELATIVE

ROBOTIC HOME AND WORK POSITION MOVES
FOR EASY AUTOMATED PIPETTER EXCHANGE



QUAD: FOUR-AXIS MICROMANIPULATOR SYSTEM

QUAD, the newest Sutter Instrument motorized manipulator is easy to use and has four independent axes. The X, Y, Z axes provide 25mm range of motion and Diagonal offers 30mm. The ROE controller has a digital display and keys for Home, Work, Pulse, Quiet and Relative. The compact, intuitive controller takes up minimal bench space, is fan-free, and easy to use.

While the three axes provide X, Y and Z orthogonal motion typical of most motorized manipulators, Sutter has introduced a true fourth axis with the **QUAD** so one can move the electrode coaxially at the exact desired angle of approach. The fourth axis also significantly extends the range of travel (30mm) for the system.

The **QUAD's** ROE provides fine control of electrode position and the rate of rotation of ROE dials for each axis determines the speed of travel. The finest step size is 100nm. Five conveniently located buttons on the ROE provide control of all the basic functions you will need in normal operation (Work, Home, Quiet, Relative and Pulse). Press and hold **WORK** to quickly store a work position, tap **HOME** to move all axes to an initial location that is useful for changing electrodes, or press and hold the **HOME** button to memorize a new **HOME** position. When you are ready to record data, the motor drive electronics can be suppressed by pressing the **QUIET** button. In the **QUIET** mode the display turns red and ROE input is locked out to avoid any accidental motion. The display coordinates can be zeroed at any location by pressing and holding the **RELATIVE** button. When the relative mode is activated, the display turns blue.

To return to viewing the absolute coordinates, tap the Relative button to toggle back. Finally, when tapping the **PULSE** button a 3 μ m advance in the diagonal is initiated. This rapid burst of forward motion can assist in sharp electrode cell penetration.

All the electronics, except for a small power supply, are housed within the **QUAD** ROE and no separate controller is required. Sutter has achieved this space savings by using high frequency current switching to regulate motor output.

In keeping with the compact and simple design, the **QUAD** has no computer connectors. Users who need a controller with computer connectivity or a controller that can be used to control multiple stepper motor devices are encouraged to use the industry standard Sutter MP-285 or the MPC-200 controllers.

SUTTER INSTRUMENT

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